LANDAU ASSOCIATES

April 14, 2015

Washington State Department of Ecology
Central Regional Office
Toxics Cleanup Program
15 West Yakima Avenue, Suite 200
Yakima, WA 98902

Attn: Ms. Mary Monahan, Mr. Matt Durkee, and Ms. Valerie Bound

RE: REMEDIAL INVESTIGATION – INTERIM DATA REPORT (SEPTEMBER 2014 THROUGH JANUARY 2015) CLOSED CITY OF YAKIMA LANDFILL SITE YAKIMA, WASHINGTON

Dear Mary, Matt, and Valerie,

On behalf of the City of Yakima (City), Landau Associates is pleased to provide the attached Remedial Investigation (RI) Interim Data Report for the closed City of Yakima Landfill Site (Site). The report presents the results and preliminary findings of the additional RI activities conducted at the Site to date (September 2014 through January 2015).

At the direction of the Washington State Department of Ecology (Ecology), the City entered into the Voluntary Cleanup Program (VCP) in February 2014 (VCP Site 1927; Project CE040) and requested that Ecology review reports summarizing the results of the previous Site investigations conducted through 2012 and provide an opinion concerning the status of the RI process. Following review of the reports included with the VCP application, Ecology issued an Opinion Letter (2014) regarding the current Site investigation process. The Opinion Letter indicated that characterization of soil and groundwater at the Site was insufficient to support the selection of a cleanup action, and that additional investigation was needed to complete the RI process.

Based on the data gaps identified in the Ecology Opinion Letter, an RI work plan (Work Plan) was prepared and submitted for Ecology's approval on August 11, 2014. The Work Plan outlined the planned approach for further investigation at the Site and provided the basis for the collection and the evaluation of data that is presented in the attached report. As outlined in the Work Plan, two additional quarterly groundwater monitoring events (March and June 2015) and one Site-wide Landfill Gas (LFG) survey (June 2015) remain to be completed as part of the RI process. As indicated in Ecology's Opinion Letter (2014), a Terrestrial Ecological Evaluation (TEE) was also prepared for the Site and is included

with the RI Interim Data Report (as Attachment 1). A Supplemental RI Report will be prepared upon completion of the remaining RI activities; the report will be published in late summer 2015.

The RI Interim Data Report presents and discusses the field investigation and laboratory analytical results, and preliminary findings and conclusions based on the RI activities conducted through January 2015. The City requests that Ecology review the attached report and provide a written opinion on the sufficiency of the RI activities (including the work performed to date and planned future sampling) to satisfy the issues noted in the Opinion Letter (2014); the relevancy and applicability of the current results, preliminary findings, and the initial conclusions concerning potential remedial action requirements for the Site; and the sufficiency of the Terrestrial Ecological Evaluation. A request for opinion form is included with this submittal.

In general, the RI Interim Data Report includes the following information:

- A summary of previous investigations and remedial actions;
- A description of the additional RI activities conducted to date and an outline of the remaining activities to be completed through June 2015;
- Updated information on Site geology and hydrogeology;
- The development of preliminary site screening criteria;
- A media-specific presentation of the nature and extent of Site contamination (based on the results to date); and
- Preliminary RI findings and conclusions relative to potential remedial action requirements.

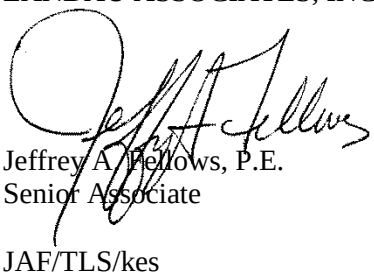
Elements presented in the report, which have been revised and updated based on the results of the additional RI activities, include:

- Geologic cross-sections, including information from the new groundwater well and LFG probe installations;
- Groundwater elevation and contour maps (based on the September and December 2014 groundwater sampling events);
- Updated information regarding the extent of municipal solid waste (MSW) at the Site;
- Tabulated RI analytical data evaluated relative to preliminary screen level criteria; and
- The nature and extent of Site contamination, including a discussion on dissolved metals and the associated area-wide aquifer-reducing conditions.

Relevant historical data for the Site has been tabulated and is included as Appendix A. Appendices B through E include a full compilation of the groundwater monitoring well construction logs, exploratory test pit logs, LFG/soil gas probe logs, and soil boring logs, respectively.

The City requests that Ecology provide its review and written opinion regarding the RI Interim Data Report in a format such that potential comments and/or revisions can be addressed during preparation of the Supplemental RI Report, versus through revision to this report. Given that additional planned RI activities remain to be completed, we would appreciate Ecology's written opinion within 30 calendar days, if feasible, as subsequent data analyses may be dependent upon the results of the review. During the review process, please let us know if you have any questions, initial concerns, or would like additional information to support the review process. The City appreciates your ongoing assistance and support with management of the Site through the VCP.

LANDAU ASSOCIATES, INC.



Jeffrey A. Fellows, P.E.
Senior Associate

JAF/TLS/kes

cc: Ecology – Central Region, VCP Coordinator
Joan Davenport, City of Yakima
Jeff Cutter, City of Yakima
Brett Sheffield, City of Yakima
Kurt Peterson, Cascadia Law Group PLLC

DEPARTMENT OF ECOLOGY
State of Washington

Voluntary Cleanup Program

Washington State Department of Ecology
Toxics Cleanup Program

REQUEST FOR OPINION FORM

Use this form to request a written opinion on your planned or completed independent remedial action under the Voluntary Cleanup Program (VCP). Attach to this form the plans or reports documenting the remedial action. Please submit only one form for each request.

Step 1: IDENTIFY HAZARDOUS WASTE SITE

Please identify below the hazardous waste site for which you are requesting a written opinion under the VCP. This information may be found on the VCP Agreement.

Facility/Site Name: Closed City of Yakima Landfill Site/Interstate 82 Exit 33A Yakima City Landfill

Facility/Site Address: 805 North 7th Street, Yakima, Washington

Facility/Site No: 1927	VCP Project No.: CE0406

Step 2: REQUEST WRITTEN OPINION ON PLAN OR REPORT

What type of independent remedial action plan or report are you submitting to Ecology for review under the VCP? Please check all that apply.

- ☐ Remedial investigation plan
- ☒ Remedial investigation report
- ☐ Feasibility study report
- ☐ Property cleanup* plan (* cleanup of one or more parcels located within the Site)
- ☐ Property cleanup* report
- ☐ Site cleanup plan
- ☐ Site cleanup report
- ☐ Other – please specify:

Do you want Ecology to provide you with a written opinion on the planned or completed independent remedial action?

☒ Yes ☐ No

Please note that Ecology's opinion will be limited to:

- Whether the planned or completed remedial action at the site meets the substantive requirements of the Model Toxics Control Act (MTCA), and/or
- Whether further remedial action is necessary at the site under MTCA.

Step 3: REPRESENTATIONS AND SIGNATURE

The undersigned representative of the Customer hereby certifies that he or she is fully authorized to request services from Ecology under the Agreement for this VCP Project.

Name: Jeffrey A. Fellows, PE		Title: Senior Associate Engineer
Signature:		Date: April 13, 2015
Organization: Landau Associates, Inc.		
Mailing address: 130 2nd Ave South		
City: Edmonds	State: WA	Zip code: 98020
Phone: 425-329-0305	Fax: 425-778-6409	E-mail: jfellows@landauinc.com

Step 4: SUBMITTAL

Please mail your completed form and the independent remedial action plan or report that you are requesting Ecology review to the site manager Ecology 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: VCP Coordinator 3190 160th Ave. SE Bellevue, WA 98008-5452	**Central Region:** Attn: VCP Coordinator 15 W. Yakima Ave., Suite 200 Yakima, WA 98902
Southwest Region: Attn: VCP Coordinator P.O. Box 47775 Olympia, WA 98504-7775	**Eastern Region:** Attn: VCP Coordinator N. 4601 Monroe Spokane WA 99205-1295

If you need this publication in an alternate format, please call the Toxics Cleanup Program at 360-407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

Remedial Investigation
Interim Data Report – September 2014 through January 2015
Closed City of Yakima Landfill Site

April 13, 2015

Prepared for

City of Yakima

LANDAU ASSOCIATES
130 2nd Avenue South
Edmonds, WA 98020
(425) 778-0907

EXECUTIVE SUMMARY

This Interim Data Report presents the data collected between September 2014 and January 2015, and the associated preliminary findings and conclusions, for the Remedial Investigation (RI) in progress at the closed City of Yakima Landfill Site (Site) located in Yakima, Washington. The Site is defined by the extent of the municipal solid waste (MSW) within the former landfill, including the extent of contamination associated with potential releases from the former landfill.

PURPOSE AND SCOPE OF REMEDIAL INVESTIGATION

At the direction of the Washington State Department of Ecology (Ecology), the City entered into the Voluntary Cleanup Program (VCP) in February 2014 and requested that Ecology review reports summarizing previous investigation results (through 2012) relating to the Site and provide its opinion concerning the status of the RI process. Subsequent to this review, Ecology issued an Opinion Letter (2014) indicating that characterization of soil and groundwater at the Site was insufficient to support the selection of a cleanup action, and that additional investigation was needed to complete the RI for the Site.

Based on the data gaps identified in Ecology's Opinion Letter, an RI work plan (Work Plan) was prepared and submitted on August 11, 2014 for Ecology's approval. The Work Plan outlined the planned approach for further investigation at the Site and was developed to meet the requirements for an RI as defined by the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation [Washington Administrative Code (WAC) 173-340-350]. The Work Plan described the additional RI activities to be performed, including installation of new groundwater monitoring wells, collection of soil and groundwater samples for chemical analyses, further investigation of the extent of MSW, survey of landfill gas (LFG) concentrations, and preparation of a Terrestrial Ecological Evaluation (TEE). The Work Plan also included a site-specific Sampling and Analysis Plan (SAP), a Quality Assurance Project Plan (QAPP), and a Site Health and Safety Plan (HASP), per Ecology's requirements.

REMEDIAL INVESTIGATION TO DATE

Two of the four planned quarterly groundwater sampling events have been completed (September and December 2014); the extent of MSW has been further investigated and new LFG probes have been installed (October 2014); and a Site-wide LFG survey has been completed (January 2015). This Interim Data Report presents the results of these RI activities and provides preliminary conclusions regarding the nature and extent of contamination at the Site, based on the data collected to date. Two additional quarterly groundwater monitoring events (March and June 2015) are planned, additional LFG probes will be installed (April 2015), and an additional LFG survey will be conducted (June 2015). The results and

preliminary conclusions presented in this Interim Data Report will be updated upon completion of the additional RI activities and presented in a Supplemental RI Report (to be published late summer 2015).

PRELIMINARY SCREENING CRITERIA

To support the RI for the Site, preliminary screening levels (PSLs) were developed for soil and groundwater that are protective of human health and the environment (in accordance with MTCA requirements). Ecology's Opinion Letter identified that consideration of MTCA Method A and B criteria for unrestricted land uses is appropriate for the Site; therefore, these criteria were used as the basis for the development of PSLs.

The Site-specific groundwater PSLs were established as the lower of the values protective of groundwater as drinking water and as surface water, based on the evaluation methodology outlined in Section 6 of this report. For several compounds, the PSL criterion was lower than the laboratory-specific quantitation limit [QL, applied as the practical quantitation limit (PQL)]. In those instances, the initial chemical-specific PSL was raised to the laboratory-specific QL for data comparison and screening purposes.

Site-specific soil PSLs were also developed for the Site based on MTCA Method A and B criteria for unrestricted land uses, including Method B criteria derived based on direct contact and the 3-phase protection of groundwater model results. However, certain Site-specific soil PSLs were subsequently adjusted, based on the current RI groundwater analytical results, when a preliminary empirical demonstration could be made that the soil concentrations for a given compound are protective of groundwater [per WAC 173-340-747(3)(f)]. This soil PSL adjustment, based on the empirical demonstration approach, will be revised based on the results of the additional RI activities, as appropriate.

Furthermore, several soil and/or groundwater PSLs may ultimately be adjusted to regional- or Site-specific background values, in accordance with the procedures outlined in MTCA and based on additional RI results. Surface water-specific PSLs were not developed for the Site because surface water is not considered an affected media, and because the groundwater PSLs have been established to be protective of surface water.

Based on MTCA cleanup regulations [WAC 173-340-710(7)(c)], the solid waste closure requirements in chapter WAC 173-304 can be considered the minimum requirements for potential cleanup actions for landfills close prior to 1991. These regulations provide relevant compliance standards that are considered generally applicable and protective for contaminant migration or exposure, in the absence of other directly applicable regulations. Based on current Site conditions (i.e., no onsite structures, etc.), LFG concentrations (in particular methane) at the perimeter of the Site were used as the basis for LFG PSLs.

TERRESTRIAL ECOLOGICAL EVALUATION

In accordance with Ecology's Opinion Letter, a TEE has been prepared based on current Site conditions and is included with this Interim Data Report (Attachment 1). The TEE concludes that the MTCA TEE exclusion assessment criteria cannot be met for the Site. However, consideration of the relevant risk-based screening criteria, the conditional point of compliance, and the likelihood of future institutional controls (e.g., restrictions on subsurface activities, etc.) allows the Site to meet the TEE simplified evaluation procedural criteria; therefore, no further evaluation is required.

CONTAMINANTS OF POTENTIAL CONCERN

Based on the investigation outlined in the submitted Work Plan, soil and groundwater samples were selectively analyzed for total petroleum hydrocarbons (TPH), metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and conventional parameters (e.g., nitrate, fluoride, pH, etc.). Based on the RI results to date, the detections of these compounds above the laboratory reporting limits (RL), with the exception of metals in both soil and groundwater samples, were very limited at the Site. Furthermore, many of the compounds that were detected were identified in samples collected at locations hydraulically upgradient of the Site and, therefore, are not considered to be associated with historical Site operations. The concentrations of these compounds will be further evaluated during the additional RI activities; a summary of the RI results to date (by media type) is provided below.

Soil

Metals were the most frequently detected compounds in soil at the Site, including arsenic, barium, calcium, chromium (III), iron, lead, magnesium, manganese, and sodium; cadmium, hexavalent chromium, mercury, selenium, and silver were not detected at concentrations above the laboratory RLs in any of the samples collected in September or December 2014. Of these detected metals, only iron was detected at a concentration greater than its corresponding PSL; however, all of the detected concentrations were below the statewide 90^{th} percentile value for iron [i.e., 43,100 milligrams per kilogram (mg/kg)]. Therefore, iron is not considered a preliminary contaminant of potential concern (COPC) for the Site.

Based on the data evaluated to date, TPH, conventional and field parameters, PCBs, and VOCs are not currently identified as preliminary COPCs in Site soil. However, certain pesticides, SVOCs, and PAHs could be considered as preliminary COPCs, either because of their presence at concentrations greater than the corresponding soil PSLs or because the compound was also detected in co-located groundwater samples. These compounds include 4,4'-DDD, n-nitrosodiphenylamine, and several PAHs.

These compounds will be further evaluated during the additional RI activities, as appropriate, and their potential to be a Site COPC will be reevaluated in the Supplemental RI Report.

Groundwater

As with the soil results, the most frequently detected compounds in groundwater were metals (both total and dissolved). Of the dissolved metals detected, dissolved arsenic, iron, manganese, and sodium were identified at concentrations greater than their corresponding PSLs in several samples. These PSL exceedances were identified at locations throughout the area of investigation, both within the Site, and hydraulically upgradient and hydraulically downgradient of the Site. In part, these detected concentrations reflect the area-wide reducing conditions that are apparent in the shallow aquifer, as discussed further below. With respect to dissolved arsenic, none of the concentrations detected during the sampling events completed to date were greater than either the federal drinking water criterion or state background value; dissolved metals concentrations will be further evaluated as part of the additional RI activities.

TPH [specifically TPH-diesel (TPH-D) and TPH-oil (TPH-O)] was identified at several sampling locations at concentrations greater than their respective groundwater PSLs; however, all but one of the locations where TPH was detected were located hydraulically upgradient of the Site in locations not considered to be associated with historical Site operations. TPH-D and TPH-O concentrations were detected in one Site sample in December 2014, but the detected concentrations were below the PSLs based on the analysis using silica gel cleanup. TPH is not considered a preliminary COPC for the Site; however, TPH concentrations will continue to be evaluated during the next two rounds of groundwater sampling and analysis.

Other preliminary COPCs in groundwater that will be further evaluated during the additional RI activities, either because of corresponding PSL exceedances or the frequency of detections, include pH (numerous detections outside the PSL range); 4,4'-DDD and 4,4'-DDT (each greater than the PSL in one Site sample location); Aroclor 1242 (several low detected concentrations, all less than the PSL based on Total PCBs); chloroform (detected at three locations in the area of investigation); vinyl chloride (one Site sample greater than the PSL); bis(2-ethylhexyl)phthalate (numerous area-wide samples greater than the PSL); 3,3'-dichlorobenzidine (hydraulically downgradient exceedance); and n-nitrosodiphenylamine (one Site sample greater than the PSL). These compounds will be further evaluated during the March and June 2015 groundwater monitoring events, as outlined in the submitted Work Plan.

Landfill Gas

Based on the results of the Site-wide LFG survey conducted in January 2015, none of the samples collected along the southern perimeter of the Site indicated concentrations greater than the LFG PSL (based on methane concentrations). However, methane concentrations greater than the PSL were detected in samples collected along the western and northwestern perimeters, and along the north/northeastern perimeter. The LFG probes along the southern perimeter were installed in areas where no wood debris or MSW was identified. The LFG probes to the west, northwest, and north of the Site were installed in areas of wood debris (but no MSW); the presence of this wood debris is influencing methane concentrations, which cannot directly be linked to historical MSW landfill activities at the Site. LFG concentrations will be further evaluated in June 2015 after the remaining LFG probes are installed along the Site's eastern boundary (April 2015).

PRELIMINARY FINDINGS AND CONCLUSIONS

Based on the RI results to date, and with the exception of metals which have been detected in both soil and groundwater samples, the detections of other compounds in Site soil and groundwater is very limited. TPH has been detected in both soil and groundwater samples during the RI; however, these detections and corresponding concentrations greater than the PSLs, have been in samples collected at locations hydraulically upgradient of the Site and these detections are not considered associated with historical Site operations.

In general, the dissolved metals results for groundwater indicate that the entire area of investigation is being affected to some degree by groundwater aquifer reducing conditions resulting from the presence of wood debris, MSW, or both. Oxygen is consumed during the natural degradation of solid waste and wood debris in the subsurface creating reducing conditions that allows some metals to become mobile through precipitation into the dissolved phase. This is a biological process during which available electron acceptors are chemically reduced sequentially based on potential energy yield (oxygen, nitrate, manganese, iron, arsenic, and sulfate), transitioning from an aerobic to anaerobic environment. As consumption of the electron acceptors continues during this natural attenuation process, then reducing conditions increase.

As groundwater moves first through the areas of buried wood debris located hydraulically upgradient of the Site, and eventually through the areas of combined wood debris and MSW, the available oxygen/carbon in the aquifer is consumed, thereby creating reducing conditions. As the groundwater passes through the Site and leaves the area of combined wood debris and MSW, the reducing conditions begin to dissipate as metals concentrations decrease and nitrate and sulfate concentrations start to rebound. The hydraulically cross-/downgradient areas to the south of the Site do not appear to display the

reducing conditions seen in other parts of the area of investigation, in part because of the lack of wood debris and MSW to provide an organic electron donor and the continued "fringe" influence of groundwater that is higher in oxygen content.

Mitigation of these area-wide reducing conditions could possibly be achieved through source removal [i.e., removal of the material (wood debris/MSW) that is providing the electron donor (carbon)]. However, given the size and complexity of the Site and the surrounding properties, mass removal of these materials is impracticable and would present a substantial and disproportionate cost.

With respect to LFG concentrations, methane and the other LFG components are generated by microbes during the anaerobic degradation of materials such as MSW and wood debris; this degradation process is highly dependent upon the type of waste, the moisture content, and the subsurface conditions. Depending on site conditions, LFG production can last from 20 years to more than 50 years; based on the methane concentrations in LFG probes located within the Site, some level of LFG production is anticipated to occur into the near future. No buildings or other structures are present at the Site, so the LFG that is being generated passively escapes to the atmosphere. As development of the Site is considered, future design strategies will likely need to consider potential mitigation of LFG, or the source for LFG production (i.e., MSW, wood debris) could be removed, which as mentioned previously, is impracticable on a large scale.

CLEANUP STANDARDS EVALUATION

Based on the guidelines established under MTCA, cleanup standards consist of: 1) cleanup levels (CLs), as defined by regulatory criteria, which are determined to be adequately protective of human health and the environment, and 2) the point(s) of compliance at which the CLs must be met for each media of concern. The Site-specific cleanup standards developed are then used to set the basis for establishing remedial action objectives (RAOs) for potential remedial actions, if required, which will then be evaluated as part of the Feasibility Study (FS) process.

CLs for affected media developed under MTCA represent the concentration of a compound that is protective of human health and the environment for identified potential exposure pathways, based on the highest beneficial use (HBU) and the reasonable maximum exposure (RME) for each affected media. The point of compliance is the location on the Site where the CL must be attained. Ultimately, the point(s) of compliance for affected media will be selected by Ecology and presented in the Site Cleanup Action Plan (CAP), as appropriate. The process for developing the CLs and point(s) of compliance, and identifying the HBU and RME for affected media, will be presented in the Supplemental RI Report; however, this Interim Data Report does discuss the basis for this process.

The media-specific PSLs discussed in this Interim Data Report can initially be considered as applicable preliminary CLs (PCLs), with the levels for various analytes raised to the laboratory QL (applied as the PQL) or natural- or regional-background concentrations, per the guidelines under MTCA. Based on the current RI results, PCLs may be set for compounds identified in groundwater and for LFG constituents, but likely not for compounds identified in soil. Soil PSLs consider criteria protective of groundwater in those instances where current RI groundwater PSL exceedances do not empirically demonstrate that concentrations in soil are adequately protective of groundwater; current soil PSLs will be reevaluated based on the results of the remaining groundwater sampling RI activities.

With the exception of dissolved metals, compounds detected in groundwater samples at concentrations greater than their corresponding groundwater PSLs were identified predominately at locations hydraulically upgradient or within the Site. The elevated dissolved metals concentrations are an area-wide issue, and not directly linked to the Site. In some instances, the dissolved metals PSLs are set based on drinking water criteria (aesthetics/taste in the case of dissolved iron and manganese). As discussed in this Interim Data Report, groundwater is not currently and will not be used as drinking water at or downgradient of the Site. However, PCLs will likely be established for selected dissolved metals as part of the RI process, but any potential remediation requirement will be linked to area-wide considerations and the identified point of compliance (to be discussed further in the Supplemental RI Report upon completion of the RI activities).

With respect to LFG compound concentrations, based on current Site conditions (i.e., the absence of structures, etc.), PCLs for LFG compounds (specifically methane) will be most directly related to compliance requirements at the perimeter of the Site.

POTENTIAL REMEDIAL ACTION CONSIDERATIONS

Soil

The remedial action strategy for potentially addressing impacted soil at the Site will be need to comply with the Site's groundwater cleanup standards and/or to meet standards designed to minimize human or environmental exposure to affected soil (e.g., containment, etc.). Based on current sampling results and existing Site conditions, is it likely that exposure to potentially affected soil will be managed through institutional controls/restrictive covenants that will limit activities that might expose potential receptors to the surface soil and the underlying MSW (e.g., prohibiting drinking water wells, managing excavation during redevelopment, etc.). A restrictive covenant prohibiting residential use of the Site has already been established by the Site's owner (Boise Cascade Corporation/Office Depot, Inc.). With the likelihood that the Site will be redeveloped in the future, areas of potential soil contamination (and MSW)

may be addressed through removal to support redevelopment requirements, but not directly for soil remediation.

Groundwater

Based on the RI results to date and a preliminary proposed point of compliance at the hydraulically downgradient edge of the Site, only a few compounds (with the exception of dissolved metals) have been identified in groundwater hydraulically downgradient of the Site. The dissolved metals and the associated groundwater aquifer reducing conditions are present area-wide. The most direct approach to address these reducing conditions would be source removal (i.e., wood debris and MSW). However, given the size of the Site and the surrounding properties, as well as the volume of the materials present, removal of materials on this scale would be impracticable and disproportionately cost prohibitive.

If dissolved metals concentrations need to be addressed, other alternatives could be considered. However, many of the dissolved metals PSLs (and potential PCLs) are based on protection of drinking water criteria. The dissolved arsenic PSL is based on the groundwater protective of surface water criterion. The detected dissolved arsenic concentrations to date are all below regional background and the arsenic concentrations are not considered as a primary driver for potential groundwater remediation at the Site. Given that groundwater at and hydraulically downgradient of the Site will not be used as a drinking water source, institutional controls/deed restrictions (combined with long-term monitoring) will likely be sufficient to address the limited impacts to groundwater relating to the Site.

Landfill Gas

Potential remediation requirements to address LFG compounds (particularly methane) will be more directly linked to future Site development scenarios and considerations. Based on existing Site conditions (e.g., no buildings or structures, etc.) no immediate remediation of LFG concentrations may be required. However, potential remedial action scenarios to address the other media of concern (e.g., soil/MSW containment, etc.) could influence LFG exposure pathways at the Site and those scenarios would require consideration of some level of LFG mitigation based on potential new migration pathways.

The information in this Executive Summary and the associated Interim Data Report was developed based on the data collected through January 2015. Once the additional RI activities are completed (June 2015; see Section 1.0); a Supplemental RI Report will be published in late summer 2015 to provide a comprehensive presentation and evaluation of the RI data for the Site.

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APPENDICES

ATTACHMENT

LIST OF ABBREVIATIONS AND ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirements
ASTM	American Society for Testing and Materials
BEHP	bis(2-ethylhexyl)phthalate
BGS	below ground surface
BTEX	benzene, toluene, ethyl benzene, and total xylenes
CAP	cleanup action plan
CFR	Code of Federal Regulations
City	City of Yakima
CL	cleanup level
COPC	contaminant of potential concern
cPAH	carcinogenic polycyclic aromatic hydrocarbons
CRB	Columbia River Basalt
CWA	Clean Water Act
CY	cubic yards
Ecology	Washington State Department of Ecology
°F	degrees Fahrenheit
FS	feasibility study
ft	feet
HASP	Health and Safety Plan
HBU	highest beneficial use
HCID	hydrocarbon identification
I-82	Interstate 82
LEL	lower explosive limit
LFG	landfill gas
MCL	maximum contaminant level
MDL	method detection limit
MFS	minimum functional standards
mg/kg	milligrams per kilogram
Mill	Former Boise Cascade Mill Facility
MRL	method reporting limit
MSL	mean sea level
MSW	municipal solid waste
MTCA	Model Toxics Control Act
NTR	National Toxics Rule
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCL	preliminary cleanup level
PID	photoionization detector
ppm	parts per million
PQL	practical quantitation limit
PSL	preliminary screening level
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
QL	quantitation limit
RAO	remedial action objectives
RI	Remedial Investigation
RL	reporting limit
RME	reasonable maximum exposure

LIST OF ABBREVIATIONS AND ACRONYMS (CONT.)

SAP	Sampling and Analysis Plan
SCG	silica gel cleanup
SIM	selected ion monitoring
Site	Closed City of Yakima Landfill Site
SL	screening level
SVOC	semivolatile organic compound
TDS	total dissolved solids
TEE	Terrestrial Ecological Evaluation
TEQ	toxicity equivalency
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TPH-D	diesel-range total petroleum hydrocarbons
TPH-Dx	total petroleum hydrocarbons diesel-extended range
TPH-G	gasoline-range total petroleum hydrocarbons
TPH-O	oil-range total petroleum hydrocarbons
TSS	total suspended solids
UEL	upper explosive limit
VC	vinyl chloride
VCP	Voluntary Cleanup Program
VOC	volatile organic compound
WAC	Washington Administrative Code
WSDOT	Washington State Department of Transportation
Work Plan	Remedial Investigation Work Plan
Yakima Resources	Yakima Resources, LLC
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

1.0 INTRODUCTION

This document presents the results of the data collected through January 2015 and the associated preliminary findings and conclusions for the Remedial Investigation (RI) in progress at the closed City of Yakima Landfill Site (Site) located in Yakima, Washington (Figure 1). The Site is located at the southern end of the former Boise Cascade Mill and Plywood Facility (Mill Facility) on the eastern edge of the City of Yakima (City). The Site is defined by the extent of the municipal solid waste (MSW) within the former landfill, including the extent of contamination associated with potential releases from the former landfill.

At the direction of the Washington State Department of Ecology (Ecology), the City entered into the Voluntary Cleanup Program (VCP) in February 2014 (VCP Project CE040; SLR 2014) and requested that Ecology review reports summarizing the results of the previous investigations conducted through 2012 relating to the Site and provide its opinion concerning the status of the RI process. Following review of the reports provided as part of the VCP application, Ecology issued an Opinion Letter regarding the Site investigation process to date (Ecology 2014). The Opinion Letter indicated that characterization of soil and groundwater at the Site was insufficient to support the selection of a cleanup action, and that additional investigation is needed to complete the RI for the Site. Specific data gaps identified in Ecology's Opinion Letter include the following:

- The potential presence and associated lateral and vertical extent of soil contamination at the Site has not been fully investigated.
- The extent of municipal solid waste (MSW) along the eastern edge of the Site has not been fully identified and potential methane concentrations have not been assessed in this area.
- The lateral and vertical extent of groundwater contamination at the Site has not been fully characterized and four consecutive quarters of groundwater sampling and analysis is recommended to effectively support Site groundwater characterization.
- A terrestrial ecological evaluation (TEE) is required for the Site (Ecology 2014).

Based on the data gaps identified in the Ecology Opinion Letter, an RI work plan (Work Plan) was prepared and submitted for Ecology's approval. The Work Plan outlined the planned approach for further investigation at the Site to address Ecology's identified data gaps and complete the RI (Landau Associates 2014). This Work Plan was developed to meet the requirements for an RI as defined by the Washington State Model Toxics Control Act (MTCA) Cleanup Regulation [Washington Administrative Code (WAC) 173-340-350]. The Work Plan described the RI activities to be performed, and included a schedule for data collection, evaluation, and reporting. As requested in Ecology's Opinion Letter, the Work Plan also included a site-specific Sampling and Analysis Plan (SAP); a Quality Assurance Project

Plan (QAPP); and a Site Health and Safety Plan (HASP)[1]. The Work Plan has been submitted to Ecology and is the basis for the investigative, analytical, data evaluation, and reporting activities in progress for the RI.

To date, the following activities identified in the Work Plan have been completed at the Site:

- September 2014:
  - Drilling of ten soil borings (i.e., SB-100 through SB-109), including collection of soil samples for chemical analyses
  - Completion of the ten borings as groundwater monitoring wells (i.e., MW-100 through MW-109)
  - Collection of water level measurements from 28 Site-wide groundwater monitoring wells
  - Collection of groundwater samples for chemical analyses from 24 Site-wide groundwater wells, including the 10 newly installed wells.
- October 2014:
  - Further investigation of the extent of MSW along the northeastern and eastern edges of the former Landfill Parcel
  - Installation of four new landfill gas (LFG) probes (i.e., GP-23 through GP-26), including collection of soil samples for chemical analyses during drilling for probe installation.
- December 2014:
  - Collection of water level measurements from 29 Site-wide groundwater monitoring wells
  - Collection of groundwater samples for chemical analyses from 26 Site-wide groundwater wells
  - Site-wide LFG probe survey
  - Ongoing evaluation of Site-wide drainage and surface water infrastructure.
- January 2015:
  - Site-wide LFG probe survey.

Planned RI activities include:

- March 2015:
  - Collection of water level measurements from 29 Site-wide groundwater monitoring wells
  - Collection of groundwater samples for chemical analyses from 26 Site-wide groundwater wells.
- April 2015:
  - Installation of up to five new LFG probes along the eastern edge of the Site, pending receipt of a formal access agreement from the Washington State Department of Transportation (WSDOT).

[1] Revised versions of these three plans will be provided with the Supplemental RI report to be published in summer 2015 following the third and fourth quarters of groundwater sampling (i.e., March and June 2015 events).

- June 2015:
  - Collection of water level measurements from 29 Site-wide groundwater monitoring wells
  - Collection of groundwater samples for chemical analyses from 26 Site-wide groundwater wells
  - Site-wide LFG probe survey.
- Summer 2015:
  - Data validation and RI report preparation.

This report provides an overview of historical investigations and ongoing RI activities, discusses findings based on the data collected to date, and provides initial conclusions and recommendations relevant to the selection of a remedial action for the Site consistent with MTCA. A comprehensive Supplemental RI Report will be prepared subsequent to completion of the planned March and June 2015 investigation events.

2.0 SITE BACKGROUND AND HISTORY

This section provides an overview of the history of the Site and its vicinity. As mentioned previously, the Site is the location of the closed City of Yakima Landfill that is defined by the extent of the MSW within the former landfill, including the extent of potential contamination associated with releases from the former landfill. The former landfill covers an area of approximately 33 acres and is located across portions of three parcels, consisting of an approximately 38-acre Landfill Parcel (19131841001; owned by the Boise Cascade Corporation[2],) a second approximately 15.5-acre parcel (19131842001; owned by the LeeLynn, Inc. and Wiley Mt., Inc.), and an area adjacent to Interstate 82 (I-82) that is owned and maintained by WSDOT (Landau Associates 2013).

Between 1963 and 1970, the City operated an MSW landfill at the Site. As part of landfill operations, MSW was placed in a former log pond that originally occupied the Site (City of Yakima 1996). By the time landfill operations ceased in 1970, the MSW was covered and the area brought to grade with a mixture of fill soil and wood debris. The Site was then used until 2010 for log storage, including temporary log storage and log chipping operations by the tenant of the Landfill Parcel [Yakima Resources, LLC (Yakima Resources)].

The Site is currently primarily covered with wood debris and various mixtures of reclaimed bark, fines, and rock. Vegetation has started to reclaim some areas of the Site. The Site is situated at an elevation of approximately 1,070 feet (ft) above mean sea level (MSL), sloping slightly to the east and southeast, toward the Yakima River (which is located approximately 600 ft to the east, beyond I-82).

[2] Boise Cascade Corporation is listed on the Yakima County Assessor's website as the current property owner. The City understands that Boise Cascade Corporation became OfficeMax and is currently Office Depot, Inc.

3.0 PREVIOUS INVESTIGATIONS AND REMEDIAL ACTIONS

Since 1998, several investigations have been conducted that focused on the environmental conditions at or in the vicinity of the Site. Previous investigations have included assessment of soil, soil vapor/LFG, and groundwater; historical investigation locations completed prior to this RI in the vicinity of the Site and the current groundwater monitoring well network are shown on Figures 2 and 3, respectively. Results from each investigation are discussed in the sections that follow based on the information available for review at the time this document was prepared; results of the various investigations are summarized in Appendix A, as available. A general summary of each of the previous investigations is presented below.

3.1 INTERSTATE 82 OFF-RAMP CONSTRUCTION AND MUNICIPAL SOLID WASTE REMOVAL (1996)

In early 1996 during the construction of an off-ramp to support the I-82 Gateway Project, MSW was encountered at the extreme southeastern edge of the Site. WSDOT, in coordination with Ecology, evaluated the necessity to remove all or a portion of the identified MSW to support construction of the off-ramp. Ultimately it was determined that the off-ramp could be constructed on top of the MSW, if the material was determined to be suitable to support the construction. However, approximately 2,000 cubic yards (CYs) of MSW was removed for construction-stability purposes and to allow for installation of a buried 42-inch diameter drainage pipe beneath the off-ramp that discharges east of I-82 into the Yakima River. The removed MSW was disposed of at the Terrace Heights Landfill (CH2M Hill 1996).

3.2 1998 HYDROGEOLOGIC STUDY

In 1998, an investigation was conducted by Landau Associates to assess the hydrogeologic conditions within the general area of the Mill Facility. The investigation included the installation and monitoring of six groundwater monitoring wells (designated MW-5 through MW-10), and the monitoring of four existing groundwater monitoring wells (MW-1 through MW-4[3]); the latter four wells were originally installed to evaluate groundwater conditions at a wood waste landfill established at the northeastern corner of the Mill Facility in 1990 (Boise Cascade 1990). The groundwater well locations are shown on Figure 3; monitoring well construction logs are provided in Appendix B.

The monitoring wells noted above were installed near, but not within the boundaries of the Site (i.e., within the boundaries of the MSW). The results of the investigation indicated that the direction of

[3] As of the start of this RI (i.e., September 2014) MW-2, MW-3, and MW-4 could no longer be located/identified and are presumed to be either buried under debris or destroyed.

the shallow groundwater flow in the area of investigation was consistently from the northwest to the southeast, toward the Yakima River. Landau Associates measured pH in groundwater on July 29, 1998; pH concentrations ranged from 6.54 to 7.08. The lowest pH concentrations were detected at wells located to the northwest or north (and hydraulically upgradient) of the Site; investigation results are summarized in Table A-1 (Landau Associates 1998).

3.3 2008 SUBSURFACE INVESTIGATION

In 2008, Parametrix conducted a subsurface investigation that included the Site and adjacent parcels on the Mill Facility. The objectives of the investigation were to assess groundwater conditions beneath the area, to estimate the extent of the MSW, and to assess the potential for soil vapor (i.e., methane) generation and migration. The investigation included conducting a geophysical survey; excavating 14 test pits; advancing 2 soil borings; installing a new groundwater monitoring well (MW-9A) to replace MW-9 (a well that had gone dry); installing 3 soil vapor probes (GP-l, GP-2, and GP-3); collecting groundwater samples for analysis from wells MW-7, MW-8, and MW-9A; and collecting soil vapor samples from the soil vapor probes and from wells MW-7, MW-8, MW-9, and MW-9A for methane analysis (Parametrix 2008). The approximate locations of the Parametrix investigations are shown on Figures 2 and 3. Monitoring well construction logs, exploratory test pit logs, and LFG probe logs are provided in Appendices B, C, and D, respectively.

The groundwater samples were analyzed for total petroleum hydrocarbons (TPH) in the gasoline-, diesel-, and oil-ranges (TPH-G, TPH-D, and TPH-O, respectively); for benzene, toluene, ethylbenzene, and total xylenes (BTEX); and for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), total and dissolved metals, and conventionals (i.e., anions). The methane concentrations at soil vapor probes GP-1 and GP-3 exceeded the upper explosive limit (UEL; 15 percent by volume) (Parametrix 2008). The analytical data from the 2008 Parametrix investigation is presented in Table A-2[4].

3.4 2009 REMEDIAL INVESTIGATION

In 2009, SLR conducted an RI at the Site to assess potential environmental conditions that would require remedial action under MTCA (SLR 2009). The 2009 RI activities consisted of the following:

- Test pits TP-8 through TP-63 were excavated to delineate the lateral extent of the MSW (test pit locations are shown on Figure 2). Test pit logs are included in Appendix C.

[4] The Parametrix investigation data is presented as provided directly from the investigation report (Parametrix 2008).

- Soil borings SB-1 through SB-41 were advanced to define the MSW thickness and geometry relative to native soils, fill, wood debris, and the groundwater table (soil boring locations are shown on Figure 2). Soil boring logs are included in Appendix E.
- Groundwater samples were collected from borings SB-11, SB-13, SB-16, SB-18, and SB-19 to evaluate groundwater quality immediately beneath the landfill (these groundwater grab samples were considered leachate samples).
- Soil vapor probes GP-4 through GP-18 were installed; these probes and existing probe GP-3 were monitored to evaluate the extent of methane in subsurface soils (the probe locations are shown on Figure 4). Soil vapor/LFG probe logs are included in Appendix D.
- Groundwater monitoring wells MW-11, MW-12, and MW-13[5] were installed, and groundwater samples were collected from these new wells and existing wells MW-7, MW-8, and MW-9A to further evaluate the groundwater flow direction beneath the landfill area and the groundwater quality upgradient and downgradient of the landfill. The groundwater samples were analyzed for TPH-G, TPH-D, TPH-O, VOCs, SVOCs, PCBs, dissolved metals, conventionals (i.e., anions), and pH. Monitoring well construction logs are included in Appendix B.

Groundwater analytical results for metals and conventionals are included in Appendix A-3; soil vapor/LFG investigation results are presented in Appendix A-4. According to the RI report, no VOCs or SVOCs were detected in groundwater samples at concentrations above the screening levels (SLs) or method reporting limits (MRLs) used specifically for the 2009 investigation. Methane concentrations detected in soil vapor ranged from 0 to 58.5 percent (SLR 2009).

3.5 2009–2010 ADDITIONAL INVESTIGATION

Between November 2009 through February 2010, SLR completed an additional investigation at the Site to: 1) evaluate sources and seasonal variations of methane in soil vapor, 2) identify the sources of the groundwater contaminants, 3) delineate the downgradient (south-southeast) extent of the impacted groundwater, 4) characterize any seasonal variations in groundwater flow direction and contaminant concentrations, and 5) assess the hydraulic interactions between shallow groundwater and the Yakima River (SLR 2010). The work consisted of the following activities:

- Soil vapor probes GP-19 through GP-22 were installed and two soil vapor sampling events were conducted in November 2009 and February 2010 for methane analysis (locations of these probes are shown on Figure 4; soil vapor/LFG probe logs are included in Appendix D).
- Installation of groundwater monitoring wells MW-14 through MW-18 (see Figure 3); monitoring well construction logs are included in Appendix B.
- Four gauging stations RG-l through RG-4 were marked and surveyed on the west bank of the Yakima River (see Figure 3).
- Groundwater sampling events were conducted in November 2009 and February 2010 that included the wells associated with the Site (i.e., MW-7, MW-8, MW-9A, and MW-11

[5] MW-13 was destroyed in early 2013. Newer monitoring well FPP-MW-3 was placed, in part, as MW-13's replacement.

through MW-18) and surface water samples from the Yakima River at locations upstream of the Site. The groundwater samples were analyzed for the preliminary groundwater contaminants of potential concern (COPCs), including vinyl chloride (VC), nitrate, pH, and dissolved arsenic, sodium, iron, and manganese, as well as additional conventional parameters (i.e., calcium, chloride, sulfate, magnesium, and alkalinity).

Methane concentrations detected in soil vapor samples ranged from 0 to 77.7 percent. VC was not detected in any of the groundwater samples analyzed. Groundwater, soil vapor/LFG, and surface water investigation results are included in Appendices A-3, A-4, and A-5, respectively.

3.6 WOOD DEBRIS REMOVAL

In 2010, Yakima Resources removed a large volume of wood debris from the area to the northeast of the Site and south of the BNSF Railway railroad tracks, including wood debris that was on top of the known extent of MSW. Although not considered a remedial action, the removal of the wood debris may have reduced the volume of material influencing the production of LFG in this area. The removal of the wood debris reduced the relative elevation of the ground surface in this area by up to 15 ft in some locations. The extent of MSW in the northeastern corner of the Site was further investigated in October 2014 as part of the RI (discussed further in Section 4.4).

3.7 2012 SOIL VAPOR AND GROUNDWATER SAMPLING EVENT

In May 2012, SLR conducted a soil vapor and groundwater sampling event to assess conditions associated with higher seasonal groundwater elevations (SLR 2012). The soil vapor sampling event included the sampling of the remaining soil vapor probes that were installed in borings (GP-3 through GP-20[6]) for methane analysis (see Figure 4 for locations). Groundwater samples were collected from MW-7, MW-8, MW-9A, and MW-11 through MW-18 (see Figure 3 for well locations). In the northeastern portion of the Site where wood debris was removed in 2010, the methane concentrations detected in May 2012 were lower than previous results (see Section 3.6). VC was not detected in the groundwater samples analyzed. Investigations results are summarized in Appendices A-3 and A-4; monitoring well construction logs and LFG probe logs are included in Appendices B and D, respectively.

3.8 2013 PHASE II – FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS

In June 2013, Landau Associates conducted a Phase II investigation at parcels located immediately adjacent to the northwest and hydraulically upgradient of the Site (Landau Associates 2013). The purpose of the investigation was to evaluate and document environmental conditions to assess

[6] GP-21 and GP-22 were accidentally destroyed by ongoing property operations.

potential releases related to historical Mill Facility operations (located hydraulically-upgradient of the Site). Investigation activities included the following:

- Soil borings were advanced at 48 locations for selected soil and groundwater sampling and analysis.
- Five additional monitoring wells were installed.
- Two rounds of groundwater sampling and analysis were conducted, including the initial sampling of temporary wells installed in soil borings plus sampling of two existing groundwater monitoring wells, and a supplemental sampling of additional temporary wells and the five new monitoring wells.
- Surface water samples (i.e., standing water) were collected and analyzed from three locations.
- Shallow soil gas samples were collected and analyzed from four locations.
- Two wood debris samples were collected and analyzed from one location.
- Samples were selectively analyzed for some or all of the following constituents: TPH-G, TPH-D, TPH-O, VOCs, SVOCs, PCBs, metals, total suspended solids (TSS), pH, and total organic carbon (TOC).

The results of the Phase II investigation identified contaminants of concern at concentrations above the SLs, which were based on applicable regulatory criteria, including TPH-D and TPH-O in soil and groundwater, and dissolved metals in groundwater. Specifically, the findings included:

- TPH-O and TPH-D concentrations exceeded the soil and groundwater SLs specific to the 2013 Phase II investigation in samples collected within the former Plywood Plant parcels only (northwest and hydraulically upgradient of the Site).
- Dissolved arsenic, iron, manganese, and sodium were detected in several groundwater samples at concentrations greater than the SLs used specifically for the investigation. The highest percentage of these dissolved metals was identified in samples collected from within the former Plywood Plant parcel. Dissolved metals (with the exception of dissolved manganese) were detected to a lesser degree in the samples collected in the Triangular Parcel (located north of the BNSF Railway tracks and hydraulically upgradient of the Site).

Analytical results from this two-part investigation are summarized in Appendices A-6 through A-10; monitoring well construction logs and soil boring logs are included in Appendices B and E, respectively.

4.0 REMEDIAL INVESTIGATION ACTIVITIES (2014-2015)

As discussed previously, Ecology indicated that further investigation of Site soil, LFG, and groundwater is necessary to evaluate and document the nature and extent of contamination and complete the RI for the Site (Ecology 2014). The additional RI activities were developed to address the data gaps identified by Ecology in its Opinion Letter, and to collect the additional data required to support the evaluation of remedial action alternatives and the selection of a final remedial action for the Site, as appropriate based on the results of the RI. This section presents the scope of the additional RI activities and their current status. Results and findings, based on the RI activities completed to date, are discussed in the later sections of this document.

4.1 INVESTIGATION SUPPORT ACTIVITIES

The activities listed below are being coordinated, as necessary, by Landau Associates representatives as part of the additional RI scope of work. Many of these activities will be ongoing throughout the remaining RI activities.

- Access is being coordinated with the Site owner (Boise Cascade Corporation/Office Depot, Inc.) and current Site tenant (Yakima Resources). Landau Associates provides advance notice to Yakima Resources representatives (a minimum of 5 days) prior to any field activities to reduce potential impacts to their ongoing operations.
- Access agreements are complete or in process with offsite property owners for the additional investigations, as necessary. Access has been coordinated with the City for additional investigation to the south of the Site, and an access agreement is currently under negotiation with WSDOT for additional investigation along the I-82 corridor.
- Public and private utility locators are contacted to identify and mark any utilities within 100 ft of planned investigation locations during the RI activities. Site visits are conducted in advance of potential soil boring/groundwater sampling to identify locations for further investigation and support the required utility locates.
- Daily health and safety meetings are conducted between Landau Associates representatives and the onsite subcontractors for the various RI activities.
- Landau Associates and the identified subcontractors check in daily with Yakima Resources at their administrative office in the former Mill Facility and relay plans for the day's activities. The field crews also check out with Yakima Resources administrative staff at the end of daily activities, as appropriate.
- An updated survey of the existing groundwater well network (including wells installed for this RI) was conducted as part of the evaluation of Site groundwater conditions.

4.2 SOIL INVESTIGATION

The following section summarizes the strategy to further soil investigation at the Site conducted in September and October 2014 to support RI activities. The section includes both the approach for

boring advancement within the known extent of solid waste and in locations upgradient and downgradient of the site. The laboratory analytical program used to evaluate the collected soil samples is also discussed. Soil boring logs are provided in Appendix E.

4.2.1 SOIL BORINGS WITHIN THE EXTENT OF MUNICIPAL SOLID WASTE

Historically, numerous borings and test pits were advanced into and through the MSW to evaluate the vertical and lateral extent of the former landfill. As part of the most recent RI activities, seven borings (i.e., SB-102 through SB-108/MW-102 through MW-108) were advanced at locations within the known extent of MSW to evaluate soil conditions above and below the MSW (see Figure 3). These soil borings were advanced to an approximate depth of 25 ft below ground surface (BGS) to provide for sufficient depth for the subsequent construction of permanent groundwater monitoring wells (see Section 4.3). Drilling through MSW can create a risk for drawdown of contaminants from the MSW into or through underlying less permeable soil layers that may be acting as barriers to vertical contaminant migration. Therefore, the borings advanced through the MSW used step-down drilling methodologies to limit the potential for contaminant drawdown during drilling. Details regarding the step-down drilling methodology are included in the SAP [Appendix A of the Work Plan submitted to Ecology (Landau Associates 2014)].

An environmental professional from Landau Associates supervised the drilling and sampling activities. Soil samples collected during drilling were visually described in the field in general accordance with ASTM International (ASTM) D2488-09a, *Standard Recommended Practice for Description of Soils (Visual-Manual Procedure)*. Subsurface conditions were described and recorded from soil recovered in California split-spoon soil samplers advanced at approximately 2.5 ft intervals. Environmental field screening was conducted at each boring location to evaluate the potential presence of contamination. Field-screening results [e.g., obvious signs of contamination such as staining or discoloration, photoionization detector (PID) readings, headspace analysis, etc.) were recorded on the exploration log. Headspace analyses were conducted by placing a representative portion of the soil in a sealable plastic bag, allowing the soil to vaporize inside the sealed container for five (5) minutes, then inserting the PID tip into the bag to measure total VOCs.

Two soil samples were collected from each boring location for laboratory analyses, with the exception of SB-103, as described below. Soil samples were collected for analyses based on the procedures outlined in the SAP as provided in the Work Plan submitted to Ecology (Landau Associates 2014). One soil sample was collected near the ground surface (approximately 1 to 3 ft BGS) and above the MSW at each boring location. Much of the surface of the former landfill is covered with a mix of soil and wood debris. The depths for collection of the near surface soil samples were determined

in the field based on the presence/absence of wood debris and the availability of sufficient soil volume for sample collection, as appropriate. Insufficient soil volume and the presence of wood debris prevented the collection of a soil sample above the MSW at SB-103.

The second/deeper soil sample collected for analysis at each boring location was from a depth below the MSW interface; no MSW samples were collected for analyses. As noted previously, seasonal groundwater fluctuates through the MSW at several locations within the Site; therefore, these deeper soil samples collected beneath the MSW interface were wet at several sampling locations.

4.2.2 ADDITIONAL SOIL BORINGS

Two soil borings were advanced at locations to the north/relatively upgradient of the MSW (i.e., SB-100, SB-101), and one boring was advanced at a location to the south/relatively downgradient (i.e., SB-109) of the known extent of the MSW (see Figure 3). At these three boring locations, soil samples were collected at 2.5 ft intervals using a California split-spoon sampler and evaluated using field-screening techniques for indications of the likelihood of contamination [as discussed in Section 4.2.1 and as outlined in the SAP as provided in the Work Plan submitted to Ecology (Landau Associates 2014)].

Only one soil sample was collected from each relatively upgradient boring (i.e., SB-100, SB-101) for subsequent laboratory analysis due to the presence of wood debris and insufficient soil volumes in the shallow sections of each borehole. The soil samples collected for analysis from these borings were from directly above the elevation of the groundwater table. Two soil samples were collected for laboratory analysis from the boring SB-109, located to the south of the Site. The two samples were selected from the depth intervals that indicated evidence of potential for contamination, based on field screening and observations made at the time of drilling. These samples included a relatively shallow soil sample and one collected from just above the groundwater table.

4.2.3 LABORATORY ANALYSIS

Shallow soil samples collected from borings within the extent of MSW, as noted above, were analyzed based on the analytical schedule presented in Table 1. In general, shallow soil samples were screened by the laboratory using the hydrocarbon identification (HCID) method and subsequently analyzed for TPH-G and/or TPH-diesel-extended range organics (TPH-Dx[7]), based on the HCID result[8]. For those samples with positive HCID results for diesel- and/or oil-range organics, subsequent TPH-Dx analysis was performed with and without silica gel cleanup (SGC). The shallow soil samples collected from the MSW borings were also analyzed for metals, polycyclic aromatic hydrocarbons (PAHs), and

[7] TPH-Dx analysis includes both diesel- and oil-range organics evaluation.
[8] Only one shallow soil sample collected at SB-106 had a positive initial HCID screen for TPH-G.

conventionals (i.e., fluoride, nitrate, and nitrite). The shallow soil sample collected from the boring relatively downgradient of the Site (i.e., SB-109) was also analyzed for hexavalent chromium, chlorinated pesticides, PCBs, VOCs, and SVOCs. As noted previously, no shallow soil sample was collected at the two relatively upgradient boring locations (i.e., SB-100, SB-101) because of insufficient soil volume.

The deeper soil samples, whether just above the elevation of the groundwater table (locations SB-100, SB-101, SB-109) or beneath the extent of MSW (SB-102 through SB-108), were also analyzed as indicted in Table 1. These samples were also analyzed using the HCID method with follow-on analysis based on the result of the initial HCID screen; subsequent TPH-Dx analysis, if required, was conducted with and without SGC. The deeper soil samples were also analyzed for metals (including hexavalent chromium), chlorinated pesticides, PCBs, VOCs, SVOCs, conventionals (i.e., fluoride, nitrate, and nitrite), and pH. Some analyses were completed outside the method-recommended laboratory holding time, because of either issues at the laboratory or an additional analysis was requested past the holding time, as indicated in Table 1. Results of the soil analysis are discussed in further detail in Section 7.1.

4.3 GROUNDWATER INVESTIGATION

The following section summarizes the construction of the new groundwater monitoring wells and the approach for groundwater sampling and characterization.

4.3.1 NEW GROUNDWATER WELL CONSTRUCTION

The ten soil borings discussed in Section 4.2 were completed as monitoring wells, subsequent to drilling and soil sample collection. The new groundwater monitoring wells were constructed with 2-inch-diameter, schedule 40 polyvinyl chloride (PVC) casings. The seven borings advanced within the footprint of the MSW (i.e., MW-102 through MW-108) were completed with 5 ft screens (0.010 machine slot size) installed beneath the MSW and across the elevation of the groundwater table, where possible. The groundwater elevation at several of the well locations was within the MSW; at these locations the new wells were screened below the bottom of the MSW identified at the time of drilling. The relatively upgradient and downgradient locations (i.e., MW-100, MW-101, and MW-109) were constructed with 10 ft screens (0.010 machine slot size), positioned across the elevation of the groundwater table, as identified at the time of drilling.

The new monitoring wells were developed at the time of construction; groundwater samples were collected at least 72 hours after well development [as outlined in the SAP in the Work Plan submitted to Ecology (Landau Associates 2014)]. Well construction logs are provided in Appendix B.

4.3.2 GROUNDWATER ELEVATION CONTOURING

Prior to sample collection, the depth to groundwater was measured at each of the Site monitoring wells. The depth to water measurements were collected as close in relative time to one another as possible to provide a representative "snapshot" of Site-wide groundwater elevations for use in evaluating the direction of groundwater flow. Depth-to-groundwater was measured from a surveyed reference point on each well casing and the measured depths were converted to elevations to evaluate groundwater flow direction at the site[9]. Relative river surface elevations were also measured at the four river gauges (i.e., RG-1 through RG-4) located on the east side of I-82 along the Yakima River.

The measured depth-to-groundwater and corresponding groundwater elevation data for the September and December 2014 monitoring events are presented in Tables 2 and 3, respectively. The horizontal and vertical locations of the Site monitoring wells, including the ten new groundwater wells constructed in September 2014, were surveyed in October 2014. The survey data are also presented in Tables 2 and 3. The groundwater elevations were plotted on a map and contours were prepared for both September and December groundwater sampling events (Figures 5 and 6, respectively). Site groundwater dynamics are discussed further in Section 5.3.

4.3.3 GROUNDWATER SAMPLING AND FREQUENCY

To date, the additional RI activities have included two quarters/rounds of groundwater monitoring and sampling (September and December 2014). In September 2014, 10 new and 14 existing groundwater monitoring wells within and in the vicinity of the Site were monitored and sampled. The December 2014 round included the 24 wells monitored and sampled in September, plus 2 wells located to the northwest of the Site within the Former Plywood Plant parcel (FPP-MW-1 and FPP-MW-2). These latter two wells were added into the monitoring program to further evaluate hydraulically upgradient TPH contamination identified in this area during the September 2014 monitoring (see Section 7.2.1 for further information).

As outlined in the Work Plan, groundwater samples are being collected for four consecutive quarters; the remaining two quarterly events will occur in March and June 2015, respectively. Groundwater samples for chemical analysis have been and will continue to be collected based on the procedures and methodologies presented in the SAP and QAPP (Appendices A and B, respectively of the Work Plan).

[9] Depth-to-groundwater measurements were also collected at MW-1, MW-3, MW-4, MW-5, and MW-10; no groundwater samples for chemical analysis were collected from these wells.

4.3.4 LABORATORY ANALYSIS AND CONTAMINANTS OF CONCERN

The groundwater samples collected during the September and December 2014 quarters were analyzed based on the analytical schedule and the laboratory methods presented in Tables 4 and 5, respectively. Data quality objectives and data management procedures are discussed in the QAPP included as part of the Work Plan.

As with the soil sampling strategy discussed in Section 4.2, the majority of the groundwater samples were initially analyzed for the potential presence of petroleum hydrocarbons using the HCID method; any subsequent TPH-Dx analysis was conducted with and without SGC. Samples were also analyzed for total and dissolved metals, chlorinated pesticides, PCBs, VOCs, SVOCs, PAHs, conventionals [i.e., fluoride, nitrate, nitrite, chloride, sulfate, alkalinity, bicarbonate, ammonia, TOC, and total dissolved solids (TDS)], as indicated in Tables 4 and 5. Based on the absence of concentrations above the laboratory reporting limits (RLs) during the September 2014 sampling event and issues surrounding its required short holding time, hexavalent chromium was removed from the analyte list for the December 2014 round, and for subsequent rounds pursuant to Ecology approval. The analytical results for the September and December 2014 groundwater monitoring events are discussed in Section 7.2.

4.4 EXTENT OF MUNICIPAL SOLID WASTE INVESTIGATION

As noted in Section 1.0, Ecology requested additional investigation to evaluate and document the extent of MSW along the eastern boundaries of the Site (Ecology 2014). Additional data was also needed to document the boundary of the MSW along the northeastern edge of the Site where wood debris has been removed since the initial RI (SLR 2009) and the relative ground surface elevation has been reduced by almost 15 ft in some locations (see Section 3.6). Therefore, the investigation of the extent of the MSW included explorations along the northeast and eastern boundaries of the Site.

To support this investigation, test pits were advanced between October 27 and 28, 2014 using an excavator to depths between 7 and 13 ft BGS, based on access and field conditions. The locations where the test pits were advanced are shown on Figure 4. Landau Associates representatives logged the conditions of soil and MSW encountered during the test pit excavations; test pit field logs are provided in Appendix C.

The test pit investigation showed that MSW was present as shallow as 1 ft and as deep as 12 ft BGS in the areas investigated in October 2014 (see Figures C-72 through C-85; Appendix C). The test pits were advanced in a step-out pattern until MSW was no longer identified. The extent of the MSW, based on historical investigation and the work completed in October 2014, is shown on Figure 4. The only area where further MSW evaluation could not be completed was the far northeastern corner of the

Site because of the presence of surface water associated with the historical irrigation channel and current drainage patterns. However, given the results of the additional MSW investigation conducted adjacent to this area, is it unlikely that the MSW extends farther than the inferred area shown on Figure 4.

4.5 LANDFILL GAS PROBE SURVEYS

Once the extent of MSW investigation (i.e., test pit exploration program) discussed in Section 4.4 was completed, and the lateral extent of MSW along the northeastern and eastern edges of the Site was better defined, two permanent gas probes (i.e., GP-25 and GP-26) were installed along the newly defined northeastern boundary of the MSW. The new gas probes were installed a minimum of 15 ft from the lateral extent of MSW (see Figure 4), as outlined in the Work Plan (Landau Associates 2014). Up to five additional gas probes will be installed along the eastern edge of the Site (along the I-82 easement) once the access agreement with WSDOT has been finalized[10]. In addition, two gas probes were installed to replace damaged probes GP-21 and GP-22; the locations for these replacement probes (i.e., GP-23, GP-24) are shown on Figure 4.

The four new gas probes were installed using hollow-stem auger methods and soil samples were collected on a continuous basis during drilling using a California split-spoon sampler. Soils encountered during boring advancements were logged by Landau Associates personnel. Soil samples were collected for analysis based on the methodology and approach discussed in Section 4.2 and as identified for the deeper (below MSW) sample collected from borings MW-102 through MW-108, and as outlined in Table 1. However, only one soil sample was collected for analysis from each boring advanced for gas probe construction at the soil interval directly above the groundwater table. The gas probes were constructed with the bottom of their screens a minimum of 5 ft above the seasonal high groundwater elevation. Gas probe construction logs are presented in Appendix D. Soil analytical results from gas probes locations GP-23, GP-24, and GP-26 are discussed in Section 7.1; an insufficient volume of soil was available from the boring for GP-25 for chemical analysis.

In both December 2014 and January 2015, the existing gas probe network (GP-1 through GP-9 and GP-11 through GP-20) and the new gas probes (GP-23 through GP-26) were sampled. To the extent possible, soil vapor/LFG concentrations of methane, oxygen, carbon monoxide, carbon dioxide, hydrogen sulfide, and hydrogen were measured during the gas probe surveys[11].

During completion of the December 2014 gas probe survey, several issues arose that affected the accuracy and representativeness of the survey's results. Since the entire network was installed over years by varying contractors, the varying casing sizes and port adaptors made it problematic to obtain an

[10] Installation scheduled for April 2015.
[11] A CES/Landtec GEM-2000 Plus multi-gas meter or similar meter was used.

effective seal and representative sample results at the various locations. New probe caps/sampling ports were constructed, based on each probe's specific construction, to help ensure that an effective seal was obtained prior to sample collection and a subsequent survey was conducted in January 2015. The results from the January 2015 LFG survey are discussed in Section 7.3. An additional LFG survey will be conducted concurrent with the fourth quarter groundwater sampling event in June 2015.

4.6 ADDITIONAL RI INVESTIGATION ACTIVITIES

As mentioned previously in Section 1.0, two additional quarters of groundwater sampling will be conducted in March and June 2015 and an additional Site-wide gas probe survey will also be conducted during the June 2015 investigation event. The data from the third and fourth quarters will be evaluated to assess the need for and scope of any additional groundwater monitoring or investigation.

Also, up to five additional gas probes will be installed along the eastern boundary pending an approved access agreement with WSDOT; soil samples will be collected for analysis from the borings used for gas probe construction as outlined in Section 4.5. Once these probes have been installed, they will be added to the existing gas probe survey monitoring network at the Site. Installation of these additional probes is scheduled for April 2015.

The data collected through June 2015 will be evaluated and added to the information presented in this report to create the Supplemental RI Report for the Site, which is planned to be completed during summer 2015.

5.0 ENVIRONMENTAL SETTING

This section summarizes information regarding the physical setting of the Site, based in part on the investigations conducted to date, including information on Site geology, hydrogeology, surface water/drainage, natural resources, and the extent of the MSW.

5.1 PHYSICAL CONDITIONS

The following section provides information on the physical setting of the Site, including geography, climate, topography, land use, and the extent of MSW.

5.1.1 GEOGRAPHY AND CLIMATE

The Site is located within the Yakima River Valley of central Washington in Township 13N, Range 19E Willamette Meridian, and in the west-central portion of Section 18 at the eastern edge of the City. The Site (as defined by the extent of MSW) is located across portions of three parcels, consisting of one approximately 38-acre parcel (19131841001; owned by Boise Cascade Corporation/Office Depot, Inc.), a second approximately 15.5-acre parcel (19131842001; owned by the LeeLynn, Inc. and Wiley Mt., Inc.), and an area adjacent to I-82, owned and maintained by WSDOT (Landau Associates 2013).

The Site is currently zoned as a Regional Development District (high visibility areas that provide regional commerce, office campus, recreation, large-scale retail, etc); future land use is zoned Regional Commercial (a new category supporting a mix of retail, services, and business establishments) (City of Yakima 2015). Areas surrounding the Site are zoned primarily as single- and two-family households and light industrial. The Site is located just outside the mapped floodplain of the Yakima River and immediately west of I-82 (Yakima County GIS website 2015).

Average daily high temperatures for the City range between 36° Fahrenheit (°F) and 88°F, with an annual average high temperature of 63.2°F. Average daily lows range between 21°F and 53°F, with an average annual low temperature of 36.2°F. The overall average temperature for the City is approximately 50°F. The average rainfall is 8.35 inches per year; the City's average snowfall is 23 inches per year (usclimatedata website 2015).

5.1.2 TOPOGRAPHY AND SURFACE COVER

The Site is relatively flat and has an average elevation of 1070 ft above mean sea level (MSL) with a slight downward slope to the southeast (Landau Associates 2013). An active railroad track trends

from east to west along the northern edge of the Site. The ground surface at the Site is primarily covered with a mixture of wood debris and soil, with a few areas of sparse vegetation.

Until May 2010, logs were stored over a large area of the Site and de-barking and chipping operations were conducted along the northwestern edge of the Site. Prior to 2010, between 1 and 9 ft of sandy silt and/or silty gravel was placed over the ground surface in many areas of the Site along with approximately 1 to 10 ft of wood debris. In many locations, up to 10 ft of wood debris covers the MSW (SLR 2009, 2010).

5.1.3 LAND USE

As noted previously, the area of the Site used for former landfill operations was initially developed as a log pond by the Boise Cascade Corporation (now Office Depot, Inc.). From approximately 1963 to 1970, MSW was deposited into the former log pond. After closure of the landfill, the Site was used as a log storage deck until mill operations were ceased. Presently, the Site is covered with a mixture of soil and wood debris, mostly in the form of wood chips.

5.1.4 EXTENT OF MUNICIPAL SOLID WASTE

Since 2008, several investigations have been conducted to evaluate the lateral and vertical extent of MSW at the Site. Based on investigations conducted between 2008 and 2009, the estimated volume of MSW is approximately 440,000 CYs across approximately 33 acres, At the Site, the MSW has a maximum thickness of 15 ft, but averages about 10 ft in thickness (SLR 2009, 2010).

Ecology's Opinion Letter stated that additional investigation was needed to document the extent of the MSW along the northeastern and eastern boundaries of the Site (Ecology 2014). Therefore, as discussed in Section 4.4, additional test pits were excavated as part of this investigation to further identify the extent of MSW (test pit logs are provided in Appendix C). The extent of MSW, based on findings of the historical and current investigations, is shown on Figure 4.

5.2 GEOLOGY

This section provides an overview of the results of the geologic and hydrogeologic investigations conducted to date at the Site, and related information available from published sources. The results of the investigations are integrated into the following sections to provide an understanding of current Site conditions. The regional geology is presented in Section 5.2.1, Site-specific geology is presented in Section 5.2.2, and hydrogeology is presented in Section 5.2.3.

5.2.1 REGIONAL GEOLOGY

The Site is located in the Yakima Valley, which generally consists of Miocene Columbia River Basalt (CRB) flows, overlain by the Ellensburg formation, which consists of pyroclastic and sedimentary deposits that interfinger with the uppermost CRB flows. These layers are overlain predominantly by Holocene alluvial deposits (USGS 1962).

Geologic information for the Site's vicinity was obtained from the *Geologic Map of the East Half of the Yakima 1:100,000 Quadrangle, Washington* (Schuster 1994). Near-surface deposits in the vicinity of the Site are mapped as Holocene alluvium. Soil defined as alluvium typically consists of clay, silt, sand, and gravel deposited by running water. Locally, the alluvium includes lacustrine, paludal, and eolian deposits in depressions, and occurs in valley bottoms throughout the area with the most significant deposits along the Yakima River, which is located to the east of the Site. Drilling records from within 0.25 mile of the Site indicate that the Ellensburg Formation in this area consists of a clayey shale and sandstone, capped with cemented gravel and was encountered at approximately 44 ft BGS (Landau Associates 1998).

5.2.2 SITE-SPECIFIC GEOLOGY

The ground surface at the Site slopes gradually downward to the southeast and is approximately 5 to 10 ft higher in elevation that the surrounding properties. The Site's surface is covered predominantly by decomposing wood debris remaining from the historical log storage operations, intermixed with sandy silt and silty sands (Landau Associates 2014). In areas where wood debris has been removed or covered, the surface soil compromises sand and/or silty or sandy gravel fill (SLR 2009, 2010).

Multiple subsurface investigations have occurred at the Site since 1998. Exploration logs for the borings completed at the Site identified the materials encountered as fill and native alluvial deposits. Three geologic cross sections were prepared based on the Site subsurface exploration logs (Appendices B through E), with reference locations shown on Figure 7. Cross sections are presented on Figures 8 through 10 and show the lateral extent of the fill and native alluvium units, MSW, and associated groundwater elevation (based on September 2014 elevation data).

Wood debris varies in thickness, with a maximum observed thickness of approximately 7 ft in the central portion of the Site. In general, the wood debris visible on the surface extends to depths of approximately 3 ft BGS, with the exception of debris observed in the central portion of the Site, where it was observed at depths up to 6 ft BGS (e.g., SB-5 and SB-21). In some central and east locations, the wood debris is underlain by a mixture of silt, sand, and gravel fill material, up to approximately 5 ft thick (e.g., MW-104, SB-34, SB-39, SB-40, TP-51). The sand and silty/sandy gravel fill observed in some surface locations has depths up to 8 ft BGS (e.g., TP-MW-1, FFP-MW-1, FFP-MW-2, GP-17). The

locations where wood debris was not observed on the surface were predominantly along the outer boundaries of the Site.

The predominant fill material underlying the wood debris at the Site is the MSW. The MSW has been observed to consist of various materials consistent with traditional domestic waste, including metal, plastic, glass, paper, and wood. The MSW has been characterized as moist to wet, with a rotten odor. No sheen has been observed in any of the exploratory borings where MSW was encountered. Soil content in the MSW ranges from none to approximately 75 percent soil. Soils intermixed with the MSW include various silts, sands, and gravels (see exploration logs in Appendices B through E). A review of the exploration logs for borings that extended through the MSW indicate that the MSW is up to 18 ft thick, to depths of up to 20 ft BGS in the central portion of the Site (e.g., SB-6, SB-18, SB-21, SB-39, MW-104, MW-106). The MSW is observed to terminate abruptly on the west, south, and eastern boundaries of the Site, which is indicative of the filling of the former log storage pond. As noted on cross section B-B' (Figure 9), the MSW gradually thins to the north. The lateral extent of the MSW is shown on Figure 4. A discussion of the extent of the MSW in relation to groundwater is provided in Section 5.3 below.

The MSW is predominantly underlain by sandy gravel fill, with mixtures of gravelly sand and sandy silt. The fill materials underlying the MSW are approximately 7 ft thick. Native soils were observed below the gravelly sand between 15 and 25 ft BGS, as noted in cross sections A-A' and B-B' (Figures 8 and 9). The observed native soils consist of medium to coarse sand with trace silt and gravel, consistent with alluvial deposits. The sand unit was characterized to be dense and wet, and no sheen or odor was noted in the exploratory logs for the borings that encountered this unit (Appendices B through E).

5.2.3 HYDROGEOLOGY

The results of subsurface investigations conducted between 1998 and 2014 were used to evaluate Site-specific hydrogeologic conditions. The subsurface hydrogeology at the Site can be considered as four Site-specific units, based on the observed conditions outlined in the previous sections – Upper Fill, MSW, Lower Fill, and Native Sand/Gravel.

- Upper Fill – This unit consists of the combined wood debris and mixtures of silt, sand, and gravel fill. The base of the unit ranges from approximately 1 to 8 ft BGS. This unit is predominantly composed of the wood debris; however, when present, the silt, sand, and gravel mixtures are both at the surface and underlying the wood debris in this unit.
- MSW – The MSW directly underlies the Upper Fill, but is not continuous across the Site. The base of the unit can be as shallow as 1 ft BGS (e.g., MSW-TP-1 and MSW-TP-2) along the northern edge of the Site, to depths of 18 ft BGS (e.g., SB-13, SB-18, SB-21, and MW-104).

- Lower Fill – This unit consists of sandy gravel mixtures extending to depths of approximately 8 to 25 ft BGS (e.g., SB-18, SB-34, SB-39, SB-40, TP-40, TP-51, TP-52, and MW-104).
- Native Sand/Gravel – Underlying the Lower Fill unit, the Native Sand/Gravel was encountered at approximately 18 to 25 ft BGS (e.g., FPP-MW-1, FPP-MW-2, MW-104, MW-108, and MW-109).

A hydrogeologic study was conducted in 1998 by Landau Associates in the area immediately adjacent to the Site. The purpose of the study was to identify the location and direction of groundwater flow in the unconfined aquifer, or water table, in the immediate vicinity of the Site. This investigation indicated that the water bearing zone within the unconfined aquifer is generally encountered between 2.5 and 11 ft BGS with calculated groundwater gradients between 0.005 and 0.007 ft/ft to the southeast (Landau Associates 1998). A later study conducted in 2008 indicated that the unconfined aquifer was identified between 8.5 and 20 ft BGS (Parametrix 2008). These investigations, including recent Site groundwater data, indicate that groundwater flow is predominately to the east-southeast, toward the Yakima River (Figures 5 and 6).

Groundwater investigations conducted between 2009 and 2014 indicate that depths-to-water range between 4.48 to 21.67 ft BGS[12]. The most recent groundwater data was collected in December 2014. Depth-to-water measurements collected from wells within the extent of MSW (i.e., MW-102 through MW-108) ranged between 15.27 and 21.67 ft BGS during this recent event (Table 3). The calculated groundwater gradient using the December 2014 results ranged between 0.002 and 0.007 ft/ft to the southeast.

Comparison of the groundwater elevations measured during the groundwater investigations conducted between 2009 and 2014 to the identified elevations and relative depths of MSW indicates that seasonal high groundwater elevations (summer months) were above the base of the MSW and that seasonal low groundwater elevations (early spring months) were predominately below the MSW (SLR 2009, 2010, 2012). In 2009, 2010, 2012, and 2014, groundwater elevations were also measured in four downgradient wells (i.e., MW-14 through MW-17). The depths-to-groundwater ranged from approximately 4.48 to 13.12 ft BGS (SLR 2010, 2012).

Groundwater elevation data collected between 2009 and 2014 consistently indicate that the general shallow groundwater flow direction is to the east-southeast, toward the Yakima River. Groundwater elevation contours, based on the September and December 2014 data, are presented on Figures 5 and 6, respectively. The Yakima River is located approximately 600 ft southeast of the southeastern corner of the former landfill and on the opposite side of I-82.

[12] The investigations include combinations of groundwater wells MW-6, MW-7, MW-8, MW-9A, MW-11, MW-12, MW-13 (decommissioned), MW-14 through MW-18, TP-MW-1, TP-MW-2, FFP-MW-1 through FFP-MW-3, and MW-100 through MW-109.

5.3 SURFACE WATER AND DRAINAGE

The Site is located 600 ft upgradient and to the west of the Yakima River, with I-82 separating the Site from the river. The Site is bordered to the east by a north-south trending drainage system (combined surface and subsurface network). This drainage system includes an open-air culvert/ditch at the northeastern corner of the Site that is fed by the subsurface irrigation channel; the irrigation channel's culvert outlet enters this area at approximately 10 ft below the neighboring surface grade. Areas of vegetation (from dense to sparse) line this area of the drainage system as this area maintains a limited volume of water during the majority of the year. Surface water then flows to the south, enters a culvert about 600 ft downstream, and continues to flow below-grade until it daylights at a second small drainage pond (Figure 11). From there, water drains into another subsurface culvert and flows beneath I-82 with discharge ultimately to the Yakima River (at RG-3).

5.4 NATURAL RESOURCES

The following section summarizes general information on the types of habitats and varying plant and animal species that might be expected to be present at the Site.

5.4.1 TYPES AND FUNCTIONS OF HABITATS

With its location within the Yakima River Valley, the dominant habitat of the Site and the surrounding parcels should be Columbia Plateau shrub-steppe habitat. Shrub-steppe habitats in the Yakima River Valley are important because they can support plant (e.g., Spalding's catchfly) and animal (e.g., Pygmy rabbits) species which are federally listed as endangered species under the Endangered Species Act (WDFW 2011). Approximately 5.5 miles southwest of the Site, on the Yakama Reservation, ongoing efforts to restore shrub-steppe habitat are underway (Yakama Nation website 2015). While indications of shrub-steppe habitat along the eastern and southern edges of the Site do exist, the presence of I-82 to the east and the surrounding residential/light industrial areas do not support connectivity between the Site and the more natural areas along the Yakima River (see Attachment 1).

5.4.2 PLANT AND ANIMAL SPECIES

Plant types that typically thrive in the dominant Columbia Plateau shrub-steppe habitat are perennial grasses and isolated patches of shrubs, mostly sagebrush (see Attachment 1). While no patches of vegetation are observed within the Site, an area of vegetation (i.e., deciduous trees and perennial grasses) was observed where surface water is present along the northeastern/eastern edge of the Site, along the I-82 corridor (see Figure 11).

The shrub-steppe habitat usually supports birds such as sage grouse, sage sparrows, and sage thrashers, along with a variety of other avian species. While specific species have not been identified at the Site, sparrows and thrasher-like birds were observed living in the edge communities surrounding the Site during the time of investigation. Terrestrial animals that may be present in the shrub-steppe habitat include Pygmy rabbits, reptiles, and insects. Surveys have indentified the closest Pygmy rabbit habitat in the Sagebrush Flats Wildlife area approximately 70 miles north/northeast of the City (see Attachment 1). Limited terrestrial wildlife have been observed at the Site, likely due to the absence of vegetation coverage/refuge within the Site, as discussed previously, is covered predominately by a mixture of soil and wood debris.

6.0 PRELIMINARY SITE SCREENING INFORMATION

As part of the RI process, preliminary screening levels (PSLs) were developed for the media of potential concern at the Site (i.e., soil, groundwater, and soil vapor/LFG) using MTCA values and applicable and relevant and appropriate requirements (ARARs). The method detection limits (MDLs) and RLs for the various laboratory analyses were compared with the PSLs to determine appropriate analytical methods for use in the RI; the PSLs were then adjusted to the laboratory quantitation limit [QL, applied as the practical quantitation limit (PQL)] for comparison purposes, as appropriate.

The PSLs are used in the RI in the evaluation and interpretation of the sample analytical data. Ecology's Opinion Letter identified that the laboratory MDLs/RLs for some compounds analyzed for in the previously collected RI groundwater samples were above the previously applied screening levels (SLs) and, therefore, these compounds could not be eliminated from further evaluation (Ecology 2014).

The PSLs developed for soil and groundwater at the Site, as discussed in this section, are protective of human health and the environment in accordance with MTCA requirements. Ecology's Opinion Letter identified that consideration of MTCA Method A and B criteria for unrestricted land uses is appropriate for the Site (Ecology 2014). Surface water-specific PSLs were not developed for the Site because surface water is not considered an affected media, and because the groundwater PSLs, as discussed in Section 6.3.1, are protective of surface water.

The MTCA regulations (Chapter 173-340 WAC) provide three approaches for establishing cleanup levels: Method A, Method B, and Method C. The Method A approach is appropriate for sites that have few hazardous constituents or for contaminants such as TPH and lead for which toxicity information is not available to calculate Method B or Method C cleanup levels. The Method B approach is applicable to all sites. The Method C approach is applicable for specific site uses and conditions.

The Method B and Method C approaches establish cleanup levels based on applicable state and federal laws, and specified risk equations. The Method B approach establishes cleanup levels using exposure assumptions and risk levels for unrestricted land uses, whereas the Method C approach uses exposure assumptions and risk levels for restricted land uses, including industrial properties. MTCA also provides for the adjustment of cleanup levels up to concentrations equal to the PQL or natural background concentration, whichever is higher, when the cleanup levels calculated using Methods B or C are less than natural background levels or levels that can be reliably measured.

6.1 POTENTIAL EXPOSURE PATHWAYS

As part of the RI process, potential exposure pathways must be identified for both human and environmental receptors. Based on Site-specific current and/or potential future use, the potential exposure pathways include the following:

- **Ingestion of groundwater.** Although Site groundwater is not considered a potable water source and is not being used for drinking water purposes, the shallow groundwater beneath the Site does not meet the MTCA criteria for non-potablility; therefore, potential ingestion of groundwater is considered a potential future pathway, as discussed below and in Section 6.3.1.

  However, a restrictive covenant was placed on the Site at the time of sale prohibiting residential use of the Site (Boise Cascade Corporation 2004). Furthermore, City ordinances currently require that all new lots and development be served by a public water supply that will satisfy fire flow and domestic service [Ord. 2001-13 § 20, 2001: Ord. 98-64 § 1 (part), 1998]. Therefore, as future redevelopment strategies are proposed for the Site, groundwater will not be used as a drinking water source, and currently no drinking water wells are in operation at or hydraulically downgradient of the Site.

- **Groundwater discharge to surface water.** Discharge of contaminated groundwater to surface water could affect receptors in surface water, including freshwater organisms and the human consumption of freshwater organisms, and is therefore considered a current and potential future pathway.

- **Direct contact with and ingestion of soil/MSW.** Potential pathways include contact with contaminated surface soil and exposure to subsurface soil/MSW during construction that involves intrusive activities; therefore, direct contact with soil/MSW is considered a current and potential future pathway.

- **Soil transport via stormwater runoff to surface water.** Contaminated surface soil transport via stormwater runoff to downgradient surface water could introduce contaminants that could affect receptors and, therefore, stormwater runoff is considered a current and potential future pathway.

- **Soil vapor/LFG.** LFG (e.g., methane) generated from existing MSW or combined MSW and wood debris has the potential to volatilize and migrate into future Site structures. Although structures are currently not in place at the Site, the potential for future development of the Site would likely consider vapor intrusion as a potential future pathway.

- **Leaching from soil/MSW to groundwater.** Contaminants in soil/MSW can leach to groundwater in unpaved areas where stormwater can infiltrate through shallow contaminated soil or at locations where soil contamination is in direct contact with groundwater. Since the Site is currently unpaved, leaching of potential contaminants from soil/MSW to groundwater is considered a current and potential future pathway.

6.2 POTENTIAL RECEPTORS

The potential exists for human and ecological receptors to be exposed to affected media at the Site. The potential human receptors that may be exposed to affected soil, groundwater, and/or LFG at the Site include the following:

- **Site commercial/industrial workers.** Potential exposure of Site workers to contaminants in surface soil could occur through ingestion, dermal contact, and/or inhalation of particulates

prior to Site development, but potential exposure will be limited once likely development is complete following the installation of pavement and other impervious surfaces. Workers in potential future structures at the Site could be exposed to LFG through potential vapor intrusion into the buildings; however, appropriate future structure design can effectively eliminate this potential exposure.

- **Site construction workers.** Potential exposure of Site construction workers to contaminants in surface and subsurface soil could occur through ingestion, dermal contact, or inhalation of particulates and through dermal contact with groundwater.

Ecological receptors may also be exposed to affected Site media. Potential ecological receptors include:

- **Terrestrial plants and animals.** Based on an existing restrictive covenant for the Site (Boise Cascade Corporation 2004), future land use at the Site is limited to industrial and commercial activities. Future development will likely cover the Site's ground surface with structures and pavement, which will preclude contact of terrestrial plants and animals with potentially contaminated soil.

Per Ecology's Opinion Letter (Ecology 2014), a terrestrial ecological evaluation (TEE) is required for the Site. A TEE has been prepared specific to current Site conditions and is included as Attachment 1. The TEE concludes that the MTCA TEE exclusion assessment criteria cannot be met for the Site. However, consideration of the relevant risk-based screening criteria, the conditional point of compliance, and the likelihood of required future institutional controls (e.g., restrictions on subsurface activities, etc.) allows for the Site to meet the TEE simplified evaluation procedural criteria and no further evaluation is required.

6.3 PRELIMINARY SCREENING LEVELS

The following section summarizes the process used to develop the PSLs for the potentially affected media at the Site (i.e., soil, groundwater, and LFG). As mentioned previously, surface water-specific PSLs have not been dev eloped because the groundwater PSLs discussed below are protective of surface water.

6.3.1 GROUNDWATER

Ecology's Opinion Letter (2014) indicated that the use of MTCA Method A and B groundwater criteria are appropriate for the Site. In addition, the shallow groundwater beneath the Site does not meet the MTCA criteria for non-potable groundwater [WAC 173-340-720(2)]; therefore, the federal and state maximum contaminant level (MCL) criteria for protection of groundwater as drinking water are considered as ARARs, and were also included in the evaluation to established Site PSLs. As discussed with Ecology, since the point of discharge for groundwater in the relative vicinity of the Site is the

Yakima River, the groundwater PSL evaluation conservatively includes consideration of criteria protective of surface water.

Development of groundwater PSLs protective of drinking water included the following methodology:

- If MTCA Method A and Method B criteria were available, and if no state/federal MCL criteria were established, the Method A value was selected as the Site groundwater PSL protective of drinking water
- If MTCA Method A and state/federal MCL criteria were available, the lower of the two was selected as the Site groundwater PSL protective of drinking water
- In the absence of MTCA Method A criteria, but with MTCA Method B formula values and state/federal MCL criteria available, the lower of the latter two were selected as the Site groundwater PSL protective of drinking water
- If only one criterion was available (i.e., MTCA Method A, MTCA Method B formula values, or a state/federal MCL), that criterion was selected as the groundwater PSL protective of drinking water.

The groundwater PSL protective of drinking water evaluation and results are presented in Table 6.

The groundwater PSL protective of surface water evaluation included consideration of the following potential criteria:

- Surface water MTCA Method B non-carcinogenic and carcinogenic criteria
- Freshwater aquatic life acute and chronic criteria as outlined under Chapter 173-201A WAC, Clean Water Act (CWA) §304, and the National Toxics Rule (NTR) 40 Code of Federal Regulations (CFR) 131 regulations
- Human Health fresh water criteria as outlined under the CWA §304 and NTR 40 CFR 131 regulations.

The groundwater PSLs protective of surface water were then established as the lowest value of the available criteria noted above. Table 7 presents the results of the groundwater PSL protective of surface water evaluation.

The Site-specific groundwater PSLs were then established as the lower of the values protective of drinking water and surface water, as presented in Tables 6 and 7. The Site-specific groundwater PSLs are presented in Table 8. For several chemicals, the PSL criterion was lower than the laboratory-specific QL[13]. In those instances, the initial chemical-specific PSL was raised to the laboratory-specific QL (applied as the PQL) for data comparison and screening purposes. As the RI process continues, several PSLs may also be adjusted to regional- or Site-specific background values (especially metals), in accordance with the procedures outlined in MTCA.

[13] QL/PQL values are those provided by the analytical laboratory supporting the RI (ALS Global) and are included in Table 8 and in the QAPP included with the submitted Work Plan.

6.3.2 SOIL

As with groundwater, Ecology's Opinion Letter also indicated that the use of MTCA Method A and B criteria for unrestricted land uses was appropriate for establishing SLs for Site soil (Ecology 2014). Therefore, the following methodology was used to establish the PSLs for chemicals in soil:

- If a MTCA Method A criterion for unrestricted land uses was available, that criterion was selected as the chemical-specific PSL
- In the absence of MTCA Method A criteria, the MTCA Method B cleanup level was evaluated and selected as the chemical-specific PSL. The Method B criterion was established as the lower of the:
  - Protection of groundwater 3-phase model value[14]
  - Direct contact pathway (ingestion only) Method B unrestricted land use standard formula value (lower of carcinogenic and non-carcinogenic values).

After this evaluation was completed, certain Site-specific soil PSLs were subsequently adjusted based on the current groundwater analytical results of the RI. Per WAC 173-340-747(3)(f), protection of groundwater does not have to be considered in developing the Method B soil PSLs [and subsequent cleanup levels (CLs)] if it can be empirically demonstrated that the compound's concentration in soil is considered adequately protective of groundwater. Therefore, for compounds that were not detected in groundwater samples at concentrations greater than the Site-specific groundwater PSL (see Section 6.3.1), a preliminary empirical demonstration can be made that soil concentrations for a given compound are protective of groundwater.

The Site-specific soil PSLs are presented in Table 9. The soil PSLs will be re-evaluated based on the approach outlined in the section upon completion of the additional planned RI activities (see Section 1.0). As mentioned previously, soil PSLs may also be revised to reflect regional and Site-specific background values (especially metals) in accordance with the procedures outlined in MTCA.

6.3.3 LANDFILL GAS

The MTCA cleanup regulation [WAC 173-340-750(3)(b)(iii)] provides a Method B cleanup level for methane in indoor and outdoor air of 10 percent of the lower explosive limit (LEL; 0.5 percent by volume). This value is considered protective of human health and the environment; however, it does not specifically address concentrations of LFG in soil. Because most LFG investigations involve collecting measurements from probes extending into the shallow subsurface, the data are not representative of indoor or outdoor air. As a result, SLs based on solid waste regulations are typically used to evaluate LFG data.

[14] The 3-phase model evaluation incorporated groundwater PSL inputs (Table 9); the groundwater PSLs inputted into the model included those instances where the groundwater PSL was revised to the laboratory-specific QL applied as the PQL.

WAC 173-304-460(2) is applicable to landfills that operated prior to 1991. Although the former landfill was not permitted under these regulations, the regulations provide relevant compliance standards that are considered generally applicable and protective for contaminant migration or exposure, in the absence of other directly applicable regulations. The above-noted regulations provide the following standards, which often are identified as PSLs for LFG:

- Methane gas generated at a landfill must not exceed 25 percent of the LEL in potential future structures (1.25 percent methane by volume)
- Methane gas must not exceed the LEL for methane at the property (i.e., Site) boundary (5.0 percent methane by volume)
- The concentration of methane gas must not exceed 100 parts per million (ppm) in offsite structures.

Because no buildings or structures exist at the Site, the second criterion noted above represents an appropriate PSL to consider when evaluating current LFG concentrations.

7.0 NATURE AND EXTENT OF CONTAMINATION

This section summarizes the results of the RI sampling activities conducted at the Site between September 2014 and January 2015. Summaries are provided for soil, groundwater, and LFG, and the data are evaluated against the media-specific PSLs discussed in Section 6.0, as appropriate. The results from previous sampling investigations are also included, as appropriate, to further support the evaluation of current Site conditions.

Initial conclusions and potential remedial action considerations, based on the RI data collect to date, are included in Section 8.0. Further data evaluation and recommendations will be provided in the Supplemental RI Report that will be prepared following completion of the remaining two quarters of RI sampling (i.e., March and June 2015 sampling events).

7.1 SOIL QUALITY

This section summarizes the analytical results for the shallow (near surface) and subsurface soil sampling completed at the Site during installation of the additional groundwater monitoring wells (September 2014) and LFG probes (October 2014). A sufficient volume of soil was not available for sample collection at all of the planned locations (as outlined in the Work Plan), in part because of the presence of wood debris (see Table 1). Soil PSLs for this investigation are included in Table 9; soil analytical results with comparison to the PSLs are presented in Table 10.

Soil sampling results are summarized by chemical group and are presented based on relative location at the Site (i.e., within the Site, hydraulically upgradient/downgradient, etc.), as appropriate.

7.1.1 PETROLEUM HYDROCARBONS

Based on the results of the September and October 2014 soil sampling events, TPH-G, TPH-D, and TPH-O were detected in soil samples at several locations within the area of investigation. Per Ecology's request, the samples identified for TPH-D/TPH-O analysis (subsequent to the HCID results) were analyzed both with and without SGC; the analytical results are provided in Table 10.

For those soil samples collected during installation of the groundwater wells within the extent of MSW (i.e., MW-102 through MW-108), detected concentrations of petroleum hydrocarbons were identified in the shallow (near surface sample) only; no concentrations above the RLs were detected in the samples collected beneath the MSW. TPH-G, TPH-D, and TPH-O were detected in the shallow soil samples collected at MW-106; this was the only sample with a detection of TPH-G above the RL. TPH-D and TPH-O were also detected in the shallow soil sample collected at MW-107. Only TPH-O was detected in the shallower soil samples collected at MW-102, MW-104, MW-105, and MW-108.

However, none of these detections were greater than the corresponding soil PSLs, including the resulting TPH-D and TPH-O concentrations analyzed with or without SGC. Petroleum hydrocarbons are not currently identified as a COPC in surface or subsurface soil at the Site.

TPH-D and TPH-O were also detected above the RLs in the soil sample collected just above the groundwater table in LFG probe boring GP-24; the detected concentrations were below the soil PSL. GP-24 is located to the north and hydraulically upgradient of the Site; therefore, the detected TPH-D and TPH-O concentrations are not considered related to the Site. GP-24 is a replacement for previously destroyed LFG probe GP-22.

7.1.2 METALS

Various metals were detected above the RLs in the samples collected and analyzed during groundwater well and LFG probe installation. Detected metals included arsenic, barium, chromium (III), iron, lead, manganese, mercury, silver, and sodium; hexavalent chromium was not detected in the samples for which it was analyzed.

Of the various metals detected, iron was greater than the soil PSL in 100 percent of the samples analyzed (20 of 20 samples). The soil PSL for iron is based on the Method B preliminary soil CL of 151 milligrams per kilogram (mg/kg), which incorporates consideration of protection of groundwater 3-phase model values. However, the background concentration for iron, based on the statewide 90 percentile value (PTI 1989), is 43,100 mg/kg. None of the detected iron concentrations are greater than this background value in the samples analyzed during the September and October 2014 soil investigations; therefore, iron in soil is not currently a COPC in surface or subsurface soil at the Site.

7.1.3 CONVENTIONAL AND FIELD PARAMETERS

Soil samples collected during both the September and October 2014 investigations were analyzed for fluoride, nitrate, and nitrite. Although these three compounds were detected in several locations, in both near surface (shallow) and deeper soil samples, none of the results were greater than their respective soil PSL.

pH was also analyzed in the deeper soil samples (beneath the MSW) collected during well installation and in the samples collected during the LFG probe installation; the results ranged between 6.07 and 8.62. The highest two pH values were 8.62 at MW-100 (hydraulically upgradient of the Site) and 8.42 at MW-109 (cross-gradient and to the south of the Site). The lowest pH values were in samples collected to the north (hydraulically upgradient of the Site) at MW-101, GP-23, GP-24, and GP-26. pH values in the soil samples collected from beneath the MSW were generally in the neutral pH range.

7.1.4 PESTICIDES

Several pesticides were detected above the RLs in the soil samples for which they were analyzed during the September and October 2014 investigations; pesticides were analyzed using low-level RLs to target the soil PSLs, to the extent possible. For soil samples collected within the Site (i.e., within the extent of MSW), pesticides were only analyzed in the soil samples collected beneath the MSW. Pesticide analysis was planned for the shallow soil samples from MW-100 and MW-109; however, sufficient soil volume for analysis was only available at MW-109.

The detected pesticides include Aldrin, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, and endosulfan sulfate; the results were greater than the soil PSLs at two locations. The only pesticide PSL exceedance identified at the Site was at MW-103 (4,4'-DDD at 0.012 mg/kg, slightly above the PSL of 0.009 mg/kg). The other location with a PSL exceedance included the soil sample collected at the hydraulically upgradient/off-Site GP-26 location (4,4'-DDD at 0.045 mg/kg).

7.1.5 POLYCHLORINATED BIPHENYLS

PCBs were detected above the RLs at only two locations within the Site during the September 2014 investigation; no PCBs were detected in the samples collected during the installation of the LFG probes in October 2014. Aroclor 1242 was detected at sample locations MW-105 (0.0059 mg/kg) and MW-106 (0.028 mg/kg). Relevant criteria are not available to derive a Site-specific soil PSL for Aroclor 1242; however, the Aroclor 1242 results do not exceed the soil PSL for total PCBs (1.0 mg/kg). PCBs in subsurface soil are not currently identified as a COPC with respect to the Site.

7.1.6 VOLATILE ORGANIC COMPOUNDS

No VOCs were detected above the RLs in the soil samples collected from the Site (i.e., MW-102 through MW-108) during the September 2014 soil investigation. No VOCs were identified at hydraulically upgradient/off-Site locations MW-100, MW-101, GP-23, or GP-24, or at the location to the south/cross-gradient of the Site (MW-109). The only detected VOC was acetone at sample location GP-26; however, the detected concentration was well below the soil PSL. VOCs in subsurface soil are not currently identified as a COPC with respect to the Site.

7.1.7 SEMIVOLATILE ORGANIC COMPOUNDS

Three SVOCs were detected above the RLs in the soil samples analyzed during the September and October 2014 soil investigations, including 3&4-methylphenol, bis(2-ethylhexyl)phthalate (BEHP), and n-nitrosodiphenylamine. BEHP was the most frequently detected SVOC compound (8 of 14 samples analyzed); no detected result was greater than the soil PSL for the compound. The one detection of

3&4-methylphenol (MW-101, hydraulically upgradient of the Site) also did not exceed its corresponding soil PSL. The only SVOC detection at a concentration greater than the soil PSL was identified for n-nitrosodiphenylamine in the sample collected below the MSW at location MW-106 [110 micrograms per kilogram (µg/kg)], slightly above the compound's PSL of 100 µg/kg. No other SVOCs were detected above the laboratory RLs.

7.1.8 POLYCYCLIC AROMATIC HYDROCARBONS

Selected ion monitoring (SIM) analysis was used to meet the lower PSLs for the compounds included in the PAH series. Several PAHs were detected in samples from within the Site (i.e., MW-102 through MW-108) and in locations both hydraulically upgradient/off Site (GP-23 and GP-26), and /cross-gradient/to the south of the Site (MW-109). PAHs were detected predominately in the shallower soil samples; however, detections at deeper depths (MW-106 and GP-23) were also identified. All detected PAH concentrations were below their corresponding soil PSLs and no soil sample results were greater than the carcinogenic polycyclic aromatic hydrocarbon (cPAH) toxicity equivalency (TEQ) PSL value of 100 µg/kg.

7.2 GROUNDWATER QUALITY

This section provides a summary of the results of the two quarterly groundwater events conducted to date (i.e., September and December 2014) as part of the additional RI activities. The groundwater investigation approach and analytical program is discussed in Section 4.3 and is outlined in Tables 4 and 5.

The groundwater PSL evaluation and Site-specific groundwater PSLs are presented in Tables 6, 7, and 8, respectively. As noted previously, the originally established groundwater PSLs were revised between the September and December 2014 sampling events to consider groundwater protective of surface water criteria. Therefore, some of the RLs used during analysis of the September 2014 samples do not meet the revised PSLs; RLs used for analysis of the December groundwater samples achieve the revised PSLs. Samples from future groundwater monitoring events will be analyzed with RLs selected to meet the revised PSLs, or the chemical-specific laboratory QL (applied as the PQL), as appropriate.

This section presents the analytical results for the September and December 2014 sampling events by chemical group; groundwater analytical results and the corresponding comparison to the chemical-specific PSLs are presented in Table 11. Groundwater elevation and flow direction data, which was collected at the time of these two sampling events, are discussed in Section 4.3.2 and shown on Figures 5 and 6, respectively. The results are presented based on relative locations at the Site (i.e., within the extent of MSW, hydraulically upgradient/downgradient/cross-gradient, etc.), as appropriate.

7.2.1 PETROLEUM HYDROCARBONS

Both TPH-D and TPH-O were detected in groundwater samples collected during the September and December 2014 sampling events. Per Ecology's request, the samples identified for TPH-D/TPH-O analysis (subsequent to the HCID results) were analyzed both with and without SGC. The TPH-D and TPH-O results and associated exceedances of the PSLs are presented on Figure 12.

Detections of TPH-D and TPH-O above the RL were predominately in samples collected off Site to the northwest (hydraulically upgradient) at well locations installed within the former Plywood Plant parcel. The highest TPH-D and TPH-O concentrations were identified in samples collected from FPP-MW-1[15], MW-12, and MW-101. Based on the results using SGC, TPH-D in the sample from FPP-MW-1 was greater than the PSL in December, as was TPH-D in the September samples from MW-12 and MW-101. The TPH-O concentration from the sample at MW-12 in December was also greater than the PSL. Elevated TPH-D and TPH-O concentrations were also detected in soil and groundwater samples during the 2013 Phase II investigation of the parcels hydraulically upgradient of the Site; see Tables A-6 and A-7 (Landau Associates 2013). These petroleum hydrocarbon exceedances are not considered associated with potential historical releases from the Site.

In most instances, the TPH-D and TPH-O concentrations in groundwater results from the December 2014 event are lower than the September 2014 results, indicating a potential influence of seasonal groundwater fluctuations on groundwater concentrations. Seasonal changes in the TPH concentrations will be further evaluated when the March and June 2015 groundwater monitoring events are completed.

TPH-D was detected above the RL in the sample from MW-106 (within the extent of MSW) during both the September and December 2014 monitoring events, but below the corresponding PSL (based on the sample analyzed using SGC). No other detections or exceedances were identified in samples collected at wells at the Site (within the extent of MSW) or hydraulically downgradient of the Site.

7.2.2 METALS (TOTAL AND DISSOLVED)

Metals (both total and dissolved) were the most frequently detected compounds in Site and vicinity wells during the September and December 2014 groundwater monitoring events. Detected metals include arsenic, barium, calcium, chromium (III), iron, lead, magnesium, manganese, and sodium. Cadmium, hexavalent chromium, mercury, selenium, and silver were not detected above the corresponding RLs in any of the samples collected in September or December 2014. As mentioned

[15] FPP-MW-1 and FPP-MW-2 were only sampled during the December 2014 quarterly event; these wells will be included in the March and June 2015 quarterly sampling events.

previously, the groundwater PSLs were revised in some instances between the September and December sampling events based on the incorporation of criteria protective of surface water; the RLs used during the September investigation did not meet the revised PSLs for every analysis.

Of the dissolved metals detected in the September and December samples, dissolved arsenic, iron, manganese, and sodium were greater than their corresponding PSLs in one or more samples. The PSL exceedances were identified at locations throughout the monitoring well network, both within the Site (i.e., MW-102 through MW-108), hydraulically upgradient (within the former Plywood Plant parcel, etc.), and hydraulically downgradient of the Site. In part, these detected concentrations reflect the area-wide reducing conditions that are apparent in the shallow aquifer, as discussed further in Section 8.1.2. A summary of the metals results is included in the following sections.

7.2.2.1 Arsenic

Dissolved arsenic exceeded the PSL in 74 percent of the samples analyzed (37 of 50) during the September and December 2014 sampling events; the dissolved arsenic results are shown on Figure 13. The revised dissolved arsenic PSL [i.e., 0.018 micrograms per liter (µg/L)] is based on protection of surface water criteria for human health (fresh water) raised to the laboratory QL/PQL (i.e., 0.45 µg/L) for evaluation purposes. The PSL exceedances occur in samples collected from the entire area of investigation, upgradient, downgradient, and within the Site. The highest detected concentration in September was 8.0 µg/L at MW-18 (hydraulically upgradient to the north of the Site), and the highest detected concentration in December was 8.4 µg/L at MW-106 (within the Site). The samples from most hydraulically downgradient locations had low or non-detect concentrations of arsenic (based on the RL used for each round of investigation).

None of the detected arsenic concentrations from either the September or December sampling events were greater than the state background concentration for arsenic (10.7 µg/L; Ecology 2010) or the federal MCL (10 µg/L). In addition, only a limited number of the dissolved arsenic concentrations exceed the MTCA Method A criterion (i.e., 5 µg/L) for unrestricted land uses[16]. Although consideration of criteria protective of surface water could be considered relevant for evaluation of Site conditions (given the Site's proximity to the Yakima River), the preliminary point of compliance and cleanup standards for the Site (as discussed in Section 8.2) are directed to the protection of drinking water criteria and background concentrations. None of the dissolved arsenic concentrations detected during the September and December sampling events are greater than either the federal drinking water criterion or state

[16] Ecology is currently considering raising the MTCA Method A criterion for arsenic to the federal MCL (Ecology 2010).

background value; dissolved arsenic concentrations will be further evaluated during the March and June 2015 monitoring events.

7.2.2.2 Iron

Dissolved iron exceeded the PSL in 76 percent of the samples analyzed (38 of 50) during the September and December 2014 sampling events; the dissolved iron results are shown on Figure 13. The dissolved iron PSL (i.e., 300 µg/L) is based on secondary MCL drinking water criteria (for aesthetics). Similar with dissolved arsenic concentrations, the dissolved iron PSL exceedances were identified in samples collected from locations across the entire area of investigation. The highest detected concentration in September was 41,000 µg/L at MW-18 (hydraulically upgradient and to the north of the Site), and the highest detected concentration in December was 56,000 µg/L at MW-106 (within the Site); these highest detections correspond with the same locations that had the highest detections of dissolved arsenic during those investigation rounds, respectively. No known evaluation of a state-based dissolved iron background criterion has been conducted to date. Dissolved iron concentrations will be further evaluated during the March and June 2015 sampling events.

7.2.2.3 Manganese

The dissolved manganese concentrations exceeded the PSL in 88 percent of the samples analyzed (44 of 50) during the September and December 2014 sampling events; the dissolved manganese results are also shown on Figure 13. Similar to dissolved iron, the dissolved manganese PSL (i.e., 50 µg/L) is based on secondary MCL drinking water criteria (for aesthetics) and the PSL exceedances were identified in samples from monitoring locations across the entire area of investigation. Similar to dissolved arsenic and iron, the highest detected concentration for dissolved manganese in September was from MW-18 (4,400 µg/L) and the highest detected concentration in December was from the sample at MW-106 (5,700 µg/L). No known evaluation of a state-based dissolved manganese background criterion has been conducted to date. Dissolved manganese concentrations will be further evaluated during the March and June 2015 sampling events.

7.2.2.4 Sodium

The dissolved sodium concentrations exceeded the PSL in 36 percent of the samples analyzed (18 of 50) during the September and December 2014 sampling events; the dissolved sodium results are also shown on Figure 13. Similar to dissolved iron and manganese, the dissolved sodium PSL (i.e., 20,000 µg/L) is based on secondary MCL drinking water criteria (for aesthetics and taste) and the PSL exceedances were identified in samples from locations across the entire area of investigation. The

highest detected concentration for dissolved sodium in September was from MW-12 (69,000 µg/L) and in December was from FPP-MW-1 (53,000 µg/L). Both wells are located to the north and hydraulically upgradient of the Site. As with dissolved iron and manganese, state-based background concentrations for dissolved sodium have not been evaluated to date. Dissolved sodium will be further evaluated during the March and June 2015 sampling events.

7.2.3 CONVENTIONAL AND FIELD PARAMETERS

Various conventional parameters were analyzed in groundwater samples collected during the September and December 2014 monitoring events. Many of these parameters were analyzed specifically to support evaluation of potential landfill contamination dynamics, including sulfate, ammonia, alkalinity, bicarbonate, TOC, and TDS. Fluoride, chloride, nitrate, and nitrite were also evaluated at most sampling locations; these compounds were detected in several samples from both the September and December monitoring events. The fluoride result from the September sample at MW-101 (hydraulically upgradient and north of the Site) was the only detected result that exceeded its corresponding PSL; the fluoride result from the December round at this location did not exceed the PSL.

pH values in groundwater samples, as measured in the field at the time of sampling, were outside of the PSL range (6.5 to 8.5) at several locations in both September and December 2014. The percentage factor for pH PSL range exceedances was 71 percent (17 of 24 samples) and 46 percent (12 of 26 samples) in September and December, respectively. In general, pH values outside of the PSL range were identified below the range (i.e., <6.5); however, pH values at well MW-9A (hydraulically upgradient and northwest of the Site) were above the pH PSL range (i.e., >8.5) at 9.76 in September and 9.10 in December. pH values are presented on Figure 13.

7.2.4 PESTICIDES

Pesticides were detected above the RLs at two locations during the September and December monitoring events. Endosulfan II was detected during the December monitoring event at MW-100 (hydraulically upgradient and northwest of the Site), but at a concentration below its corresponding PSL. Pesticides were also detected at MW-103 (4,4'-DDD in September and December, and 4,4'-DDT in September only); these three concentrations were all above the compound-specific PSL. Pesticides were not detected at any other sampling location within the Site or hydraulically downgradient during the September or December monitoring events. Pesticides concentrations will be further evaluated during the March and June 2015 groundwater monitoring events.

7.2.5 POLYCHLORINATED BIPHENYLS

Low concentrations of Aroclor 1242 were identified in samples from the six sampling locations within the Site (i.e., MW-102 through MW-108) during both the September and December monitoring events (except for the sample from MW-102 which was non-detect in the December event). Low concentrations were also detected in samples from hydraulically downgradient wells (i.e., MW-7, MW-8, and MW-17), but only during the December monitoring event.

The concentrations detected in the samples from the downgradient wells in December, but not in September, may be a reflection of the influence of seasonal groundwater fluctuations on area-wide compound concentrations. The effect of seasonal groundwater fluctuations will be further evaluated following completion of the March and June 2015 quarterly monitoring events. In general, Aroclor 1242 concentrations from the December event were lower than those from September.

As mentioned previously with the Aroclor 1242 soil concentrations, relevant criteria are not available to derive a Site-specific Aroclor 1242 PSL. Therefore, the results were compared to the total PCB PSL (i.e., 0.10 µg/L); no exceedances were identified based on this comparison. PCB concentrations will be further evaluated during the March and June 2015 groundwater monitoring events.

7.2.6 VOLATILE ORGANIC COMPOUNDS

The only VOCs detected above the RLs in the groundwater samples collected during the September and December monitoring events were chloroform (MW-9A, MW-100, and MW-109), chlorobenzene (MW-106), and vinyl chloride (VC; MW-106). For a few of the analyses, the September RLs did not meet the PSLs revised to also be protective of surface water, as discussed in Section 7.2 (see Table 11).

The chloroform concentrations in the sample from MW-9A exceeded the corresponding PSL in both the September and December monitoring events; MW-9A is located hydraulically upgradient and off the Site in the neighboring parcel to the northwest. The chloroform concentration detected in September at MW-109 was not above the corresponding PSL, nor was the chlorobenzene concentration detected at MW-106 in December. The VC concentration detected in the December sampling round at MW-106 (within the Site) exceeded the corresponding PSL (based on the laboratory QL/PQL for VC). Otherwise, no VOCs were detected above their respective RLs in the samples from the Site or hydraulically downgradient wells during either the September or December 2014 monitoring events. VOC concentrations will be further evaluated during the March and June 2015 groundwater monitoring events.

7.2.7 SEMIVOLATILE ORGANIC COMPOUNDS

BEHP, 3,3'-dichlorobenzidine, 3&4-methylphenol, and n-nitrosodiphenylamine were detected in one or more groundwater samples during the September and December monitoring events. BEHP was the most frequently detected SVOC compound with more detects in the December samples than in the September samples[17]; all of the detections exceeded the corresponding PSL. The compound was detected in samples collected at FPP-MW-3 (in September only), and at MW-11, MW-18, and MW-101 (in December only); these four locations are located hydraulically upgradient and to the north/northwest of the Site. BEHP was also detected at Site wells including MW-102, MW-103, and MW-106 in December only. It was also detected in both September and December in hydraulically downgradient well MW-8.

N-nitrosodiphenylamine was detected above the PSL at Site well MW-106 during the December sampling event only. 3,3'-Dicholorobenzidine was also detected above the PSL at hydraulically downgradient well MW-15 in September only, and 3&4-methylphenol was detected at hydraulically upgradient well MW-101 in September, but below its PSL. SVOC concentrations will be further evaluated during the March and June 2015 groundwater monitoring events.

7.2.8 POLYCYCLIC AROMATIC HYDROCARBONS

SIM analysis was used to meet the lower PSLs for the compounds included in the PAH series. Several PAHs were detected in samples from within the Site (i.e., MW-102 through MW-108) and in locations both hydraulically upgradient (TP-MW-1, FPP-MW-1, FPP-MW-3, MW-9A, MW-12, MW-18, and MW-101), and hydraulically downgradient of the Site (MW-7, MW-14, MW-15, MW-16, MW-17, and MW-109). None of the resulting concentrations for any of these detected PAHs exceeded the corresponding compound-specific PSLs at any sample location in September and December; detected concentrations were all below the corresponding cPAH TEQ PSL (i.e., 0.1 µg/L). PAH concentrations will be further evaluated during the March and June 2015 groundwater monitoring events.

7.3 LANDFILL GAS

A LFG survey was conducted concurrent with the December 2014 groundwater sampling event and again in January 2015. Both surveys included LFG evaluation at the previously existing probes and those installed in October 2014. The LFG surveys were conducted per the procedures and methods outline in the Work Plan submitted to Ecology (Landau Associates 2014).

[17] As a widely used plasticizer, BEHP is often identified as a cross-contaminant in laboratory analysis; Teflon-lined tubing was used exclusively to support groundwater sampling during the September and December monitoring events and will be used with the future scheduled events.

As discussed in Section 4.5, several issues arose during the December 2014 survey that affected the accuracy and representativeness of the survey's results, including issues attaining effective seals on the varying casing sizes and adaptors associated with the historically installed LFG probe network. In the subsequent survey conducted in January 2015, new probe caps/sampling ports were constructed, based on each probe's specific construction, to help ensure that an effective seal was obtained prior to sample collection. Therefore, the results of the January 2015 survey are considered more accurate and representative of current Site conditions.

In the January 2015 survey, the existing LFG probe network (GP-1 through GP-9 and GP-11 through GP-20) and the new gas probes (GP-23 through GP-26) were sampled. To the extent possible, LFG concentrations of methane, oxygen, carbon monoxide, carbon dioxide, hydrogen sulfide, and hydrogen were measured during the gas probe surveys[18]. The results of the January 2015 survey are provided in Table 12.

Based on requirements under existing landfill/solid waste regulations and as discussed in Section 6.3.3, the focus of the evaluation is the methane concentrations at the Site. Probe locations GP-19 and GP-20 are the only two remaining LFG probes within the boundary of the Site (i.e., the extent of MSW). The other remaining probes are along the periphery of the MSW, with the exception of the eastern boundary where new LFG probes are scheduled for installation once an access agreement is finalized with WSDOT[19].

In January 2015, the highest concentrations of methane were recorded at the two locations within the extent of MSW (i.e., GP-19 and GP-20) at 67.3 percent and 57.2 percent, respectively. As discussed in Section 6.3.3, since no buildings currently occupy the Site, associated methane concentrations can reasonably be screened against the requirement under WAC 173-304-460(2) that methane concentrations must not exceed the LEL (5 percent by volume) at the property (i.e., the Site) boundary.

Based on the January 2015 results, this criterion is not exceeded at the southern perimeter of the Site, but is exceeded at the western and northwestern perimeter and to a lesser degree along the north/northeastern perimeter. The lack of criterion exceedances at the southern probe locations versus those to the west, northwest, and north is likely attributed to the presence of wood debris at those latter LFG probe locations. The southern probes (i.e., GP-7 through GP-9, GP-14, and GP-15) were installed in areas where no wood debris or MSW was identified. The GPs to the west and north (including GP-11, GP-13, GP-23, and GP-26) were installed in areas where wood debris was clearly identified at the time of drilling. The construction logs indicate that GP-11 and GP-13 are actually screening within a layer of wood debris, which could greatly influence local methane concentrations. The presence of this wood

[18] A CES/Landtec GEM-2000 Plus multi-gas meter or similar meter was used.
[19] New LFG probe installation scheduled for April 2015.

debris and corresponding methane concentrations is not associated with former MSW landfill activities at the Site.

Future redevelopment scenarios for the Site will evaluate the need for potential mitigation approaches linked to the specific aspects of the design under consideration. Presently, potential methane concentrations vent to the atmosphere and no direct receptor pathway is established. An additional LFG survey will be conducted concurrent with the fourth quarter groundwater sampling event in June 2015 and potential fluctuations and trends in methane concentrations will be reevaluated and presented in the Supplemental RI Report.

7.4 PRELIMINARY CONTAMINANTS OF POTENTIAL CONCERN

Based on the results of additional RI activities conducted to date (September 2014 through January 2015), preliminary COPCs can be identified for the media under investigation (i.e., soil, groundwater, and LFG). The results of the future planned monitoring events (March and June 2015 quarterly groundwater monitoring, and additional soil sample collection during gas probe installation) will allow for further refinement of the understanding of Site conditions. Prior to evaluation of these future data, this section provides preliminary consideration of Site COPCs (by media type), based on currently available data.

7.4.1 SOIL

Soil samples, both shallow (near surface) and subsurface samples were collected for analysis during installation of the new monitoring wells and LFG probes. Based on the data evaluated to date, TPH, conventional and field parameters, PCBs, and VOCs are not currently identified as COPCs in soil. However, certain pesticides, SVOCs, and PAHs may be considered as preliminary COPCs for the Site and will continue to be evaluated, as appropriate.

With respect to metals in soil, iron is not considered a COPC because, although 100 percent of the detections were greater than the corresponding PSL, all detections were below the background concentration (i.e., 43,100 mg/kg), based on the statewide 90 percentile value (PTI 1989). Iron in soil will be further evaluated through additional soil and groundwater monitoring, as appropriate.

The pesticide 4,4'-DDD was identified above its corresponding soil PSL in samples within the Site (MW-103) and hydraulically upgradient of the Site (GP-26); therefore, 4,4'-DDD could be considered a COPC in soil, especially with the corresponding groundwater PSL exceedances identified from groundwater samples at MW-103. The pesticide will be further evaluated through additional soil and groundwater sampling, as appropriate.

PCB Aroclor 1242 was identified in soil samples collected from beneath the MSW during installation of MW-105 and MW-106 (the results were below the PSL based on total PCB criteria). Although no other soil samples had detectable concentrations for this compound, several groundwater samples, both within the Site and hydraulically downgradient, had detected concentrations of the compound (again, the results were below the groundwater PSL for total PCBs). However, given the detections in both soil and groundwater, Aroclor 1242 will be further evaluated in soil in the event of additional soil sample collection, as appropriate.

The only SVOC that exceeded a soil PSL was n-nitrosodiphenylamine from the sample beneath the MSW at MW-106. This compound was also identified in the December groundwater sample from MW-106 above its PSL and it will be further evaluated through additional soil and groundwater sampling, as appropriate. Although the low concentrations of PAHs detected in soil did not exceed their respective soil PSLs or the corresponding cPAH TEQ at any location sampled, the number of detections indicates that PAH concentrations should continue to be evaluated during the additional planned RI activities.

7.4.2 GROUNDWATER

As with consideration of preliminary soil COPCs, preliminary groundwater COPCs can also be evaluated based on the data collected to date for the Site. Each of the chemical groups analyzed, as discussed in Section 7.2, include compounds that could be considered COPCs and will be evaluated further following completion of the March and June 2015 monitoring events.

TPH (specifically TPH-D and TPH-O) was identified at several sampling locations above the respective PSLs. However, all but one of the locations where TPH was detected were hydraulically upgradient of the Site (within the former Plywood Plant or Triangular parcels), indicating that an upgradient source of TPH contamination exists. TPH-D and TPH-O concentrations were detected in the sample from MW-106 (in December only), but the detected results were below the PSLs (based on the analysis using SGC). TPH will continue to be evaluated during the next two rounds of groundwater sampling and analysis.

Metals were the most frequently detected compounds in groundwater during the September and December 2014 monitoring events. These compounds were also regularly detected in previous groundwater investigations at the Site. Since the concentrations of dissolved metals are the most relevant data to evaluate the potential for offsite migration, dissolved metals are the focus of COPC consideration. Of the dissolved metals detected, dissolved arsenic, iron, manganese, and sodium represent the metals that could be considered COPCs and that require further evaluation at the Site during future sampling events.

Fluoride was detected above its corresponding PSL in hydraulically upgradient well MW-101, but is not considered a COPC for the Site at this time; it will be further evaluated area-wide during the

March and June 2015 groundwater monitoring events. PSL exceedances of pH values, predominately below the PSL range (i.e., <6.5) require further evaluation; pH is considered a preliminary COPC at the Site.

As mentioned previously with respect to the detected soil results, pesticides (specifically 4,4'-DDD and 4,4'-DDT) were detected at MW-103 (with the 4,4'-DDD result greater than its corresponding PSL) and they could be considered a preliminary COPCs for the Site; however, the compounds have not been detected in other Site or hydraulically downgradient wells. Similar to the soil results, Aroclor 1242, which was detected in both Site and hydraulically downgradient wells (although below the PSL based on total PCB criteria), could be considered a preliminary COPC and will be further evaluated in subsequent monitoring events.

With respect to VOCs, chloroform was detected above the PSL during both the September and December 2014 monitoring events in hydraulically upgradient well MW-9A; it was also detected at hydraulically upgradient well MW-100 and in hydraulically cross-gradient well MW-109, but below the PSL. Although the PSL exceedances identified in MW-9A may indicate an upgradient source unrelated to the Site, the detection at MW-109 indicates that further evaluation should be completed to determine if it should become a COPC for the Site. The detected concentration of VC at MW-106 was above the PSL; however, VC was not detected in any other Site or hydraulically downgradient well. Nevertheless, VC could be considered a preliminary COPC for the Site.

As the most frequently detected SVOC in samples collected throughout the area of investigation during the September and December 2014 groundwater monitoring events, BEHP can be considered a preliminary COPC. The single PSL exceedances identified for both 3,3'-dichlorobenzidine (hydraulically downgradient at MW-15) and n-nitrosodiphenylamine (Site well MW-106) indicate that these two compounds could also be considered preliminary COPCs for the Site. These three compounds will be further evaluated during the March and June 2015 groundwater monitoring events.

7.4.3 LANDFILL GAS

As mentioned in Section 7.3, the focus of our continued LFG evaluation, based on the precedents set by solid waste regulations, is the methane concentrations at the Site. Current methane concentrations screened against WAC 173-304-460(2) requirements indicate that methane concentrations do exceed the LEL (5 percent by volume) at some locations along the Site's western, northwestern, and northern perimeter. However, the methane concentrations in these areas may be associated with the presence of wood debris unrelated to former landfill activities. Nevertheless, LFG/methane concentrations will be further evaluated as part of the RI process and methane can be considered a preliminary COPC for the Site.

8.0 PRELIMINARY RI CONSIDERATIONS AND CONCLUSIONS

This section provides preliminary RI considerations and conclusions, based on the Site-specific data gathered to date, including information on the nature and extent of the contaminants detected at the Site, the cleanup standard evaluation process, and potential remediation requirements. These preliminary conclusions will be updated in the upcoming Supplemental RI Report, as appropriate, based on the data collected during the March and June 2015 RI activities.

8.1 SITE CONTAMINANT CONSIDERATIONS

Based on the results of the RI activities conducted to date, this section provides initial observations regarding the potential contaminants detected in the area of investigation and preliminary conclusions as to how the occurrence and extent of the contaminants may affect development of both Site cleanup standards and remediation strategies.

8.1.1 TOTAL PETROLEUM HYDROCARBON CONTAMINATION

As discussed in Section 7.2.1, both TPH-D and TPH-O concentrations were identified in groundwater at several sampling locations above their respective PSLs. As mentioned previously, samples requiring analysis for TPH-D and TPH-O were analyzed both with and without SGC; this section's discussion focuses on the results of the analysis using SGC.

To date, the TPH-D and TPH-O concentrations greater than their corresponding groundwater PSL have been identified hydraulically upgradient of the Site, in groundwater from wells within the former Plywood Plant and Triangular parcels (i.e., TP-MW-2, FPP-MW-1, FPP-MW-2, MW-12, and MW-101); TPH concentrations are shown on Figure 12. Samples from wells MW-12 and FPP-MW-1 had the highest concentrations of TPH-D and TPH-O; however, groundwater from FPP-MW-1 (along with TP-MW-2 and FPP-MW-2) was only analyzed during the December sampling event (TP-MW-2 did not have a positive HCID result during the September sampling round). Concentrations in the December 2014 round were relatively lower than those detected in September 2014, potentially indicating a seasonal influence on the TPH concentrations in groundwater. The only Site well where TPH-O and TPH-D were detected above the laboratory RL was MW-106 (December 2014 samples only); however, the concentrations were not above the corresponding PSLs (based on the result analyzed using SGC).

Based on these initial results, a source area for TPH-D/TPH-O contamination appears to be present hydraulically upgradient of the Site within the former Plywood Plant and Triangular parcels. TPH contamination in groundwater is not currently identified as an issue with respect to the Site. This initial

conclusion and the extent of TPH contamination over the full area of investigation will be further evaluated once the additional data is available from the third and fourth quarter rounds of sampling.

8.1.2 DISSOLVED METALS AND SITE-WIDE REDUCING CONDITIONS

As discussed in Section 7.2.2, metals (both total and dissolved) were the most frequently detected compounds above their corresponding RLs in groundwater samples from Site and vicinity wells during the initial two monitoring events. Concentrations of select metals are shown on Figures 13 and 14. Elevated metals concentrations have also been consistently detected in historical groundwater samples, from sample locations both hydraulically upgradient and downgradient of the Site (see Appendix A, Tables A-3 and A-7).

Evaluation of both the historical and current RI dissolved metals results indicates that the entire area of investigation is being affected to some degree by groundwater aquifer reducing conditions resulting from the presence of both wood debris and MSW. Oxygen is consumed during the natural degradation of solid waste and wood debris in the subsurface (by microbes present in the soil), and reducing conditions can be created. Under reducing conditions, some metals, which would otherwise normally be bound within the soil matrix, become mobile through precipitation into the dissolved phase. This is a biological process during which available electron acceptors are chemically reduced sequentially based on potential energy yield (oxygen, nitrate, manganese, iron, arsenic, and sulfate), transitioning from an aerobic to anaerobic environment. As consumption of the electron acceptors continues during this natural attenuation process, then reducing conditions increase.

These natural attenuating and aquifer-reducing conditions can be observed in the area of the Site though evaluation of the metals data (indicating a nitrate to iron/manganese-reducing environment) and associated field parameters collected during sampling [e.g., depleted dissolved oxygen, negative oxidation reduction potentials (ORPs)]. As illustrated on Figure 14, naturally aerobic (oxygen-rich) groundwater entering the Site from the west/northwest (hydraulically upgradient) has lower organic carbon content and metals concentrations. As the groundwater moves first through the areas of buried wood debris located hydraulically upgradient of the Site and eventually through the areas of combined wood debris and MSW, the available oxygen/carbon in the aquifer is consumed creating reducing conditions in the aquifer. As the groundwater passes through the Site and leaves the area of combined wood debris and MSW, the reducing conditions begin to dissipate as metals concentrations decrease and nitrate and sulfate concentrations start to rebound.

The highest TOC concentrations in the area of investigation were at sampling locations hydraulically upgradient of the Site in the former Plywood Plant parcel. These higher TOC concentrations are co-located in the areas of the TPH-D and TPH-O contamination discussed in

Section 8.1.1; the presence of the TPH contamination provides an additional resource of carbon that can further accelerate the shift to reducing conditions in the area. The hydraulically cross-gradient areas to the south of the Site (e.g., MW-16 and MW-109, see Figure 14) do not appear to display the same level of reducing conditions seen in other parts of the area of investigation, in part because of the lack of wood debris and MSW to provide an organic electron donor and the continued "fringe" influence of groundwater higher in oxygen content.

The aquifer reducing conditions discussed above are present area-wide due in part to the presence of both wood debris at the hydraulically upgradient properties and the presence of combined wood debris and MSW at the Site. Mitigation of these reducing conditions could possibly be achieved through source removal [i.e., removal of the material (wood debris/MSW) that is providing the electron donor (carbon)]. Given the size and complexity of the Site and the surrounding properties, mass removal of these materials is impracticable and would present a substantial and disproportionate cost.

8.1.3 LANDFILL GAS

LFG was surveyed at and in the vicinity of the Site in December 2014 and January 2015 (see Section 7.3 and Table 12). LFG is generated by microbes during the anaerobic degradation of materials such as MSW and wood debris, and it is composed primarily of methane, carbon dioxide, and water vapor. The amount of LFG produced, and its rate of generation, is dependent upon the type of waste, moisture content, and subsurface conditions. Depending on site conditions, LFG production can last from 20 years to more than 50 years (DHHS 2001). Methane concentrations measured in recent surveys at GP-19 and GP-20, the two LFG probes located within the Site (i.e., the extent of MSW), indicate that decomposition of the MSW is ongoing and some level of LFG production is likely into the near future.

No buildings occupy the Site and the LFG that is being generated passively escapes to the atmosphere. Based on the recent survey results, it is clear that LFG unrelated to MSW decomposition is also being produced by the wood debris buried in the vicinity of the Site and combined with the MSW in many locations. As development of the Site occurs, the potential design strategies will likely need to consider potential mitigation of LFG, or the source for LFG production (i.e., MSW, wood debris) could be removed, which as mentioned previously, is impracticable on a large scale. LFG concentrations will again be surveyed in June 2015, by which time the planned LFG probes along the eastern edge of the Site will be installed. The installation and survey of those new LFG probes will provide a larger data set to be used for evaluation of LFG conditions at the perimeter of the Site.

8.1.4 OTHER CONTAMINANTS

The results of the sampling conducted from September through December 2014 identified various compounds at locations throughout the area of investigation, some of which exceeded their corresponding PSLs. Of the compounds identified, BEHP and the PCB Aroclor 1242 were the only two that had multiple detections across sampling events. Aroclor 1242 was detected in both soil (within the Site) and in groundwater (within the Site and hydraulically downgradient). Although Aroclor 1242 does not have media-specific screening criteria, the low concentrations detected in both soil and groundwater samples do not exceed their media-specific total PCB PSLs. Aroclor 1242 will continue to be monitored during the next two quarters of groundwater sampling, but it is not currently considered to be of concern for potential remedial action at the Site.

BEHP was also detected in soil and groundwater samples, and was the most frequently detected SVOC during the sampling conducted from September through December 2014. Although the BEHP soil concentrations were not greater than their corresponding PSL, the groundwater results were above the groundwater PSL at each location where it was detected. However, BEHP was detected in groundwater across the area of investigation, including at hydraulically upgradient wells and within the Site, indicating that it is not a compound solely associated with the Site. As a widely-used plasticizer, BEHP is a component of hundreds of products and materials and is often identified as a cross-contaminant in laboratory analyses. BEHP concentrations will be further evaluated during the next two rounds of quarterly groundwater sampling.

8.2 CLEANUP STANDARDS EVALUATION

Based on the guidelines established under MTCA, cleanup standards consist of 1) CLs, as defined by regulatory criteria, which are determined to be adequately protective of human health and the environment, and 2) the point(s) of compliance at which the CLs must be met for each media of concern. The Site-specific cleanup standards that are developed are then used to set the basis for establishing remedial action objectives (RAOs) for potential remedial actions, if required, which will then be evaluated as part of the Feasibility Study (FS) process.

Preliminary cleanup standards for the Site are discussed in this section and will be more thoroughly discussed in the Supplemental RI Report, which will be prepared after completion of the March and June 2015 sampling events.

8.2.1 CLEANUP LEVELS

Various compounds were detected at sample locations across the area of investigation during the additional RI activities (September 2014 through January 2015), including in soil, groundwater, and as

components of LFG (particularly methane). Once the results of the remaining sampling events are evaluated, preliminary cleanup levels (PCLs) will be developed and included in the Supplemental RI Report. The PSLs discussed in this report (see Section 6.3) can initially be considered as applicable PCLs, with the levels for various analytes raised to the laboratory QL (applied as the PQL) or natural- or regional-background concentrations, per the guidelines under MTCA (as with dissolved arsenic for instance, as discussed in Section 7.2.2.1).

CLs for affected media developed under MTCA represent the concentration of a compound that is protective of human health and the environment for identified potential exposure pathways, based on the highest beneficial use (HBU) and the reasonable maximum exposure (RME) for each affected media. The process for developing CLs consists of identifying the HBU and RME for affected media, determining which compounds represent the greatest risk to human health or the environment, and then determining the CLs for those compounds.

Based on the available analytical data and existing Site conditions, PCLs may be set for compounds identified in groundwater and for LFG constituents, but likely not for compounds identified in soil. As discussed in Section 6.3.2, soil PSLs consider criteria protective of groundwater in those instances where current RI groundwater PSL exceedances do not empirically demonstrate that concentrations in soil are adequately protective of groundwater; current soil PSLs will be reevaluated based on the results of the remaining planned groundwater sampling RI activities.

Due to its nature as a waste material, the MSW will not be directly characterized as part of this RI; specific characterization would occur if removal is required as part of Site redevelopment. Remediation alternatives to be evaluated for the Site may address the MSW and shallow (near surface) soil either through removal, isolation from the environment (e.g., landscaping or earthen capping), institutional controls, or a combination thereof; therefore, CLs protective of direct contact, leaching, and/or erosion will likely not be established.

PCLs for groundwater and LFG components will be established for the Site, based on the results collected to date and on the additional information developed from the March and June 2015 sampling events. As discussed in Section 7.2, with the exception of dissolved metals, compounds detected at concentrations greater than their corresponding groundwater PSLs were identified predominately at locations hydraulically upgradient or within the Site. The elevated dissolved metals concentrations are an area-wide issue, and not directly linked to the Site. In some instances, the dissolved metals PSLs are set based on drinking water criteria (aesthetics/taste in the case of dissolved iron, manganese, and sodium). As discussed in several instances in this report, groundwater is not currently and will not be used as drinking water at or downgradient of the Site. However, PCLs will likely be established for these

dissolved metals as part of the RI process, but any potential remediation requirement will be linked to area-wide considerations and the identified point of compliance (see Section 8.2.2).

PCLs for LFG compounds (specifically methane) will be linked to the solid waste criteria discussed in Section 6.3.3. Presently, PCLs relating to requirements at the perimeter of the Site will be the primary driver for potential LFG management.

8.2.2 POINTS OF COMPLIANCE

Under MTCA, the point of compliance is the location on the Site where the CL must be attained. Ultimately, the point(s) of compliance for affected media will be selected by Ecology and presented in the Site Cleanup Action Plan (CAP), as appropriate. However, the Supplemental RI Report will identify proposed point(s) of compliance to develop and evaluate the effectiveness of potential remedial strategies to be evaluated as part of the FS.

8.2.2.1 Soil

The point of compliance for soil, as established in WAC 173-340-740(6), will be throughout the Site (i.e., the extent of MSW). MTCA recognizes that if containment is included as part of a remedial strategy, the soil CLs will typically not be met throughout the Site [WAC 173-340-740(6)(f)]. However, MTCA also recognizes that these cleanup actions may still comply with overall Site-specific cleanup standards.

8.2.2.2 Groundwater

The point of compliance for groundwater will likely be defined as the hydraulically downgradient edge of the Site. Monitoring at this point of compliance will help demonstrate that potential groundwater contaminants are not leaving the Site (i.e., the extent of MSW) at concentrations above the CLs that will be developed for the groundwater contaminants of concern as part of the RI process.

8.2.2.3 Landfill Gas

Based on existing Site conditions, the likely point of compliance for LFG compounds (particularly methane), per WAC 173-304-460(2), is the perimeter of the Site (5 percent methane by volume).

8.3 POTENTIAL REMEDIATION REQUIREMENTS

Ultimately, Site-specific RAOs will be established as part of the RI/FS process. They will define the goals of potential remediation that would be protective of human health and the environment. They

can be either action-specific (not focused on a specific compound criterion) or media-specific (incorporating compound-specific PCL requirements). Potential remedial alternatives to be evaluated in the FS must achieve the RAOs to be considered a viable cleanup action.

Potential remediation requirements will be evaluated as part of the FS once the RI process is complete (media-specific contaminants of concern and cleanup standards are established, etc.). Based on data gathered to date and the understanding of existing Site conditions, some preliminary considerations can be made concerning potential remediation scenarios that may be applicable for the Site. These considerations will be further refined as additional RI data collection activities are completed.

8.3.1 SOIL

As discussed previously, the strategy for potentially addressing impacted soil at the Site will likely be based on a remedial action's ability to comply with the Site's groundwater cleanup standards and/or to meet standards designed to minimize human or environmental exposure to affected soil (e.g., containment, etc.). Based on sampling results and existing Site conditions, is it likely that exposure to potentially affected soil will be managed through institutional controls/restrictive covenants that will limit activities that might expose potential receptors to the surface soil and the underlying MSW (e.g., prohibiting drinking water wells, managing excavation during redevelopment, etc.). A restrictive covenant prohibiting residential use of the Site has previously been established (Boise Cascade Corporation 2004).

With the likelihood that the Site will be redeveloped in the future, areas of potential soil contamination (and MSW) may be addressed through removal to support redevelopment requirements, but not directly for soil remediation. Planning for subsurface work would need to accommodate for worker health and safety concerns and incorporate the necessary material handling and disposal requirements (as applicable), depending on the location and the depth of future excavation activities.

8.3.2 GROUNDWATER

Based on the data available to date and the proposed point of compliance at the hydraulically downgradient edge of the Site, only a few compounds (with the exception of dissolved metals) have been identified in groundwater leaving the Site. The dissolved metals and the associated groundwater aquifer reducing conditions are present area-wide. The most direct approach to eliminate the catalysts that are creating these reducing conditions could be source removal (i.e., wood debris and MSW). Given the size of the Site and the surrounding properties, as well as the volume of materials involved, removal of materials on this scale would be impracticable and disproportionately cost prohibitive.

If dissolved metals need to be addressed, other alternatives could be considered. However, many of the dissolved metals PSLs (and probably PCLs) are based on protection of drinking water criteria. The dissolved arsenic PSL is based on the groundwater protective of surface water criterion. The detected dissolved arsenic concentrations to date are all below regional background (i.e., 10.7 µg/L; Ecology 2010) and it is not currently considered as a driver for potential groundwater remediation at the Site. Given that groundwater at and downgradient of the Site will not be used as a drinking water source, institutional controls/deed restrictions (combined with long-term monitoring) will likely be sufficient to address the limited impacts to groundwater relating to the Site.

8.3.3 LANDFILL GAS

As mentioned previously, potential remediation requirements to address LFG compounds (particularly methane) may be linked to future Site development scenarios and considerations. Based on existing Site conditions (e.g., no buildings or structures, etc.) no immediate remediation of LFG concentrations may be required. However, potential remediation scenarios aimed at addressing the other media of concern (e.g., soil/MSW containment, etc.) could influence LFG exposure pathways at the Site and they would require consideration of some level of LFG mitigation based on these newly created pathways. The need for potential LFG mitigation strategies will be further evaluated after additional LFG probes are installed (eastern Site perimeter) and the June 2015 LFG survey is completed.

9.0 USE OF THIS REPORT

This Remedial Investigation Interim Data Report has been prepared for the exclusive use of City of Yakima and its designated representatives for specific application to the Closed City of Yakima Landfill Site. No other party, except the Washington State Department of Ecology, is entitled to rely on the information, conclusions, and recommendations included in this document without the express written consent of Landau Associates. Further, the reuse of information, conclusions, and recommendations provided herein for extensions of the project or for any other project, without review and authorization by Landau Associates, shall be at the user's sole risk. Landau Associates warrants that within the limitations of scope, schedule, and budget, our services have been provided in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions as this project. We make no other warranty, either express or implied.

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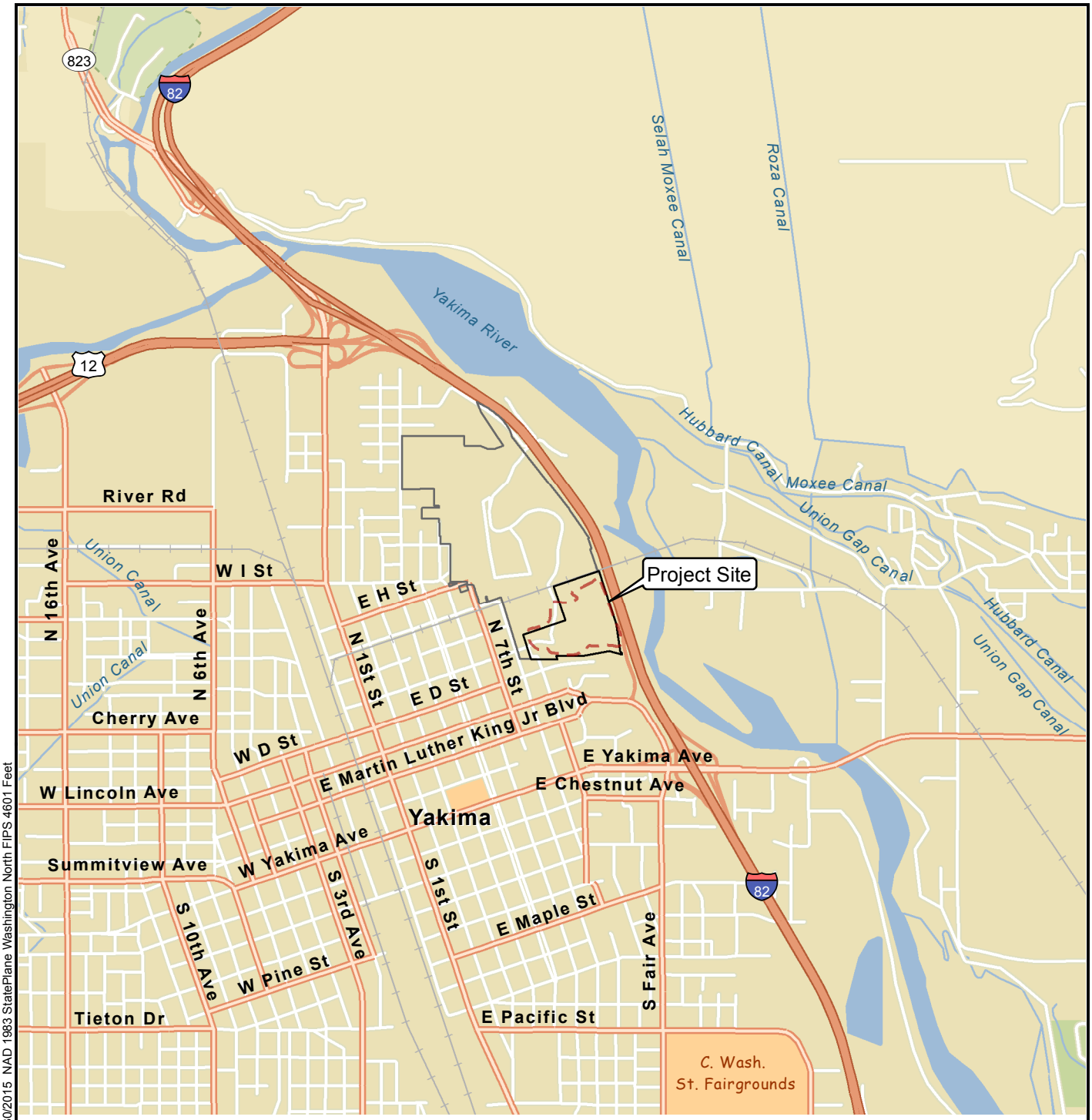

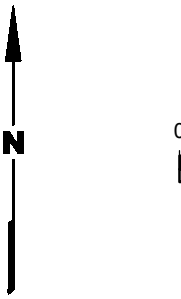

Data Source: Esri 2012

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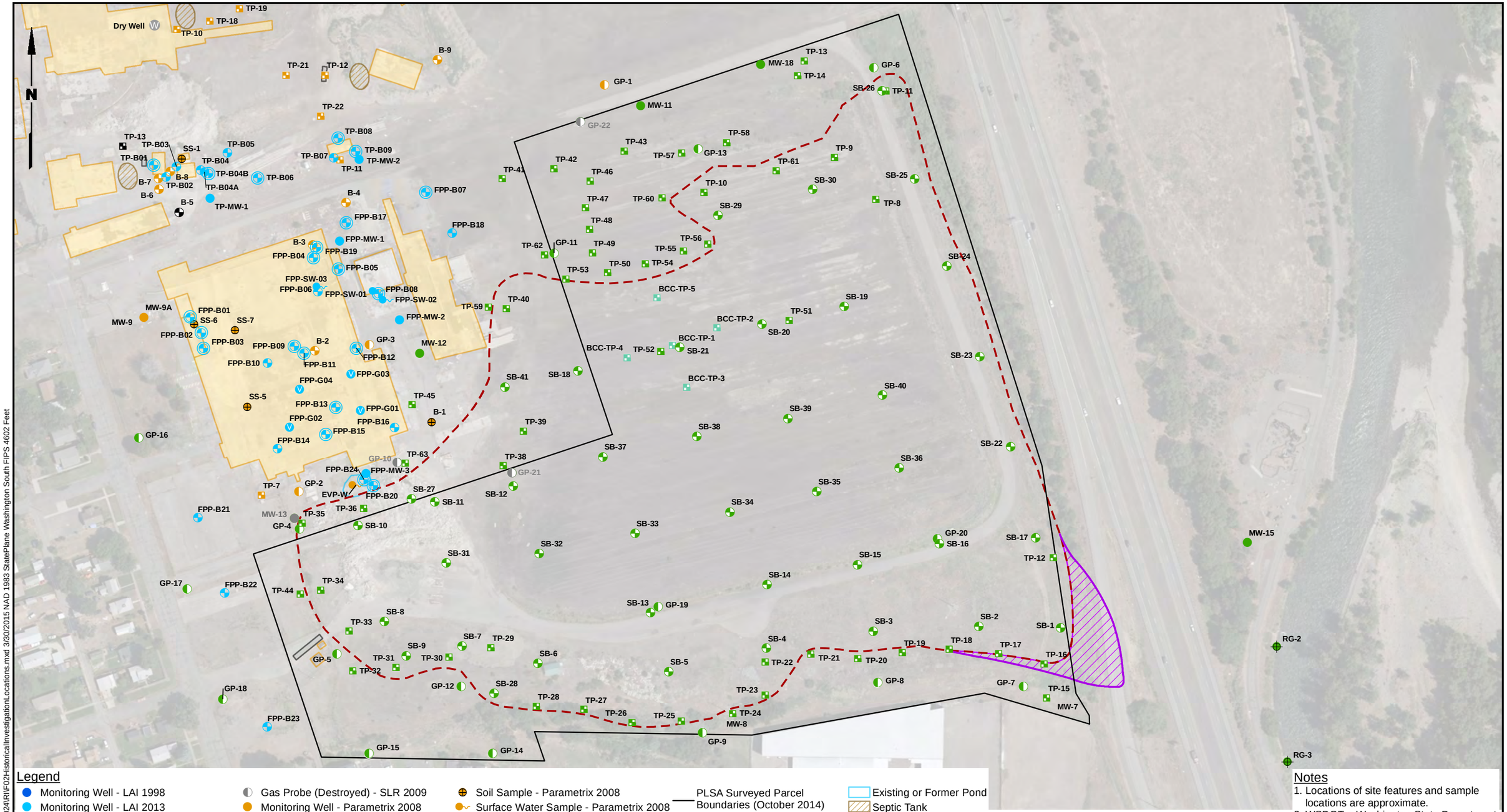
Closed City of Yakima Landfill Site Yakima, Washington	**Vicinity Map**	Figure 1



Legend

- Monitoring Well - LAI 1998
- Monitoring Well - LAI 2013
- Soil Sample - LAI 2013
- Soil and Groundwater Sample - LAI 2013
- Surface Water Sample - LAI 2013
- Soil Gas Sample - LAI 2013
- Gas Probe - Parametrix 2008
- Gas Probe - SLR 2009
- Gas Probe (Destroyed) - SLR 2009
- Monitoring Well - Parametrix 2008
- Monitoring Well - SLR 2009
- Monitoring Well (Destroyed) - SLR 2009
- River Gauge - SLR 2012
- Soil Boring - Parametrix 2008
- Soil Boring - SLR 2009
- Soil Boring - URS
- Soil Sample - Parametrix 2008
- Surface Water Sample - Parametrix 2008
- Test Pit - Parametrix 2008
- Test Pit - SLR 2009
- Test Pit - URS
- Test Pit - Boise Cascade 1985
- Water Well - URS
- Dry Well - URS
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features

0 200 400

Scale in Feet

Notes

1. Locations of site features and sample locations are approximate.
2. WSDOT = Washington State Department of Transportation.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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Closed City of Yakima Landfill Site Yakima, Washington	**Historical Investigation Locations**	Figure 2

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G:\Projects\1148\008\020\024\RI\F03MWNetwork.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

N

MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-9A
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16
MW-17
MW-18
MW-100
MW-101
MW-102
MW-103
MW-104
MW-105
MW-106
MW-107
MW-108
MW-109
TP-MW-1
TP-MW-2
FPP-MW-1
FPP-MW-2
FPP-MW-3
RG-1
RG-2
RG-3
RG-4

Legend

- Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- Water Well (WSDOT)
- River Gauge
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features

0 500 1,000
Scale in Feet

Notes

1. Locations of site features and sample locations are approximate.
2. WSDOT = Washington State Department of Transportation.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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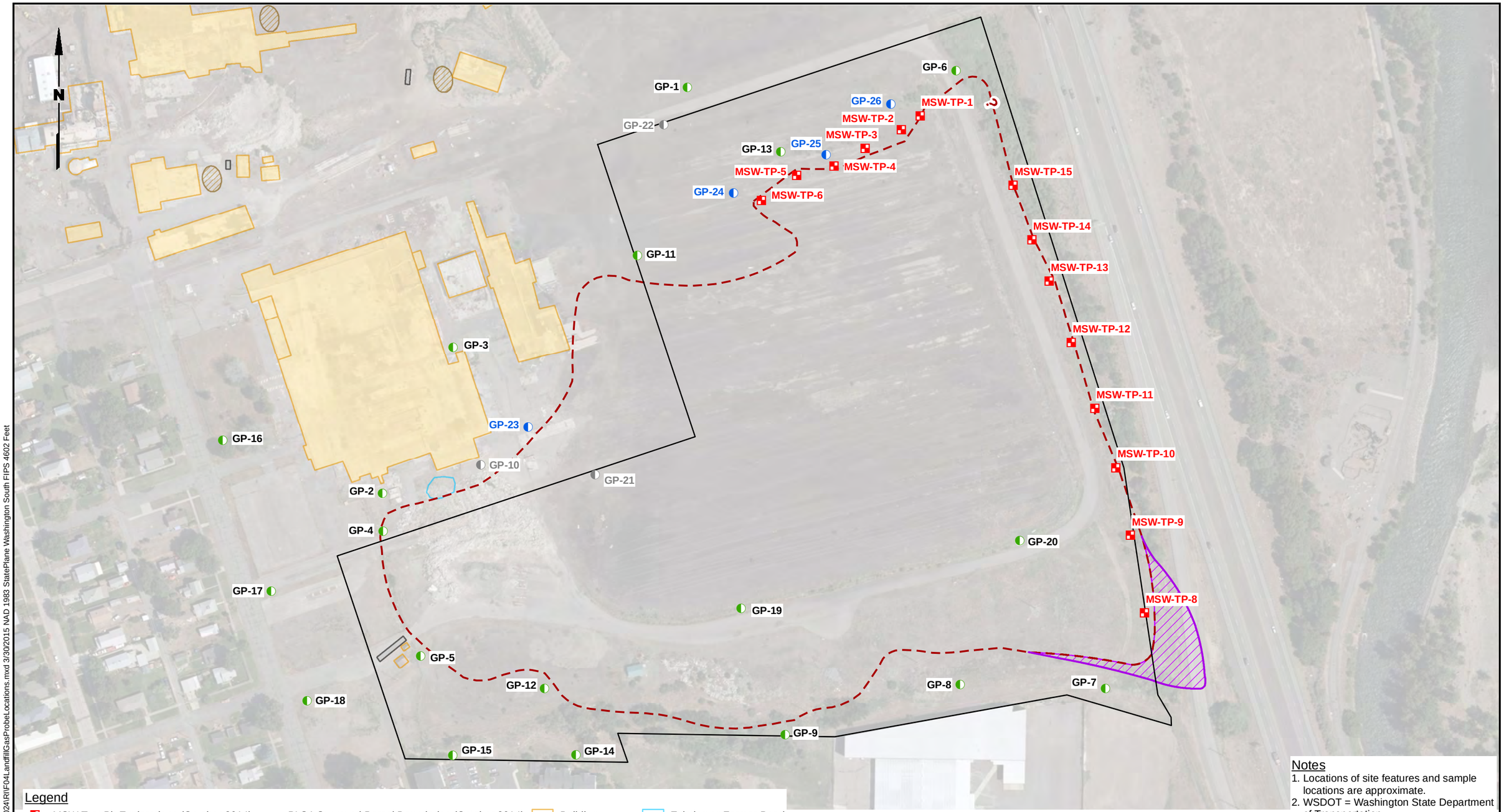
Closed City of Yakima Landfill Site
Yakima, Washington

Groundwater Monitoring Network

Figure 3



G:\Projects\1148\0080\020\024\RIF04\LandfillGasProbeLocations.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

Legend

- MSW Test Pit Explorations (October 2014)
- New Gas Probes - (October 2014)
- Gas Probe - 2009
- Gas Probe (Destroyed)
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features

0 200 400

Scale in Feet

Notes

1. Locations of site features and sample locations are approximate.
2. WSDOT = Washington State Department of Transportation.
   MSW = Municipal Solid Waste.
3. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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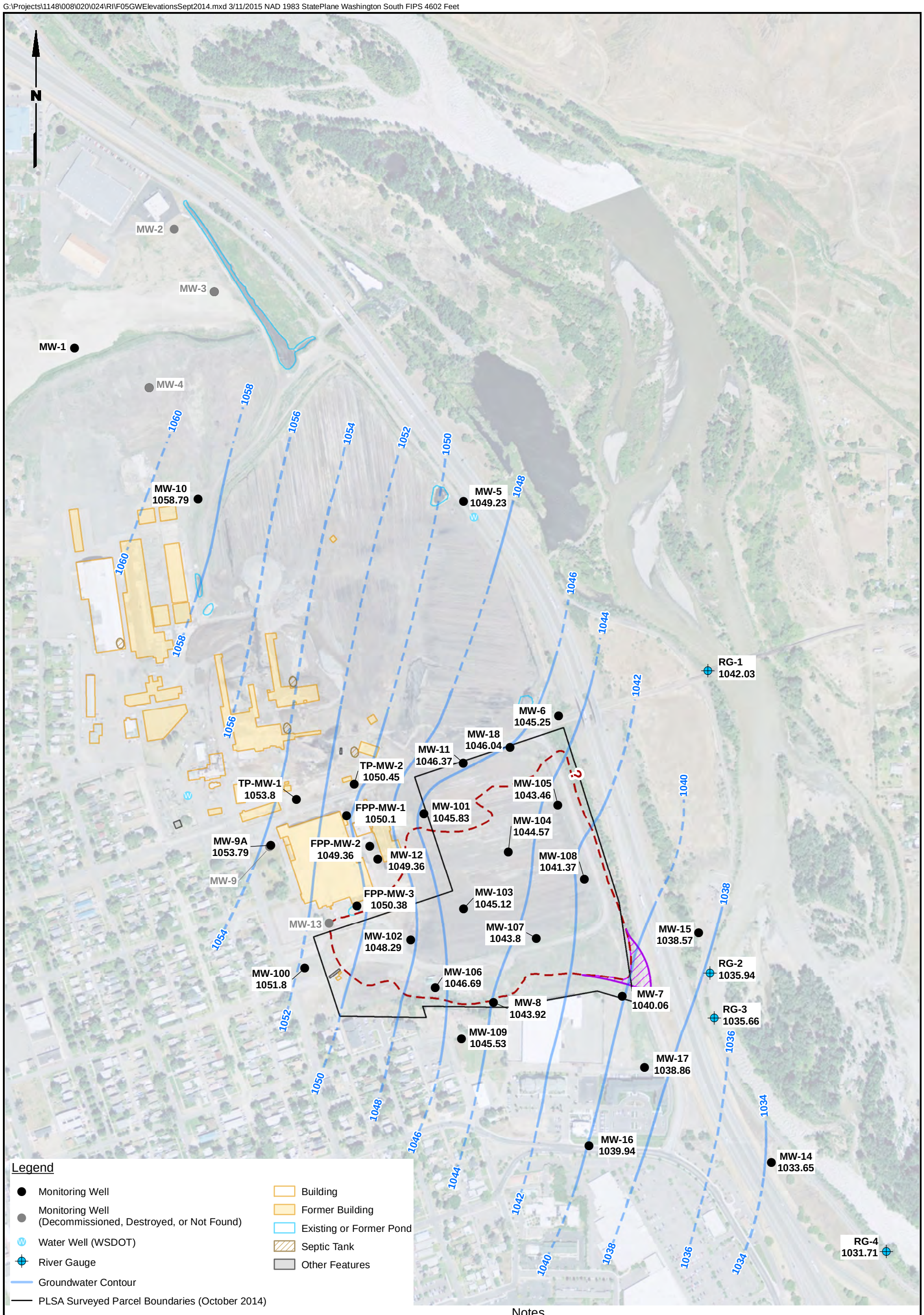
Closed City of Yakima
Landfill Site
Yakima, Washington

Landfill Gas Probe Network and Municipal Solid Waste Investigation Locations

Figure 4

G:\Projects\1148\008\020\024\RI\F05GWElevationsSept2014.mxd 3/11/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

- Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- Water Well (WSDOT)
- River Gauge
- Groundwater Contour
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features

0 500 1,000

Scale in Feet

Notes

1. River Gauges 1 through 4 (RG-1 through RG-4) were not used in generation of groundwater contours.
2. Locations of site features and sample locations are approximate.
3. WSDOT = Washington State Department of Transportation.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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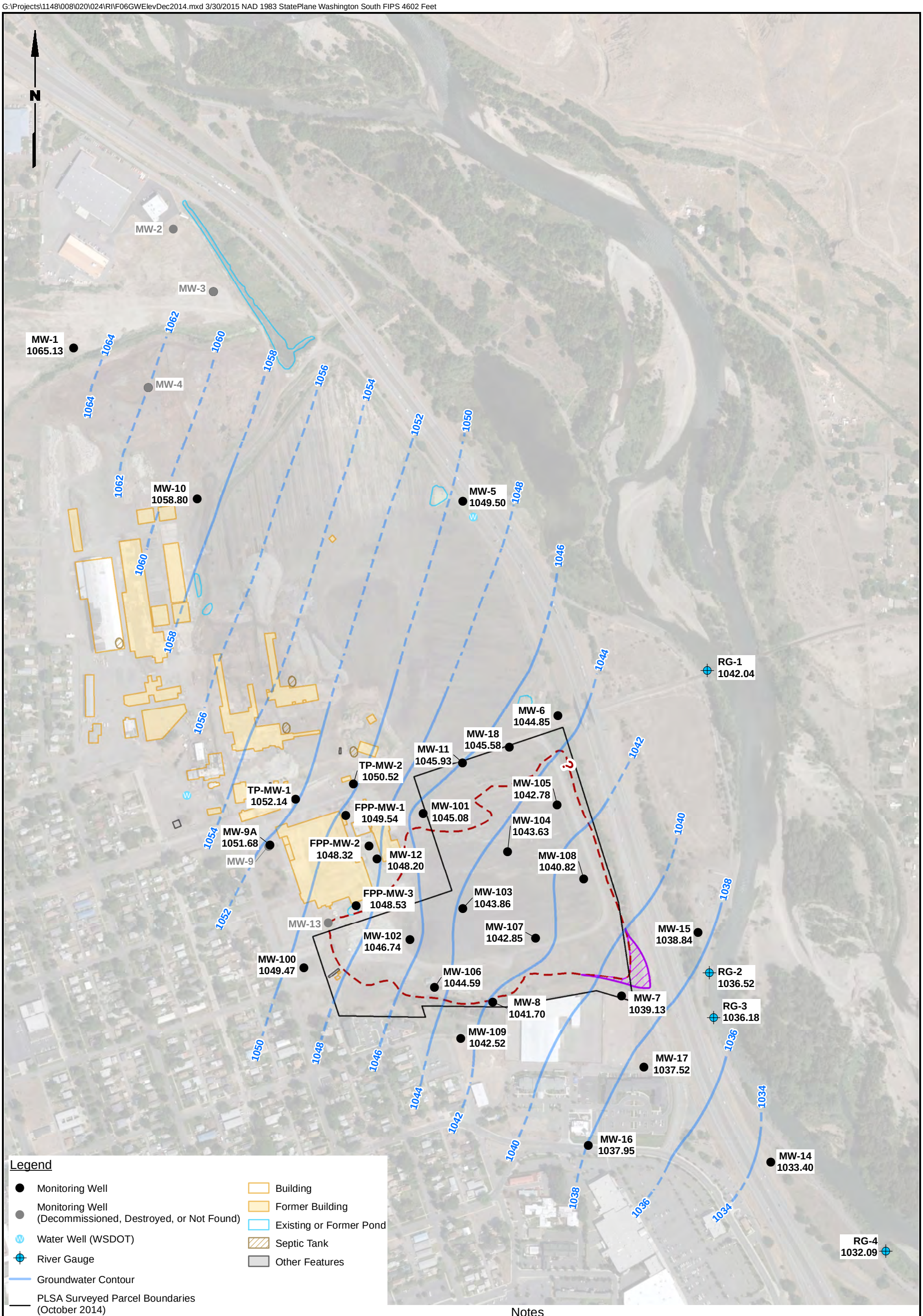
Closed City of Yakima Landfill Site
Yakima, Washington

Groundwater Elevation Contours September 2014

Figure 5

G:\Projects\1148\008\020\024\RI\F06GWElevDec2014.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

- Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- Water Well (WSDOT)
- River Gauge
- Groundwater Contour
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features

0 500 1,000

Scale in Feet

Notes

1. River Gauges 1 through 4 (RG-1 through RG-4) were not used in generation of groundwater contours.
2. Locations of site features and sample locations are approximate.
3. WSDOT = Washington State Department of Transportation.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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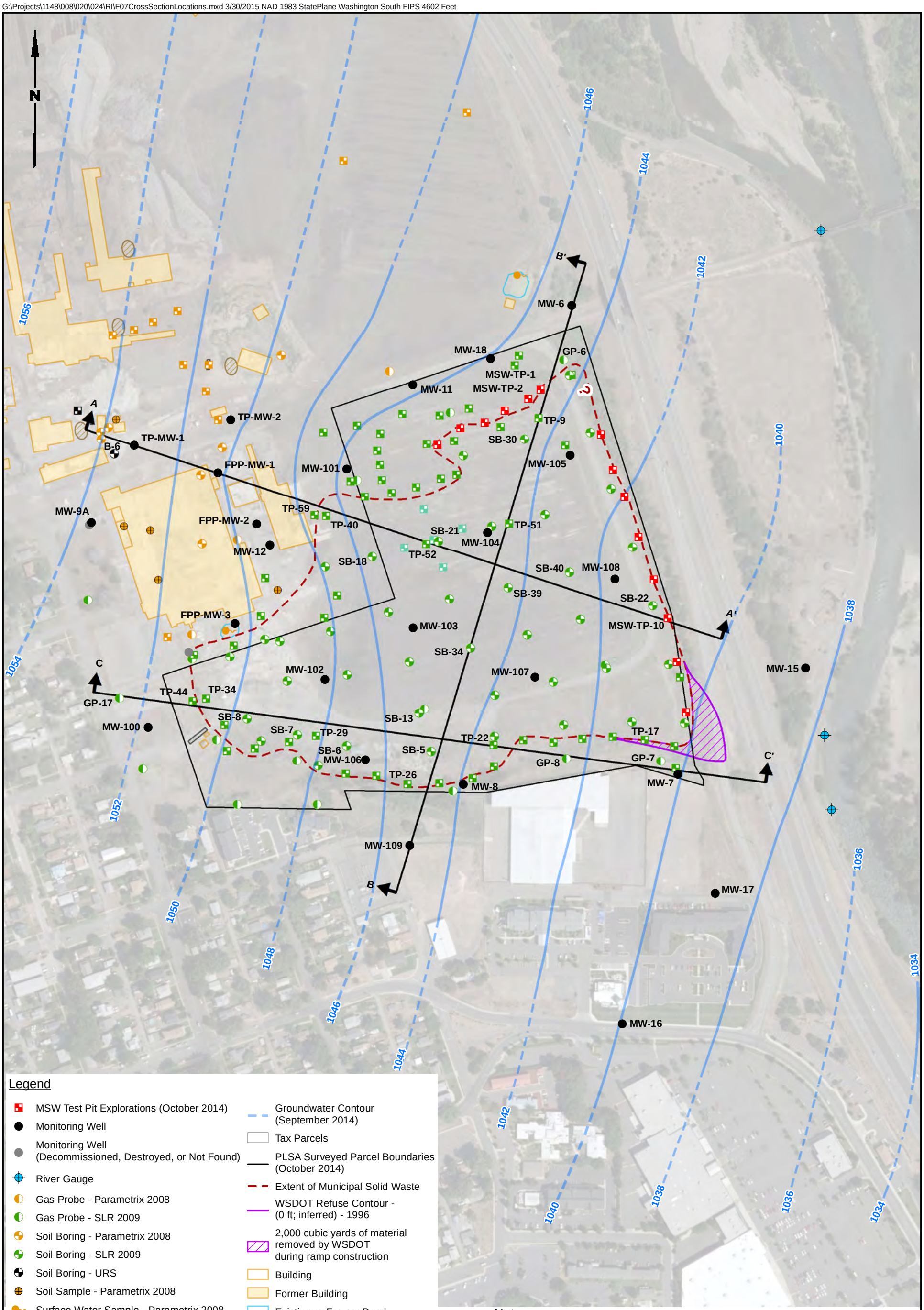
Closed City of Yakima Landfill Site
Yakima, Washington

Groundwater Elevation Contours December 2014

Figure 6

G:\Projects\1148\008\020\024\RI\F07CrossSectionLocations.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet



Legend

- MSW Test Pit Explorations (October 2014)
- Monitoring Well
- Monitoring Well (Decommissioned, Destroyed, or Not Found)
- River Gauge
- Gas Probe - Parametrix 2008
- Gas Probe - SLR 2009
- Soil Boring - Parametrix 2008
- Soil Boring - SLR 2009
- Soil Boring - URS
- Soil Sample - Parametrix 2008
- Surface Water Sample - Parametrix 2008
- Test Pit - Parametrix 2008
- Test Pit - SLR 2009
- Test Pit - URS
- Test Pit - Boise Cascade 1985
- Groundwater Contour (September 2014)
- Tax Parcels
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Cross Section Location

Notes

1. Labelled locations include the monitoring well network and those additional locations used to prepare the cross sections.
2. Locations of site features and sample locations are approximate.
3. WSDOT = Washington State Department of Transportation.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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Closed City of Yakima Landfill Site
Yakima, Washington

Cross Section Transects and Associated Exploration Locations

Figure 7

A West

A' East

1070
1065
1060
1055
1050
1045
1040
1035
1030

TP-MW-1 — TD=20'
FPP-MW-1 — TD=20'
FPP-MW-2 (Offset 121'S) — TD=20'
TP-59 (Offset 37'S) — TD=6'
TP-40 (Offset 28'S) — TD=6'
SB-18 (Offset 107'S) — TD=23'
TP-52 (Offset 13'S) — TD= 10'
SB-21 (Offset 7'N) — TD=21.5'
MW-104 (Offset 84'N) — TD=26.3'
SB-39 (Offset 66'S) — TD=21.5'
SB-40 (Offset 42'N) — TD=21.5'
MW-108 (Offset 69'N) — TD-23.1'
SB-22 (Offset 22'N) — TD=20.5'
MSW-TP-10

SAND (SM)
GRAVEL (GP)
GRAVELLY SAND (SP-SM)
SILTY GRAVEL (GM)
SANDY GRAVEL (GP-GM)
SAND (SP-SM)
WOOD DEBRIS
SAND (SM)
GRAVELLY SILT (ML)
SANDY SILT (ML)
GRAVELLY SAND (SP-SM)
MUNICIPAL SOLID WASTE
GRAVELLY SAND (SP-SM)
SANDY GRAVEL (GP-GM)
SANDY SILT (ML)
SAND (SP-SM)

Legend

MW-1	Project Exploration Designation
(Offset 160' W)	Offset Distance in Feet and Direction
	Top of Exploration
	Approximate Groundwater Surface (September 2014)
	Inferred Geologic Contact
	Well Screen
	Bottom of Exploration
TD=14'	Total Depth of Exploration
	Inferred Ground Surface
GM	Unified Soil Classification System Symbol

0 150 300
Scale in Feet
30x Vertical

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Closed City of Yakima Landfill Site
Yakima, Washington

Cross Section A-A'

Figure 8

B South

B' North

1065
1060
1055
1050
1045
1040
1035
1030

MW-109
SB-5 (Offset 21'W)
SB-13 (Offset 95'W)
SB-34
SB-39 (Offset 66'E)
MW-104 (Offset 50'W)
TP-51 (Offset 9'E)
SB-30 (Offset 23'W)
TP-9
MSW-TP-2 (Offset 49'W)
MSW-TP-1 (Offset 16'W)
GP-6 (Offset 26'E)
MW-6
TP-26 ✱ (Offset 65'W)

WOOD DEBRIS
SILTY GRAVEL (GM)
GRAVELLY SILT (ML)
SAND (SP)
SAND (SM)
MUNICIPAL SOLID WASTE
WOOD DEBRIS
SILTY SAND (SM)
SILTY GRAVEL (GM)
GRAVELLY SAND (SP)
SAND (SP-SM)
SANDY GRAVEL (GW)
GRAVEL (GP)
SAND (SP-SM)

TD=6.5'
TD=18.5'
TD=23'
TD=21.5'
TD=21.5'
TD=12.5'
TD=11'
TD=21.5'
TD=14'
TD=20'
TD=24'
TD=26.3'

Legend

- MW-1 — Project Exploration Designation
- (Offset 160' W) — Offset Distance in Feet and Direction
- Top of Exploration
- Approximate Groundwater Surface (September 2014)
- Inferred Geologic Contact
- Well Screen
- Bottom of Exploration
- TD=14' — Total Depth of Exploration
- Inferred Ground Surface
- GM — Unified Soil Classification System Symbol

✱ Based on elevation at time of excavation (2009)

0 150 300
Scale in Feet
30x Vertical

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Closed City of Yakima
Landfill Site
Yakima, Washington

Cross Section B-B'

Figure 9

C
West

C'
East

1065
1060
1055
1050
1045
1040
1035
1030

GP-17
TD=15'

TP-44
(Offset 23'N)
TD=7.5'

TP-34
(Offset 37'N)
TD=11.5'

SB-8
(Offset 12'S)
TD=19'

SB-7
(Offset 41'S)
TD=19'

TP-29
(Offset 35'S)
TD=5.5'

SB-6
(Offset 55'S)
TD=18.5'

MW-106
(Offset 91'S)
TD=23'

SB-5
(Offset 35'S)
TD=18.5'

TP-22
(Offset 13'N)
TD=8.5'

GP-8
TD= 10'

TP-17
(Offset 96'N)
TD=10'

GP-7
(Offset 35'N)
TD=8.5'

MW-7
TD=15.3'

SILTY GRAVEL (GM)

GRAVEL (GP)

SILTY GRAVEL (GM)

WOOD DEBRIS

MUNICIPAL SOLID WASTE

SILTY SAND (SM)

SANDY GRAVEL (GW)

SILTY SAND (SM)

SANDY GRAVEL (GW)

SILTY SAND (SM)

GRAVEL (GP)

Legend

MW-1	Project Exploration Designation
(Offset 160' W)	Offset Distance in Feet and Direction
	Top of Exploration
	Approximate Groundwater Surface (September 2014)
	Inferred Geologic Contact
	Well Screen
	Bottom of Exploration
TD=14'	Total Depth of Exploration
	Inferred Ground Surface
GM	Unified Soil Classification System Symbol

0 150 300
Scale in Feet
30x Vertical

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Closed City of Yakima
Landfill Site
Yakima, Washington

Cross Section C-C'

Figure
10

N

Approximate Location of Irrigation Culvert
(potential subsurface connections unknown)

Steel Pipe

Culvert
(connection unknown)

Culvert Outlet

Grated Culvert Drain
(additional connections unknown)

RG-2

Culvert Inlet

Culvert Outlet

RG-3

G:\Projects\1148\008\020\024\RI\F11SurfaceWaterIrrigationSystem.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

Legend

- Culvert Drain
- Culvert Outlet
- River Gauge
- Underground Irrigation Piping
- Drainage Flow
- Surface Water (Varies with Season)
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building

0 250 500

Scale in Feet

Note

1. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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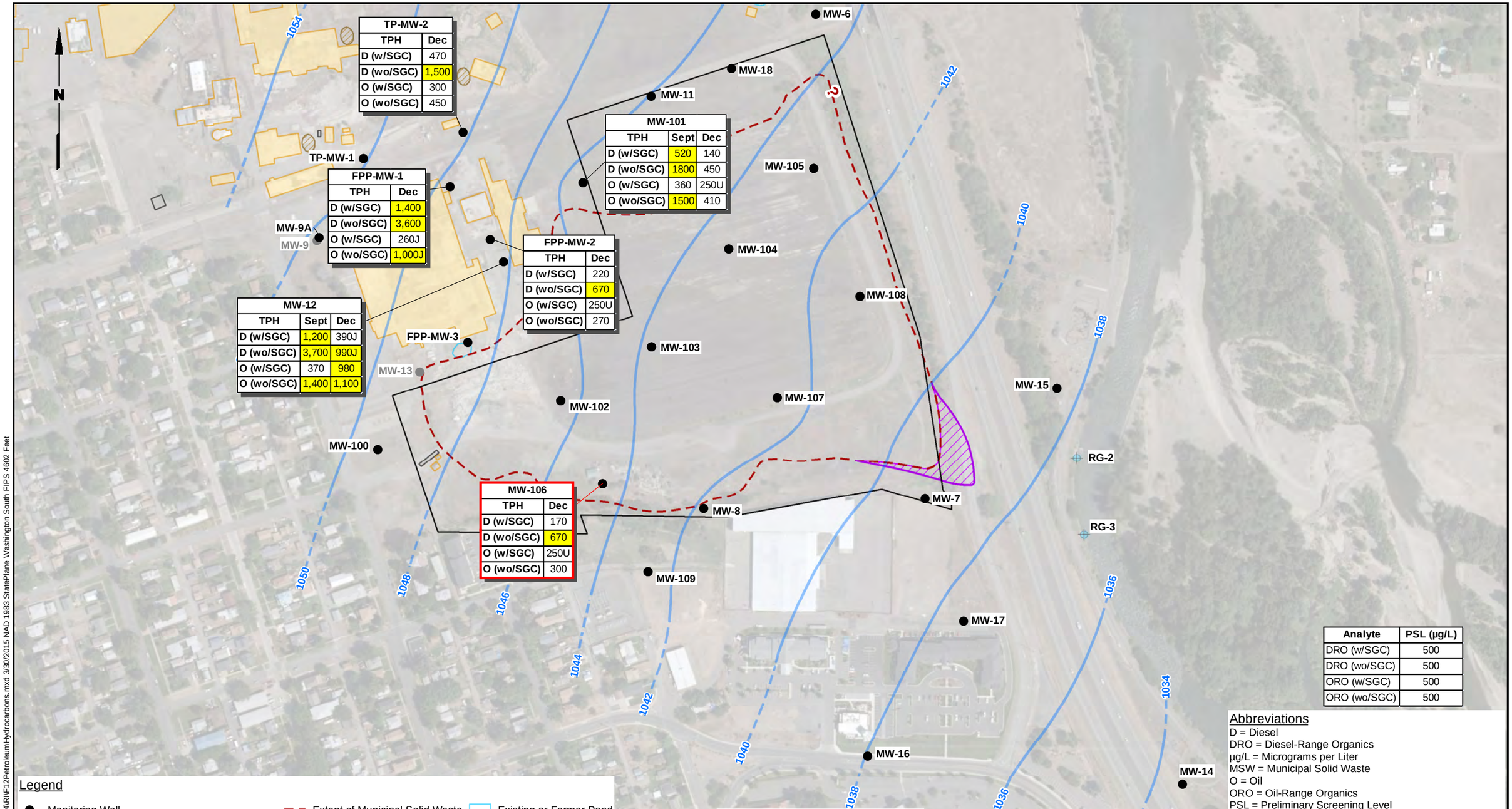
Closed City of Yakima
Landfill Site
Yakima, Washington

Surface Water and Irrigation System Information

Figure 11



Legend

- Monitoring Well
- Monitoring Well (Decommissioned or Destroyed)
- River Gauge
- Groundwater Contour
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Red-Bordered Data Box Indicates Well Installed within Known Extent of MSW

Notes

1. Highlighted results exceed PSL.
2. U = Indicates the compound was not detected at the reported concentration.
3. J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
4. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

0 300 600

Scale in Feet

Abbreviations

D = Diesel
DRO = Diesel-Range Organics
µg/L = Micrograms per Liter
MSW = Municipal Solid Waste
O = Oil
ORO = Oil-Range Organics
PSL = Preliminary Screening Level
SGC = Silica Gel Cleanup
TPH = Total Petroleum Hydrocarbon
W = With
WO/ = Without
WSDOT = Washington State Department of Transportation

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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Closed City of Yakima Landfill Site
Yakima, Washington

Petroleum Hydrocarbons in Groundwater Results (September and December 2014)

Figure 12

G:\Projects\1148\008\020\024\RIF12PetroleumHydrocarbons.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

TP-MW-1	Sept	Dec
Mn	2.0U	2.5
Fe	50U	50U
As	1.0U	0.45U
Na	11,000	9,700
pH	6.28	6.54
TOC	NS	1.9

TP-MW-2	Sept	Dec
Mn	1,300	1,500
Fe	12,000	12,000
As	3.9	2.7
Na	21,000	20,000
pH	6.54	6.46
TOC	NS	9.6

MW-11	Sept	Dec
Mn	2,000	1,900
Fe	29,000	32,000
As	3.6	4.1
Na	16,000	19,000
pH	5.46	7 (a)
TOC	5.0	4.0

MW-6	Sept	Dec
Mn	1,300	2,300
Fe	3,100	23,000
As	1.3	1.7
Na	15,000	14,000
pH	6.65	7 (a)
TOC	NS	4.7

MW-9A	Sept	Dec
Mn	2.0U	2.0U
Fe	50U	50U
As	1.1	0.67
Na	11,000	9,400
pH	9.76	9.10
TOC	1.6	1.0

FPP-MW-1	Dec
Mn	3,700
Fe	43,000
As	2.3
Na	53,000
pH	6.38
TOC	21

FPP-MW-2	Dec
Date	
Mn	1,500
Fe	17,000
As	4.2
Na	36,000
pH	6.47
TOC	6.2

MW-101	Sept	Dec
Mn	3,000	2,000
Fe	19,000	23,000
As	2.9	1.5
Na	29,000	22,000
pH	6.02	6.40
TOC	33	8.6

MW-18	Sept	Dec
Mn	4,400	3,300
Fe	41,000	37,000
As	8.0	7.3
Na	14,000	15,000
pH	6.37	7 (a)
TOC	8.2	5.7

MW-105	Sept	Dec
Mn	2,700	2,900
Fe	20,000	30,000
As	3.7	4.2
Na	28,000	16,000
pH	5.34	6.38
TOC	6.2	5.3

MW-12	Sept	Dec
Mn	1,800	1,700
Fe	13,000	11,000
As	1.2	0.45U
Na	69,000	43,000
pH	7.23	7 (a)
TOC	16	7.0

MW-104	Sept	Dec
Mn	2,300	2,100
Fe	26,000	27,000
As	5.7	5.4
Na	18,000	18,000
pH	7.62	6.43
TOC	4.9	4.1

MW-108	Sept	Dec
Mn	2,300	2,200
Fe	29,000	32,000
As	4.8	5.1
Na	16,000	18,000
pH	5.46	6.26
TOC	5.2	4.7

MW-15	Sept	Dec
Mn	890	850
Fe	6,300	5,500
As	1.1	0.45U
Na	8,900	10,000
pH	5.44	6.32
TOC	2.7	1.9

FFP-MW-3	Sept	Dec
Mn	440	390
Fe	7,600	7,900
As	1.4	0.58
Na	16,000	15,000
pH	6.48	7 (a)
TOC	1.8	1.4

MW-103	Sept	Dec
Mn	2,500	2,900
Fe	22,000	29,000
As	3.8	4.9
Na	22,000	23,000
pH	7.26	7 (a)
TOC	4.0	4.3

MW-107	Sept	Dec
Mn	2,400	1,900
Fe	24,000	22,000
As	3.6	2.7
Na	21,000	20,000
pH	5.81	6.28
TOC	4.6	3.5

MW-102	Sept	Dec
Mn	710	720
Fe	4,200	5,400
As	1.3	0.45U
Na	14,000	16,000
pH	5.93	7 (a)
TOC	1.9	1.5

MW-7	Sept	Dec
Mn	1,600	1,900
Fe	6,800	23,000
As	1.3	2.8
Na	13,000	19,000
pH	5.84	6.39
TOC	3.2	4.2

MW-100	Sept	Dec
Mn	190	230
Fe	50U	50U
As	1.0U	0.45U
Na	20,000	11,000
pH	6.13	6.93
TOC	1.6	1.0

MW-106	Sept	Dec
Mn	2,000	5,700
Fe	7,000	56,000
As	5.7	8.4
Na	57,000	30,000
pH	5.90	7 (a)
TOC	5.8	11

MW-8	Sept	Dec
Mn	1,900	2,000
Fe	14,000	7,700
As	3.7	0.68
Na	25,000	28,000
pH	5.95	7 (a)
TOC	8.0	4.5

MW-109	Sept	Dec
Mn	860	110
Fe	50U	50U
As	1.0U	0.45U
Na	14,000	13,000
pH	5.73	6.59
TOC	1.1	1.2

MW-16	Sept	Dec
Mn	110	210
Fe	50U	50U
As	1.0U	0.45U
Na	36,000	20,000
pH	5.58	6.51
TOC	NS	2.0

MW-17	Sept	Dec
Mn	2,000	2,100
Fe	16,000	21,000
As	2.6	1.4
Na	22,000	25,000
pH	6.66	7 (a)
TOC	4.3	4.2

MW-14	Sept	Dec
Mn	2.0U	2.9
Fe	50U	50U
As	1.0U	0.45U
Na	5,700	5,100
pH	6.59	6 (a)
TOC	NS	0.72

Analyte	Units	PSL
Mn	µg/L	50
Fe	µg/L	300
As	µg/L	0.45
Na	µg/L	20,000
pH	S.U.	6.5-8.5
TOC	mg/L	--

MW-9 MW-13 RG-2 RG-3

1054 1052 1048 1040 1036 1034 1038

Legend

- Monitoring Well
- Monitoring Well (Decommissioned or Destroyed)
- River Gauge
- Groundwater Contour
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Red-Bordered Data Box Indicates Well Installed within Known Extent of MSW

0 300 600

Scale in Feet

Abbreviations
As = Arsenic
Fe = Iron
Mn = Manganese
µg/L = Micrograms per Liter
MSW = Municipal Solid Waste
Na = Sodium
NS = Not Sampled
PSL = Preliminary Screening Level
TOC = Total Organic Carbon
WSDOT = Washington State Department of Transportation

Notes
1. Highlighted results exceed PSL.
2. U = Indicates the compound was not detected at the reported concentration.
3. (a) = pH strips used to measure pH value, due to field meter issues.
4. FPP-MW-1 and FPP-MW-2 not analyzed in September 2014.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

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Closed City of Yakima Landfill Site
Yakima, Washington

Select Dissolved Metals and Conventional Concentrations (September and December 2014)

Figure 13

G:\Projects\1148\008\020\024\RIF13DissolvedMetals.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

TP-MW-1	Sept	Dec
TOC	NS	1.9
NO_3	1.9J	0.16
Mn	2.0U	2.5
Fe	50U	50U
As	1.0U	0.45U
SO_4^{2-}	9.0	5.5

TP-MW-2	Sept	Dec
TOC	NS	9.6
NO_3	0.034UJ	0.034U
Mn	1,300	1,500
Fe	12,000	12,000
As	3.9	2.7
SO_4^{2-}	6.8	1.2

MW-11	Sept	Dec
TOC	5.0	4.0
NO_3	0.045	0.034U
Mn	2,000	1,900
Fe	29,000	32,000
As	3.6	4.1
SO_4^{2-}	0.26U	0.29

MW-6	Sept	Dec
TOC	N	4.7
NO_3	0.36J	0.034U
Mn	1,300	2,300
Fe	3,100	23,000
As	1.3	1.7
SO_4^{2-}	2.0	0.26U

MW-18	Sept	Dec
TOC	8.2	5.7
NO_3	0.034U	0.047
Mn	4,400	3,300
Fe	41,000	37,000
As	8.0	7.3
SO_4^{2-}	0.36	0.26U

MW-101	Sept	Dec
TOC	33	8.6
NO_3	3.5	0.034U
Mn	3,000	2,000
Fe	19,000	23,000
As	2.9	1.5
SO_4^{2-}	0.26U	0.26U

MW-105	Sept	Dec
TOC	6.2	5.3
NO_3	0.081	0.034U
Mn	2,700	2,900
Fe	20,000	30,000
As	3.7	4.2
SO_4^{2-}	2.5	0.26U

MW-9A	Sept	Dec
TOC	1.6	1.0
NO_3	3.3	0.53
Mn	2.0U	2.0U
Fe	50U	50U
As	1.1	0.67
SO_4^{2-}	10	6.4

FPP-MW-1	Dec
TOC	21
NO_3	0.038
Mn	3,700
Fe	43,000
As	2.3
SO_4^{2-}	0.26U

FPP-MW-2	Dec
TOC	6.2
NO_3	0.063
Mn	1,500
Fe	17,000
As	4.2
SO_4^{2-}	0.26U

MW-12	Sept	Dec
TOC	16	7.0
NO_3	0.034U	0.041
Mn	1,800	1,700
Fe	13,000	11,000
As	1.2	0.45U
SO_4^{2-}	18	0.35

MW-104	Sept	Dec
TOC	4.9	4.1
NO_3	0.036	0.034U
Mn	2,300	2,100
Fe	26,000	27,000
As	5.7	5.4
SO_4^{2-}	0.26U	0.26U

MW-108	Sept	Dec
TOC	5.2	4.7
NO_3	0.059	0.034U
Mn	2,300	2,200
Fe	29,000	32,000
As	4.8	5.1
SO_4^{2-}	0.26U	0.26U

MW-15	Sept	Dec
TOC	2.7	1.9
NO_3	0.034U	0.034U
Mn	890	850
Fe	6,300	5,500
As	1.1	0.45U
SO_4^{2-}	1.2	0.90

FPP-MW-3	Sept	Dec
TOC	1.8	9.6
NO_3	0.034U	0.034U
Mn	440	390
Fe	7,600	7,900
As	1.4	2.7
SO_4^{2-}	9.7	10

MW-102	Sept	Dec
TOC	1.9	1.5
NO_3	0.034U	0.034U
Mn	710	720
Fe	4,200	5,400
As	1.3	0.45U
SO_4^{2-}	13	10

MW-103	Sept	Dec
TOC	1.9	4.3
NO_3	0.034U	0.034U
Mn	2,500	2,900
Fe	22,000	29,000
As	1.3	4.9
SO_4^{2-}	0.3	0.29

MW-107	Sept	Dec
TOC	4.6	3.5
NO_3	0.034U	0.034U
Mn	2,400	1,900
Fe	24,000	22,000
As	3.6	2.7
SO_4^{2-}	0.26U	0.26U

MW-100	Sept	Dec
TOC	1.6	1.0
NO_3	1.1	1.3
Mn	190	230
Fe	50U	50U
As	1.0U	0.45U
SO_4^{2-}	14	12

MW-106	Sept	Dec
TOC	5.8	11
NO_3	0.043J	0.034U
Mn	2,000	5,700
Fe	7,000	56,000
As	5.7	8.4
SO_4^{2-}	20	0.29

MW-8	Sept	Dec
TOC	8.0	4.5
NO_3	0.034U	0.44
Mn	1,900	2,000
Fe	14,000	7,700
As	3.7	0.68
SO_4^{2-}	0.41	0.82

MW-7	Sept	Dec
TOC	3.2	4.2
NO_3	0.39	0.35
Mn	1,600	1,900
Fe	6,800	23,000
As	1.3	2.8
SO_4^{2-}	1.8	0.26U

MW-109	Sept	Dec
TOC	1.1	1.2
NO_3	0.94	0.29
Mn	860	110
Fe	50U	50U
As	1.0U	0.45U
SO_4^{2-}	13	16

MW-16	Sept	Dec
TOC	NS	2.0
NO_3	2.8J	0.13
Mn	110	210
Fe	50U	50U
As	1.0U	0.45U
SO_4^{2-}	170	15

MW-17	Sept	Dec
TOC	4.3	4.2
NO_3	0.054	0.072
Mn	2,000	2,100
Fe	16,000	21,000
As	2.6	1.4
SO_4^{2-}	3.5	0.26U

MW-14	Sept	Dec
TOC	NS	0.72
NO_3	0.2J	0.22
Mn	2.0U	2.9
Fe	50U	50U
As	1.0U	0.45U
SO_4^{2-}	3.0	3.3

Analyte	Units	PSL
TOC	µg/L	--
NO_3	mg/L	10
Mn	µg/L	50
Fe	µg/L	300
As	µg/L	0.45
SO_4^{2-}	mg/L	--

RG-2

RG-3

MW-9

MW-13

1052 1054 1046 1048 1044 1040 1042 1040 1036 1034 1038 1036

Legend

- Monitoring Well
- Monitoring Well (Decommissioned or Destroyed)
- River Gauge
- Groundwater Contour
- PLSA Surveyed Parcel Boundaries (October 2014)
- Extent of Municipal Solid Waste
- WSDOT Refuse Contour - (0 ft; inferred) - 1996
- 2,000 cubic yards of material removed by WSDOT during ramp construction
- Building
- Former Building
- Existing or Former Pond
- Septic Tank
- Other Features
- Red-Bordered Data Box Indicates Well Installed within Known Extent of MSW

Abbreviations
µg/L = Micrograms per Liter
MSW = Municipal Solid Waste
NS = Not Sampled
NO_3 = Nitrate
PSL = Preliminary Screening Level
SO_4^{2-} = Sulfate
TOC = Total Organic Carbon
WSDOT = Washington State Department of Transportation

0 300 600
Scale in Feet

Notes
1. Highlighted results exceed PSL.
2. U = Indicates the compound was not detected at the reported concentration.
3. J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
4. FPP-MW-1 and FPP-MW-2 not analyzed in September 2014.
5. Black and white reproduction of this color original may reduce its effectiveness and lead to incorrect interpretation.

Data Sources: Yakima County GIS; Esri World Imagery; SLR; URS; Parametrix 2008; Boise 1985.

G:\Projects\1148\008\020\024\R\F14ReducedCondition.mxd 3/30/2015 NAD 1983 StatePlane Washington South FIPS 4602 Feet

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Reduced-Condition Indicator Analyte Results (September and December 2014)

Figure 14

TABLE 1
SOIL ANALYTICAL PROGRAM
CLOSED CITY OF YAKIMA LANDFILL SITE

Analytical Test	Method	Notes	Soil Boring (September 2014) (a)																				Soil Boring (October 2014)			
			U		U		MSW		MSW		MSW		MSW		MSW		MSW		MSW		D		U	U	U	U
			SB-100		SB-101		SB-102		SB-103		SB-104		SB-105		SB-106		SB-107		SB-108		SB-109		GP-23	GP-24	GP-25	GP-26
Actual Sample Depth (ft BGS)				13.5-14		17.5-18.5	4-5	15-15.5		20.5-21.5	2.5-3	19-20	2.5-3.5	17.5-19	2.5-3.5	13.5-14.5	2.5-3.5	16-17	2.5-3.5	21.5-22.5	5-5.5	12.5-13	15.0-15.5	12.5-13.0	NA	7.5-8.5
Metals	EPA 6020	As, Ba, Cd, Cr, Pb, Fe, Mn, Se, Ag, Na	No shallow sample collected (insufficient soil volume recovered)	X	No shallow sample collected (predominately wood debris)	X	X	X	No shallow sample collected (insufficient soil volume above MSW)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	No soil sample collected (insufficient soil volume - wood debris)	X
Mercury	EPA 7471			X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Hexavalent Chromium	EPA 7196			X		X		X		X		X		X		X		X		X	X	X	X	X		X
Chlorinated Pesticides	EPA 8081 (LL)			X		X		X		X		X		X		X		X		X	X	X	X	X		X
PCBs	EPA 8082 (LL)			X		X		X		X		X		X		X		X		X	X	X	X	X		X
VOCs	EPA 8260			X		X		X		X		X		X		X		X		X	X	X	X	X		X
SVOCs	EPA 8270			X		X		X		X		X		X		X		X		X	X	X	X	X		X
PAHs	EPA 8720-SIM			X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
TPH-HCID	NWTPH-HCID			X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
TPH-Dx	NWTPH-Dx w/SGC						X				X		X		X		X		X					X		
TPH-Dx	NWTPH-Dx w/o SGC						X				X		X		X		X		X					X		
TPH-G	NWTPH-G														X											
Conventionals	EPA 300.0M	Fluoride, Nitrate, and Nitrite		X		X (b)	X	X		X (b)	X (b)	X (b)	X (b)	X (b)	X	X	X	X	X (b)	X (b)	X	X	X	X		X
pH	EPA 9045			X		X		X		X		X		X		X		X		X	X	X	X	X		X

EPA = US Environmental Protection Agency
ft BGS = feet below ground surface
GP = gas probe
HCID = Hydrocarbon Identification
LL = lower limit
PAHs = Polycyclic Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls
SGC = silica gel cleanup
SVOCs = Semivolatile Organic Compounds
TPH = Total Petroleum Hydrocarbons
TPH-Dx = Diesel-range extended petroleum hydrocarbons
TPH-G = Gasoline-range petroleum hydrocarbons
VOCs = Volatile Organic Compounds
Ag = Silver
As = Arsenic
Ba = Barium
Cd = Cadmium
Cr = Chromium
Fe = Iron
Mn = Manganese
Na = Sodium
Pb = Lead
Se = Selenium
U = upgradient boring
D = downgradient boring
MSW = Municipal Solid Waste boring

(a) Soil borings SB-100 through SB-109 were completed as groundwater monitoring wells MW-100 through MW-109, respectively.
(b) Analyses completed outside the method-recommended hold time.

TABLE 2
GROUNDWATER ELEVATION DATA - SEPTEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Monitoring Well Identification	Northing	Easting	Elevation					Notes
			Top of Casing Lid	Top of PVC	Ground Surface	Depth to Water	Groundwater	
MW-1	469401.5462	1639637.5680	1070.66		1067.11	--	--	Well locked. Could not access.
MW-3	--	--	--	--	--	--	--	Well not found.
MW-4	--	--	--	--	--	--	--	Well not found.
MW-5	468565.1717	1641759.8447	1059.14	1057.66	1056.04	8.43	1049.23	
MW-6	467396.8652	1642277.6850	1060.29	1059.62	1057.09	14.37	1045.25	
MW-7	465865.5855	1642624.4579	1049.79	1049.13	1046.19	9.07	1040.06	
MW-8	465832.9292	1641923.6098	1052.27	1051.72	1048.87	7.80	1043.92	
MW-9	466681.1104	1640700.6626	1067.97	1067.51	1065.22	--	--	Well decommissioned
MW-9A	466689.2948	1640707.7116	1065.08	1064.41	1065.02	10.62	1053.79	
MW-10	468578.2813	1640311.1814	1071.23	1070.17	1068.53	11.38	1058.79	
MW-11	467137.9887	1641758.2096	1066.37	1065.95	1063.32	19.58	1046.37	
MW-12	466613.9506	1641291.2846	1068.91	1068.65	1065.89	19.29	1049.36	
MW-14	464961.4013	1643438.2272	1041.77	1041.31	1041.57	7.66	1033.65	
MW-15	466213.1371	1643041.3941	1050.68	1050.46	1049.68	11.89	1038.57	
MW-16	465050.5963	1642442.4933	1047.18	1046.86	1047.18	6.92	1039.94	
MW-17	465477.0519	1642746.0725	1044.52	1044.32	1044.52	5.46	1038.86	
MW-18	467224.4867	1642012.2967	1064.45	1063.78	1061.10	17.74	1046.04	
TP-MW-1	466941.0338	1640847.8987	1069.05	1068.70	1066.07	14.9	1053.80	
TP-MW-2	467023.8198	1641162.8497	1067.10	1066.54	1063.84	16.09	1050.45	
FPP-MW-1	466851.1582	1641121.3267	1069.55	1069.03	1066.40	18.93	1050.10	
FPP-MW-2	466684.0694	1641248.3903	1069.53	1068.77	1066.20	19.41	1049.36	
FPP-MW-3	466359.2722	1641177.5411	1066.79	1066.29	1063.21	15.91	1050.38	
MW-100	466019.6516	1640892.8071	1066.46	1065.72	1064.91	13.92	1051.80	
MW-101	466863.2039	1641542.3080	1067.02	1066.75	1064.32	20.92	1045.83	
MW-102	466174.3934	1641471.5126	1064.86	1064.37	1062.21	16.08	1048.29	
MW-103	466344.2824	1641759.2190	1065.60	1065.11	1063.35	19.99	1045.12	
MW-104	466654.7950	1642002.6422	1061.66	1061.51	1059.66	16.94	1044.57	
MW-105	466908.7123	1642272.3829	1060.41	1059.60	1058.24	16.14	1043.46	
MW-106	465912.5112	1641603.6856	1060.26	1059.86	1058.36	13.17	1046.69	
MW-107	466183.4339	1642156.8883	1061.68	1061.38	1059.93	17.58	1043.80	
MW-108	466503.9634	1642418.1085	1059.99	1059.58	1057.99	18.21	1041.37	
MW-109	465633.4457	1641747.8304	1062.15	1061.50	1059.30	15.97	1045.53	

TABLE 2
GROUNDWATER ELEVATION DATA - SEPTEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Monitoring Well Identification	Northing	Easting	Elevation					Notes
			Top of Casing Lid	Top of PVC	Ground Surface	Depth to Water	Groundwater	
RG-3	465743.6805	1643122.5822	1042.73	--	--	--	--	Marked at top of headwall
RG-3	465749.3794	1643126.3722	1037.28	--	--	1.62	1035.66	Marked at bottom of concrete
RG-2	465995.5427	1643101.8587	1041.86	--	--	--	--	Marked at top of concrete
RG-2	465992.8070	1643103.3163	1039.27	--	--	3.33	1035.94	Marked on top of rock
RG-1	467634.1637	1643083.6968	1053.44	--	--	--	--	Marked at top of rock
RG-1	467641.7786	1643091.1464	1047.79	--	--	5.76	1042.03	Marked at top of rock
RG-4	464472.3786	1644060.9160	1037.27	--	--	--	--	Marked at top of rock
RG-4	464474.3282	1644064.8369	1033.79	--	--	2.08	1031.71	Marked at top of hinge

Northings and Eastings are U.S. State Plane 1983, NAD 1983, GEOID 12A, Zone Washington South (4609) and are provided in U.S. survey feet.
Elevations are NAVD88 datum and provided in U.S. survey feet.
MW = Monitoring Well
RG = River Gauge

TABLE 3
GROUNDWATER ELEVATION DATA - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Monitoring Well Identification	Northing	Easting	Elevation					Notes
			Top of Casing Lid	Top of PVC	Ground Surface	Depth to Water	Groundwater	
MW-1	469401.5462	1639637.5680	1070.66	1070.36	1067.11	5.23	1065.13	
MW-3	--	--	--	--	--		--	Well not found; presumed destroyed.
MW-4	--	--	--	--	--		--	Well not found; presumed destroyed.
MW-5	468565.1717	1641759.8447	1059.14	1057.66	1056.04	8.16	1049.50	
MW-6	467396.8652	1642277.6850	1060.29	1059.62	1057.09	14.77	1044.85	
MW-7	465865.5855	1642624.4579	1049.79	1049.13	1046.19	10.00	1039.13	
MW-8	465832.9292	1641923.6098	1052.27	1051.72	1048.87	10.02	1041.70	
MW-9	466681.1104	1640700.6626	1067.97	1067.51	1065.22		--	Well decommisioned
MW-9A	466689.2948	1640707.7116	1065.08	1064.41	1065.02	12.73	1051.68	
MW-10	468578.2813	1640311.1814	1071.23	1070.17	1068.53	11.37	1058.80	
MW-11	467137.9887	1641758.2096	1066.37	1065.95	1063.32	20.02	1045.93	
MW-12	466613.9506	1641291.2846	1068.91	1068.65	1065.89	20.45	1048.20	
MW-14	464961.4013	1643438.2272	1041.77	1041.31	1041.57	7.91	1033.40	
MW-15	466213.1371	1643041.3941	1050.68	1050.46	1049.68	11.62	1038.84	
MW-16	465050.5963	1642442.4933	1047.18	1046.86	1047.18	8.91	1037.95	
MW-17	465477.0519	1642746.0725	1044.52	1044.32	1044.52	6.80	1037.52	
MW-18	467224.4867	1642012.2967	1064.45	1063.78	1061.10	18.20	1045.58	
TP-MW-1	466941.0338	1640847.8987	1069.05	1068.70	1066.07	16.56	1052.14	
TP-MW-2	467023.8198	1641162.8497	1067.10	1066.54	1063.84	16.02	1050.52	
FPP-MW-1	466851.1582	1641121.3267	1069.55	1069.03	1066.40	19.49	1049.54	
FPP-MW-2	466684.0694	1641248.3903	1069.53	1068.77	1066.20	20.45	1048.32	
FPP-MW-3	466359.2722	1641177.5411	1066.79	1066.29	1063.21	17.76	1048.53	
MW-100	466019.6516	1640892.8071	1066.46	1065.72	1064.91	16.25	1049.47	
MW-101	466863.2039	1641542.3080	1067.02	1066.75	1064.32	21.67	1045.08	
MW-102	466174.3934	1641471.5126	1064.86	1064.37	1062.21	17.63	1046.74	
MW-103	466344.2824	1641759.2190	1065.60	1065.11	1063.35	21.25	1043.86	
MW-104	466654.7950	1642002.6422	1061.66	1061.51	1059.66	17.88	1043.63	
MW-105	466908.7123	1642272.3829	1060.41	1059.60	1058.24	16.82	1042.78	
MW-106	465912.5112	1641603.6856	1060.26	1059.86	1058.36	15.27	1044.59	
MW-107	466183.4339	1642156.8883	1061.68	1061.38	1059.93	18.53	1042.85	
MW-108	466503.9634	1642418.1085	1059.99	1059.58	1057.99	18.76	1040.82	
MW-109	465633.4457	1641747.8304	1062.15	1061.50	1059.30	18.98	1042.52	

TABLE 3
GROUNDWATER ELEVATION DATA - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Monitoring Well Identification	Northing	Easting	Elevation					Notes
			Top of Casing Lid	Top of PVC	Ground Surface	Depth to Water	Groundwater	
RG-3	465743.6805	1643122.5822	1042.73	--	--		--	Marked at top of headwall
RG-3	465749.3794	1643126.3722	1037.28	--	--	1.10	1036.18	Marked at bottom of concrete
RG-2	465995.5427	1643101.8587	1041.86	--	--		--	Marked at top of concrete
RG-2	465992.8070	1643103.3163	1039.27	--	--	2.75	1036.52	Marked on top of rock
RG-1	467634.1637	1643083.6968	1053.44	--	--		--	Marked at top of rock
RG-1	467641.7786	1643091.1464	1047.79	--	--	5.75	1042.04	Marked at top of rock
RG-4	464472.3786	1644060.9160	1037.27	--	--		--	Marked at top of rock
RG-4	464474.3282	1644064.8369	1033.79	--	--	1.70	1032.09	Marked at top of hinge

Northings and Eastings are U.S. State Plane 1983, NAD 1983, GEOID 12A, Zone Washington South (4609) and are provided in U.S. survey feet.
Elevations are NAVD88 datum and provided in U.S. survey feet.
MW = Monitoring Well
RG = River Gauge

TABLE 4
GROUNDWATER ANALYTICAL PROGRAM - SEPTEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Analytical Test	Method	Notes	Existing Monitoring Wells														New Monitoring Wells (September 2014)									
			U	D	D	U	U	U	D	D	D	D	U	U	U	U	U	U	MSW	MSW	MSW	MSW	MSW	MSW	MSW	D
			6	7	8	9A	11	12	14	15	16	17	18	TP-1	TP-2	FPP-3	100	101	102	103	104	105	106	107	108	109
Metals (Total)	EPA 200.8	As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Metals (Dissolved)	EPA 200.8	As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mercury (Total)	EPA 7471		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mercury (Dissolved)	EPA 7470		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hexavalent Chromium (Total)	EPA 7196			X	X (a)	X	X	X		X		X	X			X (a)	X	X	X	X	X	X	X	X	X	X
Hexavalent Chromium (Dissolved)	EPA 7196			X	X (a)	X	X	X		X		X	X			X (a)	X	X	X	X	X	X	X	X	X	X
Chlorinated Pesticides	EPA 8081 (LL)			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
PCBs	EPA 8082 (LL)			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
VOCs	EPA 8260 SIM/8260C			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
SVOCs	EPA 8270D			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
PAHs	EPA 8720 SIM		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TPH-HCID	NWTPH-HCID		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TPH-Dx	NWTPH-Dx w/SGC							X										X								
TPH-Dx	NWTPH-Dx w/o SGC							X										X								
TPH-G	NWTPH-G																									
Conventionals	EPA 300.0	Fluoride, Nitrate, Nitrite, Chloride, Sulfate	X (a)	X	X	X	X	X	X (a)	X	X (a)	X	X	X (a)	X (a)	X	X	X	X	X	X	X	X	X	X	X
Alkalinity (as Ca CO3)	SM2320B			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
Bicarbonate (HCO3)	SM2320B			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
Ammonia (NH3-N)	EPA 350.1			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
TOC	SM5310C			X	X	X	X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X
TDS	SM2540C			X	X	X (a)	X (a)	X (a)		X		X	X (a)			X	X	X	X	X	X	X	X	X	X	X

EPA = U.S. Environmental Protection Agency
HCID = Hydrocarbon Identification
LL = lower limit
PAHs = Polycyclic Aromatic Hydrocarbons
PCBs = Polychlorinated Biphenyls
SGC = Silica Gel Cleanup
SVOCs = Semivolatile Organic Compounds
SIM = Select Ion Monitoring
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TPH = Total Petroleum Hydrocarbons
TPH-Dx = Diesel-range extended petroleum hydrocarbons
TPH-G = Gasoline-range petroleum hydrocarbons
VOCs = Volatile Organic Compounds
Ag = Silver
As = Arsenic
Ba = Barium
Ca = Calcium
Cd = Cadmium
Cr = Chromium
Fe = Iron
Mg = Magnesium
Mn = Manganese
Na = Sodium
Pb = Lead
Se = Selenium
U = Upgradient well location
D = Downgradient well location
MSW = Municipal solid waste well location

(a) Analyses completed outside the method-recommended hold time.

TABLE 5
GROUNDWATER ANALYTICAL PROGRAM - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

Analytes	Method	Notes	1	5	6	7	8	9A	10	11	12	14	15	16	17	18	TP-1	TP-2	FPP-1	FPP-2	FPP-3	100	101	102	103	104	105	106	107	108	109
Metals (Total)	EPA 200.8	As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Metals (Dissolved)	EPA 200.8	As, Ba, Ca, Cd, Cr, Fe, Pb, Mg, Mn, Na, Se, Ag			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mercury (Total)	EPA 7471				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mercury (Dissolved)	EPA 7470				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hexavalent Chromium (Total)	EPA 7196																														
Hexavalent Chromium (Dissolved)	EPA 7196																														
Chlorinated Pesticides	EPA 8081 (LL)					X	X	X		X	X		X		X	X					X	X	X	X	X	X	X	X	X	X	X
PCBs	EPA 8082 (LL)					X	X	X		X	X		X		X	X					X	X	X	X	X	X	X	X	X	X	X
VOCs	EPA 8260 SIM/8260C					X	X	X		X	X		X		X	X					X	X	X	X	X	X	X	X	X	X	X
SVOCs	EPA 8270D					X	X	X		X	X		X		X	X					X	X	X	X	X	X	X	X	X	X	X
PAHs	EPA 8720 SIM					X	X	X		X	X		X		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
TPH-HCID	NWTPH-HCID				X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
TPH-Dx	NWTPH-Dx w/SGC										X						X	X	X	X			X					X			
TPH-Dx	NWTPH-Dx w/o SGC										X						X	X	X	X			X					X			
TPH-G	NWTPH-G																														
Conventionals	EPA 300.0	Fluoride, Nitrate, Nitrite, Chloride, Sulfate			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Alkalinity (as Ca CO3)	SM2320B				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bicarbonate (HCO3)	SM2320B				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ammonia (NH3-N)	EPA 350.1				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TOC	SM5310C				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TDS	SM2540C				X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

EPA = U.S. Environmental Protection Agency
HCID = Hydrocarbon Identification
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Mg = Magnesium
Mn = Manganese
Na = Sodium
Pb = Lead
Se = Selenium

TABLE 6
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF DRINKING WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

		Maximum Contaminant Level (MCL)										
						Washington State Board of Health MCLs		Method B Standard Formula Values		Preliminary Method B Groundwater as Drinking Water Cleanup Level (µg/L)	Method A Groundwater Cleanup Level (µg/L)	Preliminary Screening Level (Protective of Drinking Water) (µg/L)
CAS Number	Chemical Name	MCL (µg/L)	MCL Treatment Technique Action Level (µg/L)	MCL Goal (µg/L)	MCL Secondary (µg/L)	Primary (µg/L)	Secondary (µg/L)	Carcinogen (µg/L)	Non-carcinogen (µg/L)			
PETROLEUM HYDROCARBONS												
	tph, diesel range organics	--	--	--	--	--	--	--	--	--	500	500
	tph, heavy oils	--	--	--	--	--	--	--	--	--	500	500
	tph, mineral oil	--	--	--	--	--	--	--	--	--	500	500
	tph: gasoline range organics, benzene present	--	--	--	--	--	--	--	--	--	800	800
	tph: gasoline range organics, no detectable benzene	--	--	--	--	--	--	--	--	--	1,000	1,000
TOTAL/DISSOLVED METALS												
7440-38-2	arsenic	10	--	--	--	10	--	0.058	4.8	0.058	5.0	5.0
7440-39-3	barium	2,000	--	2,000	--	2,000	--	--	3,200	2,000	--	2,000
7440-43-9	cadmium	5.0	--	5.0	--	5.0	--	--	8.0	5.0	5.0	5.0
	calcium	--	--	--	--	--	--	--	--	--	--	--
7440-47-3	chromium (total)	100	--	100	--	100	--	--	--	--	50 (a)	50
16065-83-1	chromium(III)	100	--	100	--	100	--	--	24,000	100	--	100
18540-29-9	chromium(VI)	100	--	100	--	100	--	--	48	48	--	48
7439-89-6	iron	--	--	--	300	--	300	--	11,200	300	--	300
7439-92-1	lead	--	15	0	--	15	--	--	--	15	15	15
	magnesium	--	--	--	--	--	--	--	--	--	--	--
7439-96-5	manganese	--	--	--	50	--	50	--	2,240	50	--	50
7782-49-2	selenium	50	--	50	--	50	--	--	80	50	--	50
7440-22-4	silver	--	--	--	100	--	100	--	80	80	--	80
7440-23-5	sodium	--	20,000	--	--	--	--	--		20,000	--	20,000
7439-97-6	mercury	2.0	--	2.0	--	2.0	--	--	--	2.0	2.0	2.0
CONVENTIONALS												
	total dissolved solids	--	--	--	--	--	--	--	--	--	--	--
16887-00-6	chloride	--	--	--	250,000	--	250,000	--	--	250,000	--	250,000
16984-48-8	fluoride	4,000	--	4,000	2,000	4,000	2,000	--	640	640	--	640
14797-55-8	nitrate	10,000	--	10,000	--	10,000	--	--	25,600	10,000	--	10,000
14797-65-0	nitrite	1,000	--	1,000	--	1,000	--	--	1,600	1,000	--	1,000
	sulfate	--	--	--		--	--	--	--	--	--	--
7664-41-7	ammonia	--	--	--	--	--	--	--	--	--	--	--
	alkalinity	--	--	--	--	--	--	--	--	--	--	--
	bicarbonate	--	--	--	--	--	--	--	--	--	--	--
	TOC	--	--	--	--	--	--	--	--	--	--	--
	pH	--	--	--	6.5 to 8.5	--	--	--	--	6.5 to 8.5		6.5 to 8.5
CHLORINATED PESTICIDES												
319-84-6	hexachlorocyclohexane;alpha	--	--	--	--	--	--	0.014	--	0.014	--	0.014
58-89-9	lindane (gamma-BHC)	0.20	--	0.20	--	0.20	--	0.080	4.8	0.080	0.20	0.20
319-85-7	hexachlorocyclohexane;beta-	--	--	--	--	--	--	0.049	--	0.049	--	0.049
76-44-8	heptachlor	0.40	--	0	--	0.40	--	0.019	8.0	0.019	--	0.019
319-86-8	hexachlorocyclohexane;delta-	--	--	--	--	--	--	--	--	--	--	--
309-00-2	aldrin	--	--	--	--	--	--	0.003	0.24	0.003	--	0.003
1024-57-3	heptachlor epoxide	0.20	--	0	--	0.20	--	0.005	0.10	0.005	--	0.005
57-74-9	chlordane	2.0	--	0	--	2.0	--	0.25	8.0	0.25	--	0.25
115-29-7	endosulfan	--	--	--	--	--	--	--	96	96	--	96
72-55-9	dde (4,4'-DDE)	--	--	--	--	--	--	0.26	--	0.26	--	0.26
60-57-1	dieldrin	--	--	--	--	--	--	0.005	0.80	0.005	--	0.005
72-20-8	endrin	2.0	--	2.0	--	2.0	--	--	4.8	2.0	--	2.0
72-54-8	ddd (4,4'-DDD)	--	--	--	--	--	--	0.30	--	0.30	--	0.30
50-29-3	ddt (4,4'-DDT)	--	--	--	--	--	--	0.26	8.0	0.26	0.30	0.30
72-43-5	methoxychlor	40	--	40	--	40	--	--	80	40	--	40
118-74-1	hexachlorobenzene	1.0	--	0	--	1.0	--	0.055	13	0.055	--	0.055
8001-35-2	toxaphene	3.0	--	0	--	3.0	--	0.080	--	0.080	--	0.080

TABLE 6
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF DRINKING WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Maximum Contaminant Level (MCL)						Method B Standard Formula Values		Preliminary Method B Groundwater as Drinking Water Cleanup Level (µg/L)	Method A Groundwater Cleanup Level (µg/L)	Preliminary Screening Level (Protective of Drinking Water) (µg/L)
		MCL (µg/L)	MCL Treatment Technique Action Level (µg/L)	MCL Goal (µg/L)	MCL Secondary (µg/L)	Washington State Board of Health MCLs						
						Primary (µg/L)	Secondary (µg/L)	Carcinogen (µg/L)	Non-carcinogen (µg/L)			
POLYCHLORINATED BIPHENYLS												
12674-11-2	aroclor 1016	--	--	--	--	--	--	1.3	1.1	1.1	--	1.1
11104-28-2	aroclor 1221	--	--	--	--	--	--	--	--	--	--	--
11141-16-5	aroclor 1232	--	--	--	--	--	--	--	--	--	--	--
53469-21-9	aroclor 1242	--	--	--	--	--	--	--	--	--	--	--
12672-29-6	aroclor 1248	--	--	--	--	--	--	--	--	--	--	--
11097-69-1	aroclor 1254	--	--	--	--	--	--	0.044	0.32	0.044	--	0.044
11096-82-5	aroclor 1260	--	--	--	--	--	--	0.044	--	0.044	--	0.044
	pcb mixtures	0.50	--	0	--	--	--	0.044	--	0.044	0.10	0.10
VOLATILE ORGANIC COMPOUNDS												
75-71-8	dichlorodifluoromethane	--	--	--	--	--	--	--	1,600	1,600	--	1,600
74-87-3	chloromethane	--	--	--	--	--	--	--	--	--	--	--
74-83-9	bromomethane (methyl bromide)	--	--	--	--	--	--	--	11	11	--	11
75-00-3	chloroethane	--	--	--	--	--	--	--	--	--	--	--
75-69-4	trichlorofluoromethane	--	--	--	--	--	--	--	2,400	2,400	--	2,400
75-15-0	carbon disulfide	--	--	--	--	--	--	--	800	800	--	800
67-64-1	acetone	--	--	--	--	--	--	--	7,200	7,200	--	7,200
75-35-4	dichloroethene;1,1-	7.0	--	7.0	--	7.0	--	--	400	7.0	--	7.0
75-09-2	methylene chloride (dichloromethane)	5.0	--	0	--	5.0	--	22	48	5.0	5.0	5.0
107-13-1	acrylonitrile	--	--	--	--	--	--	0.081	320	0.081	--	0.081
1634-04-4	methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	24	--	24	20	20
156-60-5	dichloroethene;1,2-,trans	100	--	100	--	100	--	--	160	100	--	100
75-34-3	dichloroethane;1,1-	--	--	--	--	--	--	7.7	1,600	7.7	--	7.7
78-93-3	methyl ethyl ketone (2-butanone)	--	--	--	--	--	--	--	4,800	4,800	--	4,800
156-59-2	dichloroethene;1,2-,cis	70	--	70	--	70	--	--	16	16	--	16
110-54-3	hexane;n-	--	--	--	--	--	--	--	480	480	--	480
594-20-7	dichloropropane;2,2-	--	--	--	--	--	--	--	--	--	--	--
74-97-5	bromochloromethane	--	--	--	--	--	--	--	--	--	--	--
71-55-6	trichloroethane;1,1,1-	200	--	200	--	200	--	--	16,000	200	200	200
563-58-6	dichloropropene;1,1-	--	--	--	--	--	--	--	--	--	--	--
107-06-2	dichloroethane;1,2-	5.0	--	0	--	5.0	--	0.48	160	0.48	5.0	5.0
71-43-2	benzene	5.0	--	0	--	5.0	--	0.80	32	0.80	5.0	5.0
74-95-3	dibromomethane	--	--	--	--	--	--	--	--	--	--	--
75-27-4	bromodichloromethane (dichlorobromomethane)	--	80	--	0.080	0.080	--	0.71	160	0.080	--	0.080
108-10-1	methyl isobutyl ketone (4-methyl-2-pentanone)	--	--	--	--	--	--	--	640	640	--	640
108-88-3	toluene	1,000	--	1,000	--	1,000	--	--	640	640	1,000	640
10061-01-5	dichloropropene;1,3-, cis	--	--	--	--	--	--	--	--	--	--	--
591-78-6	hexanone;2-	--	--	--	--	--	--	--	--	--	--	--
142-28-9	dichloropropane;1,3-	--	--	--	--	--	--	--	--	--	--	--
127-18-4	tetrachloroethene (PCE)	5.0	--	0	--	5.0	--	21	48	5.0	5.0	5.0
106-93-4	dibromoethane; 1,2- (EDB)	0.050	--	0	--	0.050	--	0.022	--	0.022	0.010	0.022
108-90-7	chlorobenzene	100	--	100	--	100	--	--	160	100	--	100
100-41-4	ethylbenzene	700	--	700	--	70	--	--	800	70	700	70
108-38-3	xylene;m-	--	--	--	--	--	--	--	1,600	1,600	--	1,600
106-42-3	xylene;p-	--	--	--	--	--	--	--	1,600	1,600	--	1,600
100-42-5	styrene	100	--	100	--	100	--	--	1,600	100	--	100
95-47-6	xylene;o-	--	--	--	--	--	--	--	1,600	1,600	--	1,600
1330-20-7	xylene	10,000	--	10,000	--	10,000	--	--	1,600	1,600	1,000	1,000
75-25-2	bromoform	--	--	--	--	--	--	5.5	160	5.5	--	5.5
98-82-8	cumene (isopropylbenzene)	--	--	--	--	--	--	--	800	800	--	800
96-18-4	trichloropropane;1,2,3-	--	--	--	--	--	--	0.001	32	0.001	--	0.001
108-86-1	bromobenzene	--	--	--	--	--	--	--	--	--	--	--
103-65-1	propylbenzene; n-	--	--	--	--	--	--	--	800	800	--	800
95-49-8	chlorotoluene, 2-	--	--	--	--	--	--	--	--	--	--	--
108-67-8	trimethylbenzene; 1,3,5-	--	--	--	--	--	--	--	80	80	--	80
106-43-4	chlorotoluene, 4-	--	--	--	--	--	--	--	--	--	--	--
98-06-6	butylbenzene; tert-	--	--	--	--	--	--	--	800	800	--	800
95-63-6	trimethylbenzene; 1,2,4-	--	--	--	--	--	--	--	--	--	--	--
135-98-8	butylbenzene; sec-	--	--	--	--	--	--	--	800	800	--	800
99-87-6	isopropyltoluene, p-	--	--	--	--	--	--	--	--	--	--	--

TABLE 6
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CAS Number	Chemical Name	Maximum Contaminant Level (MCL)						Method B Standard Formula Values		Preliminary Method B Groundwater as Drinking Water Cleanup Level (µg/L)	Method A Groundwater Cleanup Level (µg/L)	Preliminary Screening Level (Protective of Drinking Water) (µg/L)
		MCL (µg/L)	MCL Treatment Technique Action Level (µg/L)	MCL Goal (µg/L)	MCL Secondary (µg/L)	Washington State Board of Health MCLs						
						Primary (µg/L)	Secondary (µg/L)	Carcinogen (µg/L)	Non-carcinogen (µg/L)			
541-73-1	dichlorobenzene;1,3-	--	--	--	--	--	--	--	--	--	--	--
106-46-7	dichlorobenzene;1,4-	75	--	75	--	75	--	8.1	--	8.1	--	8.1
104-51-8	butylbenzene, n-	--	--	--	--	--	--	--	--	--	--	--
95-50-1	dichlorobenzene;1,2-	600	--	600	--	600	--	--	720	600	--	600
96-12-8	dibromo-3-chloropropane;1,2-	0.20	--	0	--	0.20	--	0.055	1.6	0.055	--	0.055
87-68-3	hexachlorobutadiene	--	--	--	--	--	--	0.56	8.0	0.56	--	0.56
87-61-6	trichlorobenzene;1,2,3-	--	--	--	--	--	--	--	--	--	--	--
75-01-4	vinyl chloride	2.0	--	0	--	2.0	--	0.029	24	0.029	0.20	0.20
56-23-5	carbon tetrachloride	5.0	--	0	--	5.0	--	0.63	32	0.63	--	0.63
67-66-3	chloroform	--	--	--	--	80	--	1.4	80	1.4	--	1.4
79-01-6	trichloroethene (TCE)	5.0	--	0	--	5.0	--	0.54	4.0	0.54	5.0	5.0
78-87-5	dichloropropane;1,2-	5.0	--	0	--	5.0	--	1.2	720	1.2	--	1.2
542-75-6	dichloropropene; 1,3-, trans (1,3-dichloropropene)	--	--	--	--	--	--	0.44	240	0.44	--	0.44
79-00-5	trichloroethane;1,1,2-	5.0	--	3.0	--	5.0	--	0.77	32	0.77	--	0.77
124-48-1	dibromochloromethane (chlorodibromomethane)	--	--	--	--	80	--	0.52	160	0.52	--	0.52
630-20-6	tetrachloroethane;1,1,1,2-	--	--	--	--	--	--	1.7	240	1.7	--	1.7
79-34-5	tetrachloroethane;1,1,2,2-	--	--	--	--	--	--	0.22	160	0.22	--	0.22
120-82-1	trichlorobenzene;1,2,4-	70	--	70	--	70	--	1.5	80	1.5	--	1.5
SEMIVOLATILE ORGANIC COMPOUNDS												
110-86-1	pyridine	--	--	--	--	--	--	--	8.0	8.0	--	8.0
62-75-9	nitrosodimethylamine;N-	--	--	--	--	--	--	0.0009	0.064	0.0009	--	0.0009
108-95-2	phenol	--	--	--	--	--	--	--	2,400	2,400	--	2,400
62-53-3	aniline	--	--	--	--	--	--	7.7	56	7.7	--	7.7
111-44-4	bis(2-chloroethyl)ether	--	--	--	--	--	--	0.040	--	0.040	--	0.040
95-57-8	chlorophenol;2-	--	--	--	--	--	--	--	40	40	--	40
100-51-6	benzyl alcohol	--	--	--	--	--	--	--	800	800	--	800
95-48-7	cresol;o- (2-methylphenol)	--	--	--	--	--	--	--	400	400	--	400
39638-32-9	bis(2-chloroisopropyl) ether	--	--	--	--	--	--	--	--	--	--	--
	cresol; m- & p- (3&4-Methylphenol) (b)	--	--	--	--	--	--	--	400	400	--	400
621-64-7	nitroso-di-n-propylamine;N-	--	--	--	--	--	--	0.013	--	0.013	--	0.013
67-72-1	hexachloroethane	--	--	--	--	--	--	1.1	5.6	1.1	--	1.1
98-95-3	nitrobenzene	--	--	--	--	--	--	--	16	16	--	16
78-59-1	isophorone	--	--	--	--	--	--	46	1,600	46	--	46
88-75-5	nitrophenol, 2-	--	--	--	--	--	--	--	--	--	--	--
105-67-9	dimethylphenol;2,4-	--	--	--	--	--	--	--	160	160	--	160
65-85-0	benzoic acid	--	--	--	--	--	--	--	64,000	64,000	--	64,000
111-91-1	bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	--	--	--
120-83-2	dichlorophenol;2,4-	--	--	--	--	--	--	--	24	24	--	24
106-47-8	chloroaniline;p- (4-chloroaniline)	--	--	--	--	--	--	0.22	32	0.22	--	0.22
87-65-0	dichlorophenol;2,6-	--	--	--	--	--	--	--	--	--	--	--
59-50-7	methylphenol; 4-chloro-3-	--	--	--	--	--	--	--	--	--	--	--
77-47-4	hexachlorocyclopentadiene	50	--	50	--	50	--	--	48	48	--	48
88-06-2	trichlorophenol;2,4,6-	--	--	--	--	--	--	4.0	8.0	4.0	--	4.0
95-95-4	trichlorophenol;2,4,5-	--	--	--	--	--	--	--	800	800	--	800
91-58-7	chloronaphthalene, 2-	--	--	--	--	--	--	--	--	--	--	--
88-74-4	nitroaniline, 2-	--	--	--	--	--	--	--	160	160	--	160
131-11-3	dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	--
606-20-2	dinitrotoluene;2,6-	--	--	--	--	--	--	0.060	16	0.060	--	0.060
99-09-2	nitroaniline, 3-	--	--	--	--	--	--	--	--	--	--	--
51-28-5	dinitrophenol;2,4-	--	--	--	--	--	--	--	32	32	--	32
100-02-7	nitrophenol, 4-	--	--	--	--	--	--	--	--	--	--	--
132-64-9	dibenzofuran	--	--	--	--	--	--	--	16	16	--	16
121-14-2	dinitrotoluene;2,4-	--	--	--	--	--	--	0.28	32	0.28	--	0.28
58-90-2	tetrachlorophenol;2,3,4,6-	--	--	--	--	--	--	--	480	480	--	480
84-66-2	diethyl phthalate	--	--	--	--	--	--	--	13,000	13,000	--	13,000
7005-72-3	phenylether; 4-chlorophenyl-	--	--	--	--	--	--	--	--	--	--	--
100-01-6	nitroaniline, 4-	--	--	--	--	--	--	--	--	--	--	--
534-52-1	methylphenol; 4,6-dinitro-2-	--	--	--	--	--	--	--	--	--	--	--
86-30-6	nitrosodiphenylamine;N-	--	--	--	--	--	--	18	--	18	--	18
103-33-3	azobenzene	--	--	--	--	--	--	0.80	--	0.80	--	0.80

TABLE 6
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF DRINKING WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Maximum Contaminant Level (MCL)						Method B Standard Formula Values		Preliminary Method B Groundwater as Drinking Water Cleanup Level (µg/L)	Method A Groundwater Cleanup Level (µg/L)	Preliminary Screening Level (Protective of Drinking Water) (µg/L)
		MCL (µg/L)	MCL Treatment Technique Action Level (µg/L)	MCL Goal (µg/L)	MCL Secondary (µg/L)	Washington State Board of Health MCLs						
						Primary (µg/L)	Secondary (µg/L)	Carcinogen (µg/L)	Non-carcinogen (µg/L)			
101-55-3	phenylether; 4-bromophenyl-	--	--	--	--	--	--	--	--	--	--	--
86-74-8	carbazole	--	--	--	--	--	--	--	--	--	--	--
84-74-2	di-butyl phthalate (di-n-butyl phthalate)	--	--	--	--	--	--	--	1,600	1,600	--	1,600
85-68-7	butyl benzyl phthalate	--	--	--	--	--	--	46	3,200	46	--	46
91-94-1	dichlorobenzidine;3,3'-	--	--	--	--	--	--	0.20	--	--	--	0.20
117-81-7	bis(2-ethylhexyl) phthalate	6.0	--	0	--	6.0	--	6.3	320	6.0	--	6.0
117-84-0	di-n-octyl phthalate	--	--	--	--	--	--	--	160	160	--	160
91-20-3	naphthalene	--	--	--	--	--	--	--	160	160	160	160
91-57-6	methyl naphthalene, 2-	--	--	--	--	--	--	--	32	32	--	32
90-12-0	methyl naphthalene, 1-	--	--	--	--	--	--	1.5	560	1.5	--	1.5
208-96-8	acenaphthylene	--	--	--	--	--	--	--	--	--	--	--
83-32-9	acenaphthene	--	--	--	--	--	--	--	960	960	--	960
86-73-7	fluorene	--	--	--	--	--	--	--	640	640	--	640
87-86-5	pentachlorophenol	1.0	--	0	--	1.0	--	0.22	80	0.22	--	0.22
85-01-8	phenanthrene	--	--	--	--	--	--	--	--	--	--	--
120-12-7	anthracene	--	--	--	--	--	--	--	4,800	4,800	--	4,800
206-44-0	fluoranthene	--	--	--	--	--	--	--	640	640	--	640
129-00-0	pyrene	--	--	--	--	--	--	--	480	480	--	480
56-55-3	benzo[a]anthracene	--	--	--	--	--	--	0.12	--	0.12	--	0.12
218-01-9	chrysene	--	--	--	--	--	--	12	--	12	--	12
205-99-2	benzo[b]fluoranthene	--	--	--	--	--	--	0.12	--	0.12	--	0.12
207-08-9	benzo[k]fluoranthene	--	--	--	--	--	--	1.2	--	1.2	--	1.2
50-32-8	benzo[a]pyrene	0.20	--	0	--	0.20	--	0.012	--	0.012	0.10	0.10
193-39-5	indeno[1,2,3-cd]pyrene	--	--	--	--	--	--	0.12	--	0.12	--	0.12
53-70-3	dibenzo[a,h]anthracene	--	--	--	--	--	--	0.012	--	0.012	--	0.012
191-24-2	benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--
	cPAH TEQ	--	--	--	--	--	--	--	--	--	0.10	0.10

ARARs = applicable or relevant and appropriate requirements
BHC = benzene hexachloride
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
CAS = Chemicals Abstracts Service
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
MCL = Maximum Contaminant Level
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated biphenyl
SEMI = Semivolatile
TPH = Total Petroleum Hydrocarbon
VOL = Volatile
µg/L = micrograms per liter

-- = Not Available
Note: Preliminary screening level may be adjusted upward to the practical quantitation limit (PQL) based on analytical laboratory instrument capabilities or to natural/regional background values per MTCA guidelines.
(a) The Method A Groundwater cleanup level is 100 µg/L if no Chromium VI is present.
(b) Screening level for m- & p-cresol is based on criteria for m-cresol (3-methylphenol), as it is more conservative than the criteria for p-cresol (4-methylphenol).

TABLE 7
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF SURFACE WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Preliminary Screening Level (Protective of Surface Water) (µg/L)
PETROLEUM HYDROCARBONS												
	tph, diesel range organics	--	--	--	--	--	--	--	--	--	--	--
	tph, heavy oils	--	--	--	--	--	--	--	--	--	--	--
	tph, mineral oil	--	--	--	--	--	--	--	--	--	--	--
	tph: gasoline range organics, benzene present	--	--	--	--	--	--	--	--	--	--	--
	tph: gasoline range organics, no detectable benzene	--	--	--	--	--	--	--	--	--	--	--
TOTAL/DISSOLVED METALS												
7440-38-2	arsenic, inorganic	18	0.10	360	340	360	190	150	190	0.018	0.018	0.018
7440-39-3	barium and compounds	--	--	--	--	--	--	--	--	1,000	--	1,000
7440-43-9	cadmium (potable groundwater and surface water)	--	--	--	--	--	--	--	--	--	--	--
	calcium	--	--	--	--	--	--	--	--	--	--	--
7440-47-3	chromium (total)	--	--	--	--	--	--	--	--	--	--	--
16065-83-1	chromium(III)	240,000	--	176	570	550	57	74	180	--	--	57
18540-29-9	chromium(VI)	490	--	15	16	15	10	11	10	--	--	10
7439-89-6	iron	--	--	--	--	--	--	1,000	--	300	--	300
7439-92-1	lead	--	--	14	65	65	0.54	2.5	2.5	--	--	0.54
	magnesium	--	--	--	--	--	--	--	--	--	--	--
7439-96-5	manganese	--	--	--	--	--	--	--	--	--	--	--
7782-49-2	selenium and compounds	2,700	--	20	--	20	5.0	5.0	5.0	170	--	5.0
7440-22-4	silver	26,000	--	0.32	3.2	3.4	--	--	--	--	--	0.32
	sodium	--	--	--	--	--	--	--	--	--	--	--
7439-97-6	mercury	--	--	2.1	1.4	2.1	0.012	0.77	0.012	--	0.14	0.012
CONVENTIONALS												
	total dissolved solids	--	--	--	--	--	--	--	--	--	--	--
16887-00-6	chloride	--	--	860,000	860,000	--	230,000	230,000	--	--	--	230,000
16984-48-8	fluoride	--	--	--	--	--	--	--	--	--	--	--
14797-55-8	nitrate	--	--	--	--	--	--	--	--	10,000	--	10,000
14797-65-0	nitrite	--	--	--	--	--	--	--	--	--	--	--
	sulfate	--	--	--	--	--	--	--	--	--	--	--
7664-41-7	ammonia	--	--	--	--	--	--	--	--	--	--	--
	alkalinity	--	--	--	--	--	--	--	--	--	--	--
	bicarbonate	--	--	--	--	--	--	--	--	--	--	--
	TOC	--	--	--	--	--	--	--	--	--	--	--
	pH	--	--	--	--	--	--	--	--	--		--
CHLORINATED PESTICIDES												
319-84-6	hexachlorocyclohexane;alpha	160	0.008	--	--	--	--	--	--	0.003	0.004	0.003
58-89-9	lindane (gamma-BHC)	6.0	0.045	2.0	0.95	2.0	0.080		0.080	0.98	0.019	0.019
319-85-7	hexachlorocyclohexane;beta-	--	0.028	--	--	--	--	--	--	0.009	0.014	0.009
76-44-8	heptachlor	0.12	0.0001	0.52	0.52	0.52	0.004	0.004	0.004	0.0001	0.0002	0.0001
319-86-8	hexachlorocyclohexane;delta-	--	--	--	--	--	--	--	--	0.012	--	0.012
309-00-2	aldrin	0.017	0.0001	2.5	3.0	3.0	0.002	--	--	0.00005	0.0001	0.00005
1024-57-3	heptachlor epoxide	0.003	0.0001	--	0.52	0.52	--	0.004	0.004	0.00004	0.0001	0.00004
57-74-9	chlordane	0.093	0.001	2.4	2.4	2.4	0.004	0.004	0.004	0.001	0.001	0.001
115-29-7	endosulfan	58	--	0.22	--	0.22	0.056	--	0.056	--	--	0.056
72-55-9	dde (4,4'-DDE)	--	0.0004	1.1	--	--	0.001	--	--	0.0002	0.001	0.0002
60-57-1	dieldrin	0.028	0.0001	2.5	0.24	2.5	0.002	0.056	0.002	0.0001	0.0001	0.0001
72-20-8	endrin	0.19	--	0.18	0.086	0.18	0.002	0.036	0.002	0.059	0.76	0.002
72-54-8	ddd (4,4'-DDD)	--	0.001	1.1	--	--	0.001	--	--	0.0003	0.001	0.0003
50-29-3	ddt (4,4'-DDT)	0.024	0.0004	1.1	1.1	1.1	0.001	0.001	0.001	0.0002	0.001	0.0002
72-43-5	methoxychlor	8.1	--	--	--	--	--	0.030	--	100	--	0.030
118-74-1	hexachlorobenzene	0.24	0.0005	--	--	--	--	--	--	0.0003	0.0008	0.0003
8001-35-2	toxaphene	--	0.0005	0.73	0.73	0.73	0.0002	0.0002	0.0002	0.0003	0.001	0.0002

TABLE 7
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF SURFACE WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Preliminary Screening Level (Protective of Surface Water) (µg/L)
POLYCHLORINATED BIPHENYLS												
12674-11-2	aroclor 1016	0.006	0.003	--	--	--	--	--	0.014	--	--	0.003
	aroclor 1221	--	--	--	--	--	--	--	--	--	--	--
	aroclor 1232	--	--	--	--	--	--	--	--	--	--	--
	aroclor 1242	--	--	--	--	--	--	--	--	--	--	--
	aroclor 1248	--	--	--	--	--	--	--	--	--	--	--
11097-69-1	aroclor 1254	0.002	0.0001	--	--	--	--	--	0.014	--	--	0.0001
11096-82-5	aroclor 1260	--	--	--	--	--	--	--	0.014	--	--	0.014
	pcb mixtures	--	--	--	--	--	--	--	--	--	--	--
VOLATILE ORGANIC COMPOUNDS												
75-71-8	dichlorodifluoromethane	--	--	--	--	--	--	--	--	--	--	--
74-87-3	chloromethane	--	--	--	--	--	--	--	--	--	--	--
74-83-9	bromomethane (methyl bromide)	960	--	--	--	--	--	--	--	47	48	47
75-00-3	chloroethane		--	--	--	--	--	--	--	--	--	--
75-69-4	trichlorofluoromethane	--	--	--	--	--	--	--	--	--	--	--
75-15-0	carbon disulfide	--	--	--	--	--	--	--	--	--	--	--
67-64-1	acetone	--	--	--	--	--	--	--	--	--	--	--
75-35-4	dichloroethene;1,1-	23,000	--	--	--	--	--	--	--	330	0.057	0.057
75-09-2	methylene chloride (dichloromethane)	17,000	3,600	--	--	--	--	--	--	4.6	4.7	4.6
107-13-1	acrylonitrile	3,500	0.40	--	--	--	--	--	--	0.051	0.059	0.051
1634-04-4	methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--	--	--
156-60-5	dichloroethene;1,2-,trans	32,000	--	--	--	--	--	--	--	140,000	--	32,000
75-34-3	dichloroethane;1,1-	--	--	--	--	--	--	--	--	--	--	--
78-93-3	methyl ethyl ketone (2-butanone)	--	--	--	--	--	--	--	--	--	--	--
156-59-2	dichloroethene;1,2-,cis	--	--	--	--	--	--	--	--	--	--	--
110-54-3	hexane;n-	--	--	--	--	--	--	--	--	--	--	--
594-20-7	dichloropropane;2,2-	--	--	--	--	--	--	--	--	--	--	--
74-97-5	bromochloromethane	--	--	--	--	--	--	--	--	--	--	--
71-55-6	trichloroethane;1,1,1-	930,000	--	--	--	--	--	--	--	--	--	930,000
563-58-6	dichloropropene;1,1-	--	--	--	--	--	--	--	--	--	--	--
107-06-2	dichloroethane;1,2-	13,000	59	--	--	--	--	--	--	0.38	0.38	0.38
71-43-2	benzene	2,000	23	--	--	--	--	--	--	2.2	1.2	1.2
74-95-3	dibromomethane		--	--	--	--	--	--	--	--	--	--
75-27-4	bromodichloromethane (dichlorobromomethane)	14,000	28	--	--	--	--	--	--	0.55	0.27	0.27
108-10-1	methyl isobutyl ketone (4-methyl-2-pentanone)	--	--	--	--	--	--	--	--	--	--	--
108-88-3	toluene	19,000	--	--	--	--	--	--	--	1,300	6,800	1,300
10061-01-5	dichloropropene;1,3-, cis	--	--	--	--	--	--	--	--	--	--	--
591-78-6	hexanone;2-	--	--	--	--	--	--	--	--	--	--	--
142-28-9	dichloropropane;1,3-	--	--	--	--	--	--	--	--	--	--	--
127-18-4	tetrachloroethene (PCE)	502	100	--	--	--	--	--	--	0.69	0.80	0.69
106-93-4	dibromoethane; 1,2- (EDB)	--	--	--	--	--	--	--	--	--	--	--
108-90-7	chlorobenzene	5,200	--	--	--	--	--	--	--	130	680	130
100-41-4	ethylbenzene	6,800	--	--	--	--	--	--	--	530	3,100	530
108-38-3	xylene;m-	--	--	--	--	--	--	--	--	--	--	--
106-42-3	xylene;p-	--	--	--	--	--	--	--	--	--	--	--
100-42-5	styrene	--	--	--	--	--	--	--	--	--	--	--
95-47-6	xylene;o-	--	--	--	--	--	--	--	--	--	--	--
1330-20-7	xylenes	--	--	--	--	--	--	--	--	--	--	--
75-25-2	bromoform	14,000	220	--	--	--	--	--	--	4.3	4.3	4.3
98-82-8	cumene (isopropylbenzene)	--	--	--	--	--	--	--	--	--	--	--
96-18-4	trichloropropane;1,2,3-	--	--	--	--	--	--	--	--	--	--	--
108-86-1	bromobenzene	--	--	--	--	--	--	--	--	--	--	--
103-65-1	propylbenzene;n-	--	--	--	--	--	--	--	--	--	--	--
95-49-8	chlorotoluene, 2-	--	--	--	--	--	--	--	--	--	--	--
108-67-8	trimethylbenzene;1,3,5-	--	--	--	--	--	--	--	--	--	--	--
106-43-4	chlorotoluene, 4-	--	--	--	--	--	--	--	--	--	--	--
98-06-6	tert-butylbenzene	--	--	--	--	--	--	--	--	--	--	--
95-63-6	trimethylbenzene;1,2,4-	--	--	--	--	--	--	--	--	--	--	--
135-98-8	sec-butylbenzene	--	--	--	--	--	--	--	--	--	--	--
99-87-6	isopropyltoluene, p-	--	--	--	--	--	--	--	--	--	--	--

TABLE 7
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF SURFACE WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Preliminary Screening Level (Protective of Surface Water) (µg/L)
541-73-1	dichlorobenzene;1,3-	--	--	--	--	--	--	--	--	320	400	320
106-46-7	dichlorobenzene;1,4-	3,200	21	--	--	--	--	--	--	63	400	21
104-51-8	butylbenzene, n-	--	--	--	--	--	--	--	--	--	--	--
95-50-1	dichlorobenzene;1,2-	4,200	--	--	--	--	--	--	--	420	2,700	420
96-12-8	dibromo-3-chloropropane;1,2-	--	--	--	--	--	--	--	--	--	--	--
87-68-3	hexachlorobutadiene	930	30	--	--	--	--	--	--	0.44	0.44	0.44
87-61-6	trichlorobenzene;1,2,3-	--	--	--	--	--	--	--	--	--	--	--
75-01-4	vinyl chloride	6,500	3.7	--	--	--	--	--	--	0.025	2.0	0.025
56-23-5	carbon tetrachloride	550	4.9	--	--	--	--	--	--	0.23	0.25	0.23
67-66-3	chloroform	6,800	55	--	--	--	--	--	--	5.7	5.7	5.7
79-01-6	trichloroethene (TCE)	120	13	--	--	--	--	--	--	2.5	2.7	2.5
78-87-5	dichloropropane;1,2-	57,000	44	--	--	--	--	--	--	0.50	--	0.50
542-75-6	dichloropropene; 1,3-, trans (1,3-dichloropropene)	41,000	34	--	--	--	--	--	--	0.34	10	0.34
79-00-5	trichloroethane;1,1,2-	2,300	25	--	--	--	--	--	--	0.59	0.60	0.59
124-48-1	dibromochloromethane (chlorodibromomethane)	14,000	20	--	--	--	--	--	--	0.40	0.41	0.40
630-20-6	tetrachloroethane;1,1,1,2-	--	--	--	--	--	--	--	--	--	--	--
79-34-5	tetrachloroethane;1,1,2,2-	10,000	6.5	--	--	--	--	--	--	0.17	0.17	0.17
120-82-1	trichlorobenzene;1,2,4-	240	2.0	--	--	--	--	--	--	35	--	2.0
SEMIVOLATILE ORGANIC COMPOUNDS												
110-86-1	pyridine	--	--	--	--	--	--	--	--	--	--	--
62-75-9	nitrosodimethylamine;N-	800	4.9	--	--	--	--	--	--	0.001	0.001	0.001
108-95-2	phenol	560,000	--	--	--	--	--	--	--	21,000	21,000	21,000
62-53-3	aniline	--	--	--	--	--	--	--	--	--	--	--
111-44-4	bis(2-chloroethyl)ether	--	0.85	--	--	--	--	--	--	0.030	0.031	0.030
95-57-8	chlorophenol;2-	100	--	--	--	--	--	--	--	--	--	100
100-51-6	benzyl alcohol	--	--	--	--	--	--	--	--	--	--	--
95-48-7	cresol;o- (2-methylphenol)	--	--	--	--	--	--	--	--	--	--	--
39638-32-9	bis(2-chloroisopropyl) ether	--	--	--	--	--	--	--	--	1,400	1,400	1,400
	cresol; m- & p- (3&4-Methylphenol)	--	--	--	--	--	--	--	--	--	--	--
621-64-7	nitroso-di-n-propylamine;N-	--	0.84	--	--	--	--	--	--	0.005	--	0.005
67-72-1	hexachloroethane	21	1.9	--	--	--	--	--	--	1.4	1.9	1.4
98-95-3	nitrobenzene	1,800	--	--	--	--	--	--	--	17	17	17
78-59-1	isophorone	120,000	1,600	--	--	--	--	--	--	35	8.4	8.4
88-75-5	nitrophenol, 2-	--	--	--	--	--	--	--	--	--	--	--
105-67-9	dimethylphenol;2,4-	550	--	--	--	--	--	--	--	380	--	380
65-85-0	benzoic acid	--	--	--	--	--	--	--	--	--	--	--
111-91-1	bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	--	--	--
120-83-2	dichlorophenol;2,4-	190	--	--	--	--	--	--	--	77	93	77
106-47-8	chloroaniline;p- (4-chloroaniline)	--	--	--	--	--	--	--	--	--	--	--
87-65-0	dichlorophenol;2,6-	--	--	--	--	--	--	--	--	--	--	--
59-50-7	methylphenol; 4-chloro-3-	--	--	--	--	--	--	--	--	--	--	--
77-47-4	hexachlorocyclopentadiene	3,600	--	--	--	--	--	--	--	40	240	40
88-06-2	trichlorophenol;2,4,6-	17	3.9	--	--	--	--	--	--	1.4	2.1	1.4
95-95-4	trichlorophenol;2,4,5-	--	--	--	--	--	--	--	--	1,800	--	1,800
91-58-7	chloronaphthalene, 2-	--	--	--	--	--	--	--	--	--	--	--
88-74-4	nitroaniline, 2-	--	--	--	--	--	--	--	--	--	--	--
131-11-3	dimethyl phthalate	--	--	--	--	--	--	--	--	270,000	310,000	270,000
606-20-2	dinitrotoluene;2,6-	--	--	--	--	--	--	--	--	--	--	--
99-09-2	nitroaniline, 3-	--	--	--	--	--	--	--	--	--	--	--
51-28-5	dinitrophenol;2,4-	3,500	--	--	--	--	--	--	--	69	70	69
100-02-7	nitrophenol, 4-	--	--	--	--	--	--	--	--	--	--	--
132-64-9	dibenzofuran	--	--	--	--	--	--	--	--	--	--	--
121-14-2	dinitrotoluene;2,4-	1,400	5.5	--	--	--	--	--	--	0.11	0.11	0.11
58-90-2	tetrachlorophenol;2,3,4,6-	--	--	--	--	--	--	--	--	--	--	--
84-66-2	diethyl phthalate	28,000	--	--	--	--	--	--	--	17,000	23,000	17,000
7005-72-3	phenylether; 4-chlorophenyl-	--	--	--	--	--	--	--	--	--	--	--
100-01-6	nitroaniline, 4-	--	--	--	--	--	--	--	--	--	--	--
534-52-1	methylphenol; 4,6-dinitro-2-	--	--	--	--	--	--	--	--	--	--	--
86-30-6	nitrosodiphenylamine;N-	--	9.4	--	--	--	--	--	--	3.3	5.0	3.3
103-33-3	azobenzene	--	--	--	--	--	--	--	--	--	--	--

TABLE 7
GROUNDWATER PRELIMINARY SCREENING LEVELS PROTECTIVE OF SURFACE WATER
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Surface Water Method B Non cancer (µg/L)	Surface Water Method B Cancer (µg/L)	Surface Water Aquatic Life Fresh/Acute 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Acute CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Acute NTR 40 CFR 131 (µg/L)	Surface Water Aquatic Life Fresh/Chronic 173-201A WAC (µg/L)	Surface Water Aquatic Life Fresh/Chronic CWA §304 (µg/L)	Surface Water Aquatic Life Fresh/Chronic NTR 40 CFR 131 (µg/L)	Surface Water Human Health Fresh Water CWA §304 (µg/L)	Surface Water Human Health Fresh Water NTR 40 CFR 131 (µg/L)	Preliminary Screening Level (Protective of Surface Water) (µg/L)
101-55-3	phenylether; 4-bromophenyl-	--	--	--	--	--	--	--	--	--	--	--
86-74-8	carbazole	--	--	--	--	--	--	--	--	--	--	--
84-74-2	di-butyl phthalate (di-n-butyl phthalate)	2,900	--	--	--	--	--	--	--	2,000	2,700	2,000
85-68-7	butyl benzyl phthalate	1,300	8.3	--	--	--	--	--	--	1,500	--	8.3
91-94-1	dichlorobenzidine;3,3'-	--	0.046	--	--	--	--	--	--	0.021	0.040	0.021
117-81-7	bis(2-ethylhexyl) phthalate	400	3.6	--	--	--	--	--	--	1.2	1.8	1.2
117-84-0	di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	--	--
91-20-3	naphthalene	4,700	--	--	--	--	--	--	--	--	--	4,700
91-57-6	methyl naphthalene;2-	--	--	--	--	--	--	--	--	--	--	--
90-12-0	methyl naphthalene;1-	--	--	--	--	--	--	--	--	--	--	--
208-96-8	acenaphthylene	--	--	--	--	--	--	--	--	--	--	--
83-32-9	acenaphthene	650	--	--	--	--	--	--	--	670	--	650
86-73-7	fluorene	3,500	--	--	--	--	--	--	--	1,100	1,300	1,100
87-86-5	pentachlorophenol	1,200	1.5	20	19	20	13	15	13	0.27	0.28	0.27
85-01-8	phenanthrene	--	--	--	--	--	--	--	--	--	--	--
120-12-7	anthracene	26,000	--	--	--	--	--	--	--	8,300	9,600	8,300
206-44-0	fluoranthene	86	--	--	--	--	--	--	--	130	300	86
129-00-0	pyrene	2,600	--	--	--	--	--	--	--	830	960	830
56-55-3	benzo[a]anthracene	--	0.30	--	--	--	--	--	--	0.004	0.003	0.003
218-01-9	chrysene	--	30	--	--	--	--	--	--	0.004	0.003	0.003
205-99-2	benzo[b]fluoranthene	--	0.30	--	--	--	--	--	--	0.004	0.003	0.003
207-08-9	benzo[k]fluoranthene	--	3.0	--	--	--	--	--	--	0.004	0.003	0.003
50-32-8	benzo[a]pyrene	--	0.030	--	--	--	--	--	--	0.004	0.003	0.003
193-39-5	indeno[1,2,3-cd]pyrene	--	0.30	--	--	--	--	--	--	0.004	0.003	0.003
53-70-3	dibenzo[a,h]anthracene	--	0.030	--	--	--	--	--	--	0.004	0.003	0.003
191-24-2	benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--
	cPAH TEQ	--	--	--	--	--	--	--	--	--	--	--

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
CAS = Chemicals Abstracts Service
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated biphenyl
SEMI = Semivolatile
TPH = Total Petroleum Hydrocarbon
VOL = Volatile
µg/L = micrograms per liter

-- = Not Available
Note: Preliminary screening level may be adjusted upward to the practical quantitation limit (PQL) based on analytical laboratory instrument capabilities or natural/regional background values based on MTCA guidelines.

TABLE 8
RL, QL, AND PSL EVALUATION - GROUNDWATER ANALYSIS - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Preliminary Screening Level Groundwater Protective of Drinking Water (Table 6) (µg/l)	Preliminary Screening Level Groundwater Protective of Surface Water (Table 7) (µg/L)	Background Concentration (Natural or Regional as noted) (µg/L)	ALS Global Reporting Limit (µg/L)	ALS Global Quantitation Limit (µg/L)	Groundwater Preliminary Screening Level (µg/L)
PETROLEUM HYDROCARBONS							
	tph, diesel range organics	500	--		130	119	500
	tph, heavy oils	500	--		250	109	500
	tph, mineral oil	500	--		250	109	500
	tph: gasoline range organics, benzene present	800	--		50.0	29.3	800
	tph: gasoline range organics, no detectable benzene	1,000	--		50.0	29.3	1,000
TOTAL/DISSOLVED METALS							
7440-38-2	arsenic, inorganic	5.0	0.018	10.7 (c)	1.00	0.45	0.45
7440-39-3	barium and compounds	2,000	1,000		1.00	0.67	1,000
7440-43-9	cadmium (potable groundwater and surface water)	5.0	--		1.00	0.36	5.0
	calcium	--	--		50.0	10.6	--
7440-47-3	chromium (total)	50	--		2.00	0.29	50
16065-83-1	chromium(III)	100	57		--	--	57
18540-29-9	chromium(VI)	48	10		10.0	5.40	10
7439-89-6	iron	300	300		50.0	17.3	300
7439-92-1	lead	15	0.54		1.00	0.28	0.54
	magnesium	--	--		50.0	27.4	--
7439-96-5	manganese	50	--		2.00	0.34	50
7782-49-2	selenium and compounds	50	5.0		4.00	3.41	5.0
7440-22-4	silver	80	0.32		1.00	0.20	0.32
	sodium	20,000	--		50.0	32.0	20,000
7439-97-6	mercury	2.0	0.012		0.20	0.11	0.11
CONVENTIONALS							
	total dissolved solids	--	--		5,000	5,000	--
16887-00-6	chloride	250,000	230,000		92.0	92.0	230,000
16984-48-8	fluoride	640	--		160	160	640
14797-55-8	nitrate	10,000	10,000		153	150	10,000
14797-65-0	nitrite	1,000	--		142.6	143	1,000
	sulfate	--	--		260	260	--
7664-41-7	ammonia	--	--		10.0	10.0	--
	alkalinity	--	--		1,000	1,000	--
	bicarbonate	--	--		1,000	1,000	--
	TOC	--	--		5,000	5,000	--
	pH	6.5 to 8.5	--		--	--	6.5 to 8.5
CHLORINATED PESTICIDES							
319-84-6	hexachlorocyclohexane;alpha	0.014	0.003		0.01	0.01	0.01
58-89-9	lindane (gamma-BHC)	0.20	0.019		0.01	0.01	0.019
319-85-7	hexachlorocyclohexane;beta-	0.049	0.009		0.01	0.01	0.01
76-44-8	heptachlor	0.019	0.0001		0.01	0.01	0.01
319-86-8	hexachlorocyclohexane;delta-	--	0.012		0.01	0.01	0.012
309-00-2	aldrin	0.003	0.00005		0.01	0.01	0.01
1024-57-3	heptachlor epoxide	0.005	0.00004		0.01	0.01	0.01
57-74-9	chlordane	0.25	0.001		0.20	0.20	0.20
115-29-7	endosulfan	96	0.056		0.01	0.01	0.056
72-55-9	dde (4,4'-DDE)	0.26	0.0002		0.01	0.01	0.01
60-57-1	dieldrin	0.005	0.0001		0.01	0.01	0.01
72-20-8	endrin	2.0	0.002		0.01	0.01	0.01
72-54-8	ddd (4,4'-DDD)	0.30	0.0003		0.01	0.01	0.01
50-29-3	ddt (4,4'-DDT)	0.30	0.0002		0.01	0.01	0.01
72-43-5	methoxychlor	40	0.030		0.01	0.01	0.030
118-74-1	hexachlorobenzene	0.055	0.0003		0.01	0.01	0.01
8001-35-2	toxaphene	0.080	0.0002		0.50	0.50	0.50

TABLE 8
RL, QL, AND PSL EVALUATION - GROUNDWATER ANALYSIS - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Preliminary Screening Level Groundwater Protective of Drinking Water (Table 6) (µg/l)	Preliminary Screening Level Groundwater Protective of Surface Water (Table 7) (µg/L)	Background Concentration (Natural or Regional as noted) (µg/L)	ALS Global		Groundwater Preliminary Screening Level (µg/L)
					Reporting Limit (µg/L)	Quantitation Limit (µg/L)	
POLYCHLORINATED BIPHENYLS							
12674-11-2	aroclor 1016	1.1	0.003		0.005	0.005	0.005
	aroclor 1221	--	--		0.01	0.01	--
	aroclor 1232	--	--		0.005	0.005	--
	aroclor 1242	--	--		0.005	0.005	--
	aroclor 1248	--	--		0.005	0.005	--
11097-69-1	aroclor 1254	0.044	0.0001		0.005	0.005	0.005
11096-82-5	aroclor 1260	0.044	0.014		0.005	0.005	0.014
	pcb mixtures	0.10	--		--	--	0.10
VOLATILE ORGANIC COMPOUNDS (VOCs)							
75-71-8	dichlorodifluoromethane	1,600	--		2.00	0.094	1,600
74-87-3	chloromethane	--	--		2.00	0.23	--
74-83-9	bromomethane (methyl bromide)	11	47		2.00	0.14	11
75-00-3	chloroethane	--	--		2.00	0.116	--
75-69-4	trichlorofluoromethane	2,400	--		2.00	0.045	2,400
75-15-0	carbon disulfide	800	--		0.10	0.0542	800
67-64-1	acetone	7,200	--		25.0	0.68	7,200
75-35-4	dichloroethene;1,1-	7.0	0.057		2.00	0.014	0.057
75-09-2	methylene chloride (dichloromethane)	5.0	4.6		5.00	0.68	4.6
107-13-1	acrylonitrile	0.081	0.051		10.0	0.0572	0.0572
1634-04-4	methyl tert-butyl ether (MTBE)	20	--		2.00	0.0343	20
156-60-5	dichloroethene;1,2-,trans	100	32,000		2.00	0.097	100
75-34-3	dichloroethane;1,1-	7.7	--		2.00	0.030	7.7
78-93-3	methyl ethyl ketone (2-butanone)	4,800	--		10.0	1.41	4,800
156-59-2	dichloroethene;1,2-,cis	16	--		2.00	0.068	16
110-54-3	hexane;n-	480	--		2.00	0.618	480
594-20-7	dichloropropane;2,2-	--	--		2.00	0.041	--
74-97-5	bromochloromethane	--	--		2.00	0.115	--
71-55-6	trichloroethane;1,1,1-	200	930,000		2.00	0.059	200
563-58-6	dichloropropene;1,1-	--	--		2.00	0.067	--
107-06-2	dichloroethane;1,2-	5.0	0.38		2.00	0.014	0.38
71-43-2	benzene	5.0	1.2		2.00	0.028	1.2
74-95-3	dibromomethane	--	--		2.00	0.071	--
75-27-4	bromodichloromethane (dichlorobromomethane)	0.080	0.27		2.00	0.059	0.080
108-10-1	methyl isobutyl ketone (4-methyl-2-pentanone)	640	--		10.0	0.341	640
108-88-3	toluene	640	1,300		2.00	0.015	640
10061-01-5	dichloropropene;1,3-, cis	--	--		2.00	0.048	--
591-78-6	hexanone;2-	--	--		10.0	0.94	--
142-28-9	dichloropropane;1,3-	--	--		2.00	0.066	--
127-18-4	tetrachloroethene (PCE)	5.0	0.69		2.00	0.023	0.69
106-93-4	dibromoethane; 1,2- (EDB)	0.022	--		0.01	0.01	0.022
108-90-7	chlorobenzene	100	130		2.00	0.024	100
100-41-4	ethylbenzene	70	530		2.00	0.029	70
108-38-3	xylene;m-	1,600	--		4.00	0.11	1,600
106-42-3	xylene;p-	1,600	--		4.00	0.11	1,600
100-42-5	styrene	100	--		2.00	0.020	100
95-47-6	xylene;o-	1,600	--		2.00	0.069	1,600
1330-20-7	xylenes	1,000	--		4.00	0.11	1,000
75-25-2	bromoform	5.5	4.3		2.00	0.053	4.3
98-82-8	cumene (isopropylbenzene)	800	--		2.00	0.0381	800
96-18-4	trichloropropane;1,2,3-	0.001	--		2.00	0.023	0.023
108-86-1	bromobenzene	--	--		2.00	0.041	--
103-65-1	propylbenzene;n-	800	--		2.00	0.036	800
95-49-8	chlorotoluene, 2-	--	--		2.00	0.032	--
108-67-8	trimethylbenzene;1,3,5-	80	--		2.00	0.041	80
106-43-4	chlorotoluene, 4-	--	--		2.00	0.040	--
98-06-6	t-butylbenzene	800	--		2.00	0.051	800
95-63-6	trimethylbenzene;1,2,4-	--	--		2.00	0.054	--
135-98-8	s-butylbenzene	800	--		2.00	0.019	800
99-87-6	isopropyltoluene, p-	--	--		2.00	0.035	--

TABLE 8
RL, QL, AND PSL EVALUATION - GROUNDWATER ANALYSIS - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Preliminary Screening Level Groundwater Protective of Drinking Water (Table 6) (µg/l)	Preliminary Screening Level Groundwater Protective of Surface Water (Table 7) (µg/L)	Background Concentration (Natural or Regional as noted) (µg/L)	ALS Global		Groundwater Preliminary Screening Level (µg/L)
					Reporting Limit (µg/L)	Quantitation Limit (µg/L)	
541-73-1	dichlorobenzene;1,3-	--	320		2.00	0.0413	320
106-46-7	dichlorobenzene;1,4-	8.1	21		2.00	0.045	8.1
104-51-8	butylbenzene, n-	--	--		2.00	0.053	--
95-50-1	dichlorobenzene;1,2-	600	420		2.00	0.028	420
96-12-8	dibromo-3-chloropropane;1,2-	0.055	--		10.0	0.0997	0.0997
87-68-3	hexachlorobutadiene	0.56	0.44		0.01	0.01	0.44
87-61-6	trichlorobenzene;1,2,3-	--	--		2.00	0.045	--
75-01-4	vinyl chloride	0.20	0.025		0.20	0.031	0.031
56-23-5	carbon tetrachloride	0.63	0.23		0.10	0.025	0.23
67-66-3	chloroform	1.4	5.7		0.10	0.10	1.4
79-01-6	trichloroethene (TCE)	5.0	2.5		0.02	0.020	2.5
78-87-5	dichloropropane;1,2-	1.2	0.50		0.10	0.063	0.50
542-75-6	dichloropropene; 1,3-, trans (1,3-dichloropropene)	0.44	0.34		0.10	0.0576	0.34
79-00-5	trichloroethane;1,1,2-	0.77	0.59		0.10	0.052	0.59
124-48-1	dibromochloromethane (chlorodibromomethane)	0.52	0.40		0.10	0.074	0.40
630-20-6	tetrachloroethane;1,1,1,2-	1.7	--		0.10	0.087	1.7
79-34-5	tetrachloroethane;1,1,2,2-	0.22	0.17		0.10	0.029	0.17
120-82-1	trichlorobenzene;1,2,4-	1.5	2.0		0.10	0.047	1.5
SEMIVOLATILE ORGANIC COMPOUNDS							
110-86-1	pyridine	8.0	--		2.00	2.00	8.0
62-75-9	nitrosodimethylamine;N-	0.0009	0.0007		2.00	1.51	1.51
108-95-2	phenol	2,400	21,000		2.00	1.05	2,400
62-53-3	aniline	7.7	--		2.00	2.00	7.7
111-44-4	bis(2-chloroethyl)ether	0.040	0.030		2.00	0.94	0.94
95-57-8	chlorophenol;2-	40	100		2.00	0.85	40
100-51-6	benzyl alcohol	800	--		2.00	1.03	800
95-48-7	cresol;o- (2-methylphenol)	400	--		2.00	1.29	400
39638-32-9	bis(2-chloroisopropyl) ether	--	1,400		2.00	0.62	1,400
	cresol; m- & p- (3&4-Methylphenol) (b)	400	--		2.00	0.810	400
621-64-7	nitroso-di-n-propylamine;N-	0.013	0.005		2.00	2.00	2.0
67-72-1	hexachloroethane	1.1	1.4		2.00	2.00	2.0
98-95-3	nitrobenzene	16	17		2.00	1.19	16
78-59-1	isophorone	46	8.4		2.00	1.17	8.4
88-75-5	nitrophenol, 2-	--	--		2.00	1.14	--
105-67-9	dimethylphenol;2,4-	160	380		2.00	0.87	160
65-85-0	benzoic acid	64,000	--		10.0	2.44	64,000
111-91-1	bis(2-chloroethoxy)methane	--	--		2.00	1.05	--
120-83-2	dichlorophenol;2,4-	24	77		2.00	0.79	24
106-47-8	chloroaniline;p- (4-chloroaniline)	0.22	--		2.00	1.89	1.89
87-65-0	dichlorophenol;2,6-	--	--		2.00	0.75	--
59-50-7	methylphenol; 4-chloro-3-	--	--		2.00	1.19	--
77-47-4	hexachlorocyclopentadiene	48	40		2.00	2.00	40
88-06-2	trichlorophenol;2,4,6-	4.0	1.4		2.00	0.90	1.4
95-95-4	trichlorophenol;2,4,5-	800	1,800		2.00	1.53	800
91-58-7	chloronaphthalene, 2-	--	--		2.00	0.90	--
88-74-4	nitroaniline, 2-	160	--		2.00	0.76	160
131-11-3	dimethyl phthalate	--	270,000		2.00	0.69	270,000
606-20-2	dinitrotoluene;2,6-	0.060	--		2.00	1.82	1.82
99-09-2	nitroaniline, 3-	--	--		5.00	1.35	--
51-28-5	dinitrophenol;2,4-	32	69		10.0	2.93	32
100-02-7	nitrophenol, 4-	--	--		2.00	2.00	--
132-64-9	dibenzofuran	16	--		2.00	0.51	16
121-14-2	dinitrotoluene;2,4-	0.28	0.11		2.00	0.78	0.78
58-90-2	tetrachlorophenol;2,3,4,6-	480	--		2.00	1.06	480
84-66-2	diethyl phthalate	13,000	17,000		2.00	0.80	13,000
7005-72-3	phenylether; 4-chlorophenyl-	--	--		2.00	0.74	--
100-01-6	nitroaniline, 4-	--	--		2.00	2.00	--
534-52-1	methylphenol; 4,6-dinitro-2-	--	--		2.00	2.00	--
86-30-6	nitrosodiphenylamine;N-	18	3.3		2.00	0.92	3.3
103-33-3	azobenzene	0.80	--		2.00	1.63	1.63

TABLE 8
RL, QL, AND PSL EVALUATION - GROUNDWATER ANALYSIS - DECEMBER 2014
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Preliminary Screening Level Groundwater Protective of Drinking Water (Table 6) (µg/l)	Preliminary Screening Level Groundwater Protective of Surface Water (Table 7) (µg/L)	Background Concentration (Natural or Regional as noted) (µg/L)	ALS Global Reporting Limit (µg/L)	ALS Global Quantitation Limit (µg/L)	Groundwater Preliminary Screening Level (µg/L)
101-55-3	phenylether; 4-bromophenyl-	--	--		2.00	0.79	--
86-74-8	carbazole	--	--		2.00	1.66	--
84-74-2	di-butyl phthalate	1,600	2,000		2.00	0.83	1,600
85-68-7	butyl benzyl phthalate	46	8.3		2.00	0.67	8.3
91-94-1	dichlorobenzidine;3,3'-	0.20	0.021		2.00	2.00	2.0
117-81-7	bis(2-ethylhexyl) phthalate	6.0	1.2		2.00	0.81	1.2
117-84-0	di-n-octyl phthalate	160	--		2.00	0.87	160
91-20-3	naphthalene	160	4,700		2.00	0.055	160
91-57-6	methyl naphthalene;2-	32	--		2.00	1.03	32
90-12-0	methyl naphthalene;1-	1.5	--		0.02	0.01	1.5
208-96-8	acenaphthylene	--	--		2.00	0.80	--
83-32-9	acenaphthene	960	650		2.00	0.79	650
86-73-7	fluorene	640	1,100		2.00	1.01	640
87-86-5	pentachlorophenol	0.22	0.27		0.50	0.23	0.23
85-01-8	phenanthrene	--	--		2.00	0.96	--
120-12-7	anthracene	4,800	8,300		2.00	0.80	4,800
206-44-0	fluoranthene	640	86		2.00	0.93	86
129-00-0	pyrene	480	830		2.00	0.61	480
56-55-3	benzo[a]anthracene	0.12	0.003		0.02	0.009	0.009
218-01-9	chrysene	12	0.003		2.00	0.80	0.80
205-99-2	benzo[b]fluoranthene	0.12	0.003		0.02	0.007	0.007
207-08-9	benzo[k]fluoranthene	1.2	0.003		0.02	0.024	0.024
50-32-8	benzo[a]pyrene	0.10	0.003		0.02	0.0104	0.0104
193-39-5	indeno[1,2,3-cd]pyrene	0.12	0.003		0.02	0.016	0.016
53-70-3	dibenzo[a,h]anthracene	0.012	0.003		0.02	0.0127	0.0127
191-24-2	benzo(g,h,i)perylene	--	--		2.00	0.54	--
	cPAH TEQ	0.10	--		--	--	0.10

CAS = Chemicals Abstracts Service
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
PCB = Polychlorinated biphenyl
PQL = Practical quantiation limit
PSL = Preliminary screening level
RL = Reporting limit
SEMI = Semivolatile
SIM = Selected ion monitoring
TPH = Total Petroleum Hydrocarbon
VOL = Volatile
µg/L = micrograms per liter

-- = Not Available
(a) Method A groundwater cleanup level is 100 µg/L if no chromium VI is present.
(b) Screening level for m- & p-cresol based on criteria for m-cresol (3-methylphenol), as it is more conservative than the criteria for p-cresol (4-methylphenol).
(c) Represents the natural background value for arsenic as established by Ecology (June 2010).

TABLE 9
SOIL PRELIMINARY SCREENING LEVELS
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Groundwater Preliminary Screening Level (Table 8) (µg/L)	Leaching to GW Model Inputs: Koc L/kg @ pH=6.8	Leaching to GW Model Inputs: Kd L/kg # @ pH 6.8 for metals	Leaching to GW Model Inputs: Hcc unitless	Leaching to GW Model Inputs: S mg/l	Protection of GW (3-Phase Model) mg/kg	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Carcinogen (mg/kg)	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Non-carcinogen (mg/kg)	Method B Preliminary Soil Cleanup Level (mg/kg)	Background Soil Metals Concentations Statewide (mg/kg) 90 percentile value (a)	Method A Soil Unrestricted Land Use (mg/kg)	ALS Global: Reporting Limit (mg/kg)	ALS Global: Quantitation Limit (mg/kg)	Preliminary Screening Level (mg/kg)
PETROLEUM HYDROCARBONS															
	TPH, diesel-range organics	500	--	--	--	--	--	--	--	--	--	2,000	25	11.8	2,000
	TPH, heavy oils	500	--	--	--	--	--	--	--	--	--	2,000	50	22.9	2,000
	TPH, mineral oil	500	--	--	--	--	--	--	--	--	--	4,000	50	22.9	4,000
	TPH, gasoline-range organics, benzene present	800	--	--	--	--	--	--	--	--	--	30	3	1.46	30
	TPH, gasoline-range organics, no detectable benzene	1,000	--	--	--	--	--	--	--	--	--	100	3	1.46	100
METALS															
7440-38-2	arsenic	0.45	--	29	0	--	0.26	0.67	24	0.26	7.0	20	1	0.730	20
7440-39-3	barium	1,000	--	41	0	--	824	--	16,000	824	--	--	0.5	0.140	16,000
7440-43-9	cadmium	5.0	--	6.7	0	--	0.69	--	--	0.69	1.0	2.0	0.5	0.225	2.0
	calcium	--	--	--	--	--	--	--	--	--	--	--	50.00	22.4	--
7440-47-3	chromium (total)	50	--	1,000	0	--	1,000	--	--	1,000	42	see Cr III or Cr VI	0.5	0.37	see Cr III or Cr VI
16065-83-1	chromium(III)	57	--	1,800,000	0	--	1,000,000	--	120,000	120,000	--	2,000	0.5	0.37	2,000
18540-29-9	chromium(VI)	10	--	19	0	--	3.8	--	240	3.8	--	19	5	2.70	19
7439-89-6	iron	300	--	25	0	--	151	--	56,000	151	43,100	--	50	33.6	151 (b)
7439-92-1	lead	0.54	--	10,000	0	--	108	--	--	108	17	250	0.5	0.235	250
	magnesium	--	--	--	--	--	--	--	--	--	--	--	50	27.9	--
7439-96-5	manganese	50	--	--	--	--	--	--	11,000	11,000	1,100	--	0.5	0.290	11,000
7782-49-2	selenium	5.0	--	5	0	--	0.52	--	400	0.52	--	--	5	3.21	400
7440-22-4	silver	0.32	--	8.3	0	--	0.054	--	400	0.054	--	--	0.5	0.230	400
7440-23-5	sodium	20,000	--				--	--	--	--	--	--	50	26	--
7439-97-6	mercury	0.11	--	52	0.47	--	0.11	--	--	0.11	0.070	2.0	0.02	0.00407	2.0
CONVENTIONALS															
	chloride	230,000	--	--	--	--	--	--	--	--	--	--	1.0	0.92	--
16984-48-8	fluoride	640	--	--	--	--	--	--	3,200	3,200	--	--	1	NA	3,200
14797-55-8	nitrate	10,000	--	--	--	--	--	--	130,000	130,000	--	--	3	NA	130,000
14797-65-0	nitrite	1,000	--	--	--	--	--	--	8,000	8,000	--	--	1	NA	8,000
	sulfate	--	--	--	--	--	--	--	--	--	--	--	2.0	2.0	--
7664-41-7	ammonia	--	--	--	--	--	--	--	--	--	--	--	0.5	0.5	--
	TOC	--	--	--	--	--	--	--	--	--	--	--	5	5	--
	pH	6.5 to 8.5	--	--	--	--	--	--	--	--	--	--	1	1	--
CHLORINATED PESTICIDES															
319-84-6	hexachlorocyclohexane;alpha	0.010	1,800	1.8	0.0004	2.0	0.0004	0.16	--	0.0004	--	--	0.005	0.00035	0.16
58-89-9	lindane (gamma-BHC)	0.019	1,400	1.4	0.0006	6.8	0.001	--	24	0.001	--	0.010	0.005	0.00045	0.010
319-85-7	hexachlorocyclohexane;beta-	0.010	2,100	2.1	0.00003	0.24	0.0005	0.56	--	0.0005	--	--	0.005	0.0005	0.56
76-44-8	heptachlor	0.010	9,500	9.5	0.045	0.18	0.002	0.22	40	0.002	--	--	0.005	0.00083	0.22
319-86-8	hexachlorocyclohexane;delta-	0.012	--	--	--	--	--	--	--	--	--	--	0.005	0.00037	--
309-00-2	aldrin	0.010	49,000	49	0.007	0.18	0.010	0.059	2.4	0.010	--	--	0.005	0.00034	0.059
1024-57-3	heptachlor epoxide	0.010	83,000	83	0.0004	0.20	0.017	0.11	1.0	0.017	--	--	0.005	0.00039	0.11
57-74-9	chlordane	0.20	51,000	51	0.002	0.056	0.21	2.9	40	0.21	--	--	0.1	0.022	2.9
115-29-7	endosulfan	0.056	2,040	2	0.0005	0.51	0.003	--	480	0.003	--	--	0.005	0.0017	480
72-55-9	dde (4,4'-DDE)	0.010	86,000	86	0.0009	0.12	0.017	2.9	--	0.017	--	--	0.005	0.0016	2.9
60-57-1	dieldrin	0.010	26,000	26	0.0006	0.20	0.005	0.063	4.0	0.005	--	--	0.005	0.00048	0.063
72-20-8	endrin	0.010	11,000	11	0.0003	0.25	0.002	--	24	0.002	--	--	0.005	0.00045	24
72-54-8	ddd (4,4'-DDD)	0.010	46,000	46	0.0002	0.090	0.009	4.2	--	0.009	--	--	0.005	0.001	0.009 (b)
50-29-3	ddt (4,4'-DDT)	0.010	680,000	680	0.0003	0.025	0.14	2.9	40	0.14	--	3.0	0.005	0.00085	3.0
72-43-5	methoxychlor	0.030	80,000	80	0.0006	0.045	0.048	--	400	0.048	--	--	0.005	0.00061	400
8001-35-2	toxaphene	0.50	96,000	96	0.0002	0.74	0.96	0.91	--	0.91	--	--	0.25	0.037	0.91

TABLE 9
SOIL PRELIMINARY SCREENING LEVELS
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Groundwater Preliminary Screening Level (Table 8) (µg/L)	Leaching to GW Model Inputs: Koc L/kg @ pH=6.8	Leaching to GW Model Inputs: Kd L/kg # @ pH 6.8 for metals	Leaching to GW Model Inputs: Hcc unitless	Leaching to GW Model Inputs: S mg/l	Protection of GW (3-Phase Model) mg/kg	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Carcinogen (mg/kg)	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Non-carcinogen (mg/kg)	Method B Preliminary Soil Cleanup Level (mg/kg)	Background Soil Metals Concentations Statewide (mg/kg) 90 percentile value (a)	Method A Soil Unrestricted Land Use (mg/kg)	ALS Global: Reporting Limit (mg/kg)	ALS Global: Quantitation Limit (mg/kg)	Preliminary Screening Level (mg/kg)
POLYCHLORINATED BIPHENYLS															
12674-11-2	aroclor 1016	0.005	107,000	107	0.017	0.57	0.011	14	5.6	0.011	--	--	0.01	0.0021	5.6
11104-28-2	aroclor 1221	--	--	--	--	--	--	--	--	--	--	--	0.02	0.0021	--
11141-16-5	aroclor 1232	--	--	--	--	--	--	--	--	--	--	--	0.01	0.0021	--
53469-21-9	aroclor 1242	--	--	--	--	--	--	--	--	--	--	--	0.01	0.0021	--
12672-29-6	aroclor 1248	--	--	--	--	--	--	--	--	--	--	--	0.01	0.0021	--
11097-69-1	aroclor 1254	0.005	98,000	98	0.030	0.052	0.010	0.50	1.6	0.010	--	--	0.01	0.0021	0.50
11096-82-5	aroclor 1260	0.014	820,000	820	0	--	0.23	0.50	--	0.23	--	--	0.01	0.0021	0.50
	pcb mixtures	0.1	310,000	310	0	--	--	0.50	--	0.50	--	1.0	--	--	1.0
VOLATILE ORGANIC COMPOUNDS															
75-71-8	dichlorodifluoromethane	1,600	58	0.058	4.1	280	20	--	16,000	20	--	--	0.01	0.0011	16,000
74-87-3	chloromethane	--	35	0.035	0.98	8,200	--	--	--	--	--	--	0.01	0.000665	--
75-01-4	vinyl chloride	0.031	19	0.019	1.1	6,800	0.0002	0.67	240	0.0002	--	--	0.01	0.0000286	0.0002 (b)
74-83-9	bromomethane (methyl bromide)	11	9.0	0.009	0.26	15,000	0.052	--	110	0.052	--	--	0.01	0.000555	110
75-00-3	chloroethane	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000665	--
56-23-5	carbon tetrachloride	0.23	150	0.15	1.3	790	0.002	14	320	0.002	--	--	0.01	0.000699	14
75-69-4	trichlorofluoromethane	2,400	160	0.16	4.0	1,100	34	--	24,000	34	--	--	0.01	0.000585	24,000
75-15-0	carbon disulfide	800	46	0.046	1.2	1,200	5.7	--	8,000	5.7	--	--	0.01	0.00068	8,000
67-64-1	acetone	7,200	0.58	0.0006	0.002	1,000,000	29	--	72,000	29	--	--	0.05	0.00129	72,000
75-35-4	dichloroethene;1,1-	0.057	65	0.065	1.1	2,300	0.0004	--	4,000	0.0004	--	--	0.01	0.0000297	4,000
75-09-2	methylene chloride (dichloromethane)	4.6	10	0.010	0.090	13,000	0.020	130	4,800	0.020	--	0.020	0.02	0.00138	0.020
107-13-1	acrylonitrile	0.057	0.85	0.0009	0.004	79,000	0.0002	1.9	3,200	0.0002	--	--	0.05	0.000713	1.9
1634-04-4	methyl tert-butyl ether (MTBE)	20	--	--	--	--	--	560	--	560	--	0.10	0.01	0.00069	0.10
156-60-5	dichloroethene;1,2-,trans	100	38	0.038	0.39	6,300	0.54	--	1,600	0.54	--	--	0.01	0.000661	1,600
75-34-3	dichloroethane;1,1-	7.7	53	0.053	0.23	5,060	0.042	180	16,000	0.042	--	--	0.01	0.000669	180
78-93-3	methyl ethyl ketone (2-butanone)	4,800	--	--	--	--	--	--	48,000	48,000	--	--	0.05	0.000979	48,000
156-59-2	dichloroethene;1,2-,cis	16	36	0.036	0.17	3,500	0.080	--	160	0.080	--	--	0.01	0.000721	160
110-54-3	hexane;n-	480	--	--	--	--	--	--	4,800	4,800	--	--	0.0002	0.000618	4,800
594-20-7	dichloropropane;2,2-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000684	--
74-97-5	bromochloromethane	--	--	--	--	--	--	--	--	--	--	--	0.01	0.00119	--
67-66-3	chloroform	1.4	53	0.053	0.15	8,000	0.008	32	800	0.008	--	--	0.01	0.000685	0.008 (b)
71-55-6	trichloroethane;1,1,1-	200	140	0.14	0.71	1,330	1.6	--	160,000	1.6	--	2.0	0.01	0.000616	2.0
563-58-6	dichloropropene;1,1-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000616	--
107-06-2	dichloroethane;1,2-	0.38	38	0.038	0.040	8,500	0.002	11	1,600	0.002	--	--	0.01	0.0000175	11
71-43-2	benzene	1.2	62	0.062	0.23	1,800	0.007	18	320	0.007	--	0.030	0.005	0.0000222	0.030
79-01-6	trichloroethene (TCE)	2.5	94	0.094	0.42	1,100	0.017	12	41	0.017	--	0.030	0.01	0.0000478	0.030
78-87-5	dichloropropane;1,2-	0.50	47	0.047	0.12	2,800	0.003	28	7,200	0.003	--	--	0.01	0.000619	28
74-95-3	dibromomethane	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000783	--
75-27-4	bromodichloromethane (dichlorobromomethane)	0.080	55	0.055	0.066	6,700	0.0004	16	1,600	0.0004	--	--	0.01	0.000693	16
542-75-6	dichloropropene; 1,3-, trans (1,3-dichloropropene)	0.34	27	0.027	0.73	2800	0.002	10	2,400	0.002	--	--	0.01	0.000735	10
108-10-1	methyl isobutyl ketone (4-methyl-2-pentanone)	640	130	0.13	0.006	19000	4.2	--	6,400	4.2	--	--	0.05	0.000682	6,400
108-88-3	toluene	640	140	0.14	0.27	530	4.7	--	6,400	4.7	--	7.0	0.01	0.000708	7.0
10061-01-5	dichloropropene;1,3-, cis	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000714	--
79-00-5	trichloroethane;1,1,2-	0.59	75	0.075	0.037	4,400	0.003	18	320	0.003	--	--	0.01	0.000737	18
591-78-6	hexanone;2-	--	--	--	--	--	--	--	--	--	--	--	0.05	0.000475	--
142-28-9	dichloropropane;1,3-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000717	--
127-18-4	tetrachloroethene (PCE)	0.69	270	0.27	0.75	200	0.007	480	480	0.007	--	0.050	0.01	0.0000458	0.050
124-48-1	dibromochloromethane (chlorodibromomethane)	0.40	470	0.47	0.035	4,400	0.005	12	1,600	0.005	--	--	0.01	0.00106	12
106-93-4	dibromoethane; 1,2- (EDB)	0.022	66	0.066	0.018	4,200	0.0001	0.50	--	0.0001	--	0.005	0.005	0.000023	0.005
108-90-7	chlorobenzene	100	220	0.22	0.15	470	0.87	--	1,600	0.87	--	--	0.01	0.000737	1,600
630-20-6	tetrachloroethane;1,1,1,2-	1.7	93	0.093	0.014	3,000	0.010	38	2,400	0.010	--	--	0.01	0.000573	38
100-41-4	ethylbenzene	70	204	0.20	0.32	170	0.60	--	8,000	0.60	--	6.0	0.01	0.000723	6.0
108-38-3	xylene;m-	1,600	200	0.20	0.30	160	14	--	16,000	14	--	--	0.02	0.0013	16,000
106-42-3	xylene;p-	1,600	310	0.31	0.31	190	17	--	16,000	17	--	--	0.02	0.0013	16,000
100-42-5	styrene	100	910	0.91	0.11	310	2.2	--	16,000	2.2	--	--	0.01	0.000558	16,000
95-47-6	xylene;o-	1,600	240	0.24	0.21	180	15	--	16,000	15	--	--	0.01	0.000623	16,000
1330-20-7	xylene	1,000	230	0.23	0.28	170	9.1	--	16,000	9.1	--	9.0	0.01	0.000623	9.0
75-25-2	bromoform	4.3	130	0.13	0.022	3,100	0.028	130	1,600	0.028	--	--	0.01	0.000793	130
98-82-8	cumene (isopropylbenzene)	800	220	0.22	0.47	61	7.4	--	8,000	7.4	--	--	0.01	0.000605	8,000
79-34-5	tetrachloroethane;1,1,2,2-	0.17	79	0.079	0.014	3,000	0.001	5.0	1,600	0.001	--	--	0.01	0.000763	5.0

TABLE 9
SOIL PRELIMINARY SCREENING LEVELS
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Groundwater Preliminary Screening Level (Table 8) (µg/L)	Leaching to GW Model Inputs: Koc L/kg @ pH=6.8	Leaching to GW Model Inputs: Kd L/kg # @ pH 6.8 for metals	Leaching to GW Model Inputs: Hcc unitless	Leaching to GW Model Inputs: S mg/l	Protection of GW (3-Phase Model) mg/kg	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Carcinogen (mg/kg)	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Non-carcinogen (mg/kg)	Method B Preliminary Soil Cleanup Level (mg/kg)	Background Soil Metals Concentations Statewide (mg/kg) 90 percentile value (a)	Method A Soil Unrestricted Land Use (mg/kg)	ALS Global: Reporting Limit (mg/kg)	ALS Global: Quantitation Limit (mg/kg)	Preliminary Screening Level (mg/kg)
96-18-4	trichloropropane;1,2,3-	0.023	51	0.051	1.1	2,700	0.0002	0.033	320	0.0002	--	--	0.01	0.000803	0.033
108-86-1	bromobenzene	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000767	--
103-65-1	propylbenzene; n-	800	--	--	--	--	--	--	8,000	8,000	--	--	0.01	0.000737	8,000
95-49-8	chlorotoluene, 2-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000766	--
108-67-8	trimethylbenzene; 1,3,5-	80	--	--	--	--	--	--	800	800	--	--	0.01	0.000552	800
106-43-4	chlorotoluene, 4-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.0011	--
98-06-6	butylbenzene; tert-	800	--	--	--	--	--	--	8,000	8,000	--	--	0.01	0.000711	8,000
95-63-6	trimethylbenzene; 1,2,4-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000596	--
135-98-8	butylbenzene; sec-	800	--	--	--	--	--	--	8,000	8,000	--	--	0.01	0.000649	8,000
99-87-6	isopropyltoluene, p-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000531	--
541-73-1	dichlorobenzene;1,3-	320	--	--	--	--	--	--	--	--	--	--	0.01	0.000778	--
106-46-7	dichlorobenzene;1,4-	8.1	620	0.62	0.10	74	0.13	190	5,600	0.13	--	--	0.01	0.000721	190
104-51-8	butylbenzene, n-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.001	--
95-50-1	dichlorobenzene;1,2-	420	380	0.38	0.078	160	4.9	--	7,200	4.9	--	--	0.01	0.000776	7,200
96-12-8	dibromo-3-chloropropane;1,2-	0.0997	28	0.028	0.006	1,200	0.0005	1.3	16	0.0005	--	--	0.05	0.000912	1.3
120-82-1	trichlorobenzene;1,2,4-	1.5	1,700	1.7	0.058	300	0.056	35	800	0.056	--	--	0.01	0.000676	35
87-68-3	hexachlorobutadiene	0.44	54,000	54	0.33	3.2	0.47	13	80	0.47	--	--	0.005	0.00053	13
87-61-6	trichlorobenzene;1,2,3-	--	--	--	--	--	--	--	--	--	--	--	0.01	0.000723	--
SEMIVOLATILE ORGANIC COMPOUNDS															
110-86-1	pyridine	8.0	4.7	0.005	0.28	300	0.037	--	80	0.037	--	--	0.1	0.0549	80
62-75-9	nitrosodimethylamine;N-	1.51	--	--	--	--	--	0.020	0.64	0.020	--	--	0.1	0.0334	0.020
108-95-2	phenol	2,400	29	0.029	0.00002	83,000	11	--	24,000	11	--	--	0.1	0.0495	24,000
62-53-3	aniline	7.7	8.2	0.008	0.00009	36,000	0.032	180	560	0.032	--	--	0.1	0.0576	180
111-44-4	bis(2-chloroethyl)ether	0.94	76	0.076	0.0007	17,000	0.005	0.91	--	0.005	--	--	0.25	0.12	0.91
95-57-8	chlorophenol;2-	40	390	0.39	0.016	22,000	0.47	--	400	0.47	--	--	0.25	0.122	400
100-51-6	benzyl alcohol	800	10	0.010	0.00002	40,000	3.4	--	8,000	3.4	--	--	0.1	0.0636	8,000
95-48-7	cresol;o- (2-methylphenol)	400	91	0.091	0.00005	26,000	2.3	--	4,000	2.3	--	--	0.1	0.0422	4,000
39638-32-9	bis(2-chloroisopropyl) ether	1,400	61	0.061	0.005	1,700	--	--	--	--	--	--	0.25	0.157	--
	cresol; m- & p- (3&4-Methylphenol) (c)	400	48	0.048	0.00004	23,000	2.0	--	4,000	2.0	--	--	0.1	0.0531	4,000
621-64-7	nitroso-di-n-propylamine;N-	2.0	24	0.024	0.00009	9,900	0.009	0.14	--	0.009	--	--	0.25	0.116	0.14
67-72-1	hexachloroethane	2.0	1,800	1.8	0.16	50	0.080	25	56	0.080	--	--	0.1	0.0254	25
98-95-3	nitrobenzene	16	120	0.12	0.001	2,900	0.10	--	160	0.10	--	--	0.1	0.0242	160
78-59-1	isophorone	8.4	47	0.047	0.0003	12,000	0.041	1,050	16,000	0.041	--	--	0.1	0.0875	1,050
88-75-5	nitrophenol, 2-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0385	--
105-67-9	dimethylphenol;2,4-	160	--	--	--	--	--	--	1,600	1,600	--	--	0.1	0.0798	1,600
65-85-0	benzoic acid	64,000	0.60	0.0006	0.00006	3,500	257	--	320,000	257	--	--	1	0.888	320,000
111-91-1	bis(2-chloroethoxy)methane	--	--	--	--	--	--	--	--	--	--	--	0.25	0.15	--
120-83-2	dichlorophenol;2,4-	24	150	0.15	0.0001	4,500	0.17	--	240	0.17	--	--	0.5	0.306	240
106-47-8	chloroaniline;p- (4-chloroaniline)	1.89	66	0.066	0.00001	5,300	0.010	5.0	320	0.010	--	--	1	0.705	5.0
87-65-0	dichlorophenol;2,6-	--	--	--	--	--	--	--	--	--	--	--	0.25	0.229	--
59-50-7	methylphenol; 4-chloro-3-	--	--	--	--	--	--	--	--	--	--	--	0.5	0.402	--
77-47-4	hexachlorocyclopentadiene	40	200,000	200	1.1	1.8	160	--	480	160	--	--	0.1	0.0308	480
88-06-2	trichlorophenol;2,4,6-	1.4	380	0.38	0.0003	0	0.016	91	80	0.016	--	--	0.1	0.0494	80
95-95-4	trichlorophenol;2,4,5-	800	1,600	1.6	0.0002	29	29	--	8,000	29	--	--	0.1	0.049	8,000
91-58-7	chloronaphthalene, 2-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0395	--
88-74-4	nitroaniline, 2-	160	39	0.039	0.00005	1,300	0.77	--	800	0.77	--	--	0.1	0.0235	800
131-11-3	dimethyl phthalate	270,000	31	0.031	0.000004	4,200	--	--	--	--	--	--	0.1	0.0526	--
606-20-2	dinitrotoluene;2,6-	1.82	69	0.069	0.00003	180	0.010	0.67	80	0.010	--	--	0.1	0.0462	0.67
99-09-2	nitroaniline, 3-	--	--	--	--	--	--	--	--	--	--	--	1	0.722	--
51-28-5	dinitrophenol;2,4-	32	0.010	0.00001	0.00002	2,800	0.13	--	160	0.13	--	--	0.1	0.0657	160
100-02-7	nitrophenol, 4-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0678	--
132-64-9	dibenzofuran	16	--	--	--	--	--	--	80	80	--	--	0.1	0.0402	80
121-14-2	dinitrotoluene;2,4-	0.78	96	0.096	0.000004	270	0.005	3.2	160	0.005	--	--	0.1	0.0268	3.2
58-90-2	tetrachlorophenol;2,3,4,6-	480	--	--	0.0006	100	--	--	2,400	2,400	--	--	0.1	0.062	2,400
84-66-2	diethyl phthalate	13,000	82	0.082	0.00002	1,080	73	--	64,000	73	--	--	0.1	0.0524	64,000
7005-72-3	phenylether; 4-chlorophenyl-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0516	--
100-01-6	nitroaniline, 4-	--	--	--	--	--	--	--	--	--	--	--	0.25	0.158	--
534-52-1	methylphenol; 4,6-dinitro-2-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0354	--
86-30-6	nitrosodiphenylamine;N-	3.3	1,300	1.3	0.0002	35	0.10	200	--	0.10	--	--	0.1	0.0354	0.10 (b)
103-33-3	azobenzene	1.63	--	--	--	--	--	9.1	--	9.1	--	--	0.1	0.0548	9.1

TABLE 9
SOIL PRELIMINARY SCREENING LEVELS
CLOSED CITY OF YAKIMA LANDFILL SITE

CAS Number	Chemical Name	Groundwater Preliminary Screening Level (Table 8) (µg/L)	Leaching to GW Model Inputs: Koc L/kg @ pH=6.8	Leaching to GW Model Inputs: Kd L/kg # @ pH 6.8 for metals	Leaching to GW Model Inputs: Hcc unitless	Leaching to GW Model Inputs: S mg/l	Protection of GW (3-Phase Model) mg/kg	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Carcinogen (mg/kg)	SOIL - Direct Contact Pathway (Ingestion Only) Method B: Unrestricted Land Use Standard Formula Values: Non-carcinogen (mg/kg)	Method B Preliminary Soil Cleanup Level (mg/kg)	Background Soil Metals Concentations Statewide (mg/kg) 90 percentile value (a)	Method A Soil Unrestricted Land Use (mg/kg)	ALS Global: Reporting Limit (mg/kg)	ALS Global: Quantitation Limit (mg/kg)	Preliminary Screening Level (mg/kg)
101-55-3	phenylether; 4-bromophenyl-	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0453	--
118-74-1	hexachlorobenzene	0.01	80,000	80	0.054	6.2	0.016	0.63	64	0.016	--	--	0.005	0.00047	0.63
86-74-8	carbazole	--	3,400	3.4	0.0000006	7.5	--	--	--	--	--	--	0.25	0.134	--
84-74-2	di-butyl phthalate (di-n-butyl phthalate)	1,600	1,600	1.6	0.00000004	11	57	--	8,000	57	--	--	0.1	0.0422	8,000
85-68-7	butyl benzyl phthalate	8.3	14,000	14	0.00005	2.7	2.3	530	16,000	2.3	--	--	0.1	0.028	530
91-94-1	dichlorobenzidine;3,3'-	2.0	720	0.72	0.0000002	3.1	0.037	2.2	--	0.037	--	--	0.25	0.213	0.213 (b)
117-81-7	bis(2-ethylhexyl) phthalate	1.2	110,000	110	0.000004	0.34	2.6	71	1,600	2.6	--	--	0.1	0.0274	2.6 (b)
117-84-0	di-n-octyl phthalate	160	83,000,000	83,000	0.003	0.020	265,601	--	800	800	--	--	0.1	0.0271	800
91-20-3	naphthalene	160	1,200	1.2	0.020	31	4.5	--	1,600	4.5	--	5.0	0.01	0.000763	5.0
91-57-6	methyl naphthalene, 2-	32	--	--	--	--	--	--	320	320	--	--	0.25	0.190	320
90-12-0	methyl naphthalene, 1-	1.5	--	--	--	--	--	35	--	35	--	--	0.25	0.220	35
208-96-8	acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	0.1	0.032	--
83-32-9	acenaphthene	650	4,900	4.9	0.006	4.2	66	--	4,800	66	--	--	0.1	0.0353	4,800
86-73-7	fluorene	640	7,700	7.7	0.003	2.0	101	--	3,200	101	--	--	0.1	0.0438	3,200
87-86-5	pentachlorophenol	0.23	600	0.59	0.000001	2,000	0.004	2.5	400	0.004	--	--	0.25	0.181	2.5
85-01-8	phenanthrene	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0323	--
120-12-7	anthracene	4,800	23,000	23	0.003	0.043	2,275	--	24,000	2,275	--	--	0.1	0.0289	24,000
206-44-0	fluoranthene	86	49,000	49	0.0007	0.21	85	--	3,200	85	--	--	0.1	0.037	3,200
129-00-0	pyrene	480	68,000	68	0.0005	0.14	655	--	2,400	655	--	--	0.1	0.037	2,400
56-55-3	benzo[a]anthracene	0.009	360,000	360	0.0001	0.009	0.068	1.4	--	0.068	--	--	0.1	0.032	1.4
218-01-9	chrysene	0.80	400,000	400	0.004	0.002	6.4	140	--	6.4	--	--	0.1	0.0389	140
205-99-2	benzo[b]fluoranthene	0.007	1,200,000	1,200	0.005	0.002	0.18	1.4	--	0.18	--	--	0.1	0.0274	1.4
207-08-9	benzo[k]fluoranthene	0.024	1,200,000	1,200	0.00003	0.0008	0.57	14	--	0.57	--	--	0.1	0.0518	14
50-32-8	benzo[a]pyrene	0.0104	970,000	970	0.00005	0.002	0.20	0.14	--	0.14	--	0.10	0.1	0.0239	0.10
193-39-5	indeno[1,2,3-cd]pyrene	0.016	3,500,000	3,500	0.00007	0.00002	1.1	1.4	--	1.1	--	--	0.1	0.0302	1.4
53-70-3	dibenzo[a,h]anthracene	0.0127	1,800,000	1,800	0.0000006	0.002	0.46	0.14	--	0.14	--	--	0.1	0.0274	0.14
191-24-2	benzo(g,h,i)perylene	--	--	--	--	--	--	--	--	--	--	--	0.1	0.0423	--
	cPAH TEQ	0.10	--	--	--	--	--	--	--	--	--	0.10	--	--	0.10

BHC = benzene hexachloride
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
CAS = Chemical Abstracts Service
DDD = dichlorodiphenyldichloroethane
DDE = dichlorodiphenyldichloroethylene
DDT = dichlorodiphenyltrichloroethane
mg/kg = milligram per kilogram
PAH = Polycyclic Aromatic Hydrocarbon
PCB = Polychlorinated biphenyl
SEMI = Semivolatile
TPH = Total Petroleum Hydrocarbon
VOL = Volatile

-- = Not Available
(a) PTI. 1989. Background Concentrations of Selected Chemicals in Water, Soil, Sediments, and Air of Washington State, Draft Report. April.
(b) PSL reflects considertion of protection of groundwater criteria based on RI groundwater sample analytical results.
(c) Screening level for m- & p-cresol based on criteria for m-cresol (3-methylphenol), as it is more conservative than the criteria for p-cresol (4-methylphenol).

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-100	MW-101	MW-102	MW-102	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106	MW-107	MW-107
Depth:	Preliminary	(13.5-14)	(17.5-18.5)	(4-5)	(15-15.5)	(20.5-21.5)	(2.5-3)	(19-20)	(2.5-3.5)	(17.5-19)	(2.5-3.5)	(13.5-14.5)	(2.5-3.5)	(16-17)
Laboratory ID:	Screening	EV14090067-02	EV14090040-04	EV14090051-01	EV14090051-02	EV14090040-03	EV14090022-03	EV14090022-04	EV14090022-01	EV14090022-02	EV14090051-05	EV14090067-01	EV14090051-03	EV14090051-04
Sample Date:	Levels	9/11/2014	9/5/2014	9/8/2014	9/8/2014	9/5/2014	9/3/2014	9/3/2014	9/2/2014	9/2/2014	9/9/2014	9/10/2014	9/9/2014	9/9/2014
TOTAL PETROLEUM HYDROCARBONS (mg/kg)														
HCID														
Gas Range	--	20 U	20 U	20 U	25 U	20 U	20 U	20 U	20 U	20 U	**>20**	20 U	20 U	20 U
Diesel Range	--	50 U	50 U	50 U	61 U	50 U	50 U	50 U	50 U	50 U	**>50**	50 U	50 U	50 U
Oil Range	--	100 U	100 U	**>100**	120 U	100 U	**>100**	100 U	**>100**	100 U	**>100**	100 U	**>100**	100 U
NWTPH-Gx														
Gasoline Range	30/100 (a)	NA	NA	NA	NA	NA	NA	NA	NA	NA	**35**	NA	NA	NA
NWTPH-Dx														
Diesel Range (w/SGC)	2,000	NA	NA	25 U	NA	NA	25 U	NA	25 U	NA	**87** J	NA	**250**	NA
Diesel Range (wo/SGC)	2,000	NA	NA	25 U	NA	NA	46 U	NA	25 U	NA	**150** J	NA	**300**	NA
Oil Range (w/SGC)	2,000	NA	NA	**260**	NA	NA	**300**	NA	**380**	NA	**380**	NA	**820**	NA
Oil Range (wo/SGC)	2,000	NA	NA	**330**	NA	NA	**450**	NA	**510**	NA	**560**	NA	**990**	NA
TOTAL METALS (mg/kg) Methods EPA-6020/EPA-7471														
Arsenic	20	**1.4**	**1.4**	**1.9**	**2.2**	**1.8**	**2.2**	**1.5**	**3.6**	**2.7**	**2.6**	**2.1**	**1.7**	**2.6**
Barium	16,000	**58**	**70**	**82**	**84**	**56**	**91**	**76**	**140**	**79**	**100**	**94**	**88**	**190**
Cadmium	2.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.25 U	0.26 U	**1.3**	0.27 U	0.50 U	**1.1**	0.50 U	0.50 U
Chromium	2,000	**23**	**14**	**7.9**	**15**	**14**	**12**	**19**	**24**	**18**	**13**	**16**	**8.9**	**21**
Chromium (VI) (EPA-7196)	19	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Iron	151	**25,000**	**22,000**	**17,000**	**24,000**	**23,000**	**20,000**	**22,000**	**35,000**	**21,000**	**25,000**	**24,000**	**27,000**	**40,000**
Lead	250	**2.9**	**3.7**	**39**	**6.0**	**3.1**	**56**	**3.3**	**190**	**4.7**	**51**	**11**	**68**	**9.6**
Manganese	11,000	**380**	**240**	**200**	**250**	**250**	**330**	**240**	**330**	**350**	**520**	**210**	**470**	**320**
Selenium	400	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	400	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	**3.5**	0.26 U	0.28 U	0.27 U	0.50 U	0.50 U	0.50 U	0.50 U
Sodium	--	**750**	**380**	**340**	**440**	**530**	**540**	**540**	**490**	**1200**	**560**	**490**	**520**	**1200**
Mercury	2.0	0.020 U	**0.036**	**0.060**	**0.049**	**0.028**	**0.090**	**0.23**	**0.18**	**0.023**	**0.11**	**0.035**	**0.038**	**0.073**
CONVENTIONALS (mg/kg)														
Fluoride (EPA-300.0M)	3,200	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	**1.7**	1.6 U	**3.3**	1.6 U	**2.0**	1.6 U
Nitrate as N (EPA-300.0M)	130,000	**0.87**	0.50 UJ	0.50 UJ	0.50 UJ	0.5 UJ	0.50 UJ	**0.91** J	**63** J	0.50 UJ	**15** J	**26**	0.50 UJ	0.50 UJ
Nitrite as N (EPA-300.0M)	8,000	0.50 U	0.50 UJ	0.50 UJ	0.50 UJ	0.5 UJ	0.50 UJ	0.50 UJ	0.50 UJ	0.50 UJ	**1.7** J	0.50 U	0.50 UJ	0.50 UJ
pH (lab)	--	8.62	6.71	NA	7.43	7.53	NA	7.51	NA	7.87	NA	7.17	NA	7.23
PESTICIDES (mg/kg) Method EPA-8081														
A-BHC	0.16	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
G-BHC (Lindane)	0.010	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
B-BHC	0.56	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Heptachlor	0.22	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
D-BHC	--	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Aldrin	0.059	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	**0.0094**	NA	0.0036 U
Heptachlor Epoxide	0.11	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Chlordane	2.9	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Endosulfan I (b)	480	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
4,4'-DDE	2.9	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Dieldrin	0.063	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Endrin (c)	24	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
4,4'-DDD	0.009	0.0026 U	0.0029 U	NA	0.0031 U	**0.012**	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Endosulfan II (b)	480	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
4,4'-DDT	3.0	0.0026 U	0.0029 U	NA	0.0031 U	**0.0069**	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Endrin Aldehyde (c)	24	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Endosulfan Sulfate (b)	480	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Methoxychlor	400	0.0026 U	0.0029 U	NA	0.0031 U	0.0028 U	NA	0.0031 U	NA	0.0029 U	NA	0.0032 U	NA	0.0036 U
Toxaphene	0.91	0.13 U	0.15 U	NA	0.16 U	0.14 U	NA	0.16 U		0.15 U	NA	0.16 U	NA	0.18 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-100	MW-101	MW-102	MW-102	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106	MW-107	MW-107
Depth:	Preliminary	(13.5-14)	(17.5-18.5)	(4-5)	(15-15.5)	(20.5-21.5)	(2.5-3)	(19-20)	(2.5-3.5)	(17.5-19)	(2.5-3.5)	(13.5-14.5)	(2.5-3.5)	(16-17)
Laboratory ID:	Screening	EV14090067-02	EV14090040-04	EV14090051-01	EV14090051-02	EV14090040-03	EV14090022-03	EV14090022-04	EV14090022-01	EV14090022-02	EV14090051-05	EV14090067-01	EV14090051-03	EV14090051-04
Sample Date:	Levels	9/11/2014	9/5/2014	9/8/2014	9/8/2014	9/5/2014	9/3/2014	9/3/2014	9/2/2014	9/2/2014	9/9/2014	9/10/2014	9/9/2014	9/9/2014
PCBs (mg/kg)														
Method EPA-8082														
PCB-1016	5.6	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	0.0057 U	NA	0.0064 U	NA	0.0074 U
PCB-1221	--	0.011 U	0.012 U	NA	0.013 U	0.012 U	NA	0.013 U	NA	0.012 U	NA	0.013 U	NA	0.015 U
PCB-1232	--	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	0.0057 U	NA	0.0064 U	NA	0.0074 U
PCB-1242	--	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	**0.0059**	NA	**0.028**	NA	0.0074 U
PCB-1248	--	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	0.0057 U	NA	0.0064 U	NA	0.0074 U
PCB-1254	0.50	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	0.0057 U	NA	0.0064 U	NA	0.0074 U
PCB-1260	0.50	0.0052 U	0.0059 U	NA	0.0061 U	0.0056 U	NA	0.0061 U	NA	0.0057 U	NA	0.0064 U	NA	0.0074 U
Total PCBs	1.0	NA	NA	NA	NA	NA	NA	NA	NA	**0.0059**	NA	**0.028**	NA	NA
VOCs (µg/kg)														
Method EPA-8260														
Dichlorodifluoromethane	16,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Chloromethane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Vinyl Chloride	0.2	0.033 U	0.042 U	NA	0.037 U	0.033 U	NA	0.035 U	NA	0.034 U	NA	0.034 U	NA	0.051 U
Bromomethane	110,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Chloroethane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Carbon Tetrachloride	14,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Trichlorofluoromethane	24,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Carbon Disulfide	8,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Acetone	72,000,000	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
1,1-Dichloroethene	4,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Methylene Chloride	20	20 U	20 U	NA	20 U	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U
Acrylonitrile	1,900	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
Methyl T-Butyl Ether (MTBE)	100	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Trans-1,2-Dichloroethene	1,600,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,1-Dichloroethane	180,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
2-Butanone (MEK)	48,000,000	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
Cis-1,2-Dichloroethene	160,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
2,2-Dichloropropane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Bromochloromethane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Chloroform	8	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,1,1-Trichloroethane	2,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,1-Dichloropropene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2-Dichloroethane	11,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Benzene	30	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Trichloroethene	30	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2-Dichloropropane	28,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Dibromomethane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Bromodichloromethane	16,000	0.81 U	1.0 U	NA	0.91 U	0.79 U	NA	0.84 U	NA	0.82 U	NA	0.84 U	NA	1.2 U
Trans-1,3-Dichloropropene	10,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
4-Methyl-2-Pentanone (MIBK)	6,400,000	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
Toluene	7,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Cis-1,3-Dichloropropene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,1,2-Trichloroethane	18,000	0.86 U	1.1 U	NA	0.96 U	0.84 U	NA	0.90 U	NA	0.87 U	NA	0.89 U	NA	1.3 U
2-Hexanone	--	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
1,3-Dichloropropane	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Tetrachloroethene (PCE)	50	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Dibromochloromethane	12,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2-Dibromoethane (EDB)	5.0	5.0 U	5.0 U	NA	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U
Chlorobenzene	1,600,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,1,1,2-Tetrachloroethane	38,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Ethylbenzene	6,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
m,p-Xylene (d)	16,000,000	20 U	20 U	NA	20 U	20 U	NA	20 U	NA	20 U	NA	20 U	NA	20 U
Styrene	16,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
o-Xylene	16,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Bromoform	130,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Isopropylbenzene (cumene)	8,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-100	MW-101	MW-102	MW-102	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106	MW-107	MW-107
Depth:	Preliminary	(13.5-14)	(17.5-18.5)	(4-5)	(15-15.5)	(20.5-21.5)	(2.5-3)	(19-20)	(2.5-3.5)	(17.5-19)	(2.5-3.5)	(13.5-14.5)	(2.5-3.5)	(16-17)
Laboratory ID:	Screening	EV14090067-02	EV14090040-04	EV14090051-01	EV14090051-02	EV14090040-03	EV14090022-03	EV14090022-04	EV14090022-01	EV14090022-02	EV14090051-05	EV14090067-01	EV14090051-03	EV14090051-04
Sample Date:	Levels	9/11/2014	9/5/2014	9/8/2014	9/8/2014	9/5/2014	9/3/2014	9/3/2014	9/2/2014	9/2/2014	9/9/2014	9/10/2014	9/9/2014	9/9/2014
1,1,2,2-Tetrachloroethane	5,000	0.89 U	1.1 U	NA	1.0 U	0.87 U	NA	0.93 U	NA	0.91 U	NA	0.92 U	NA	1.4 U
1,2,3-Trichloropropane	33	0.94 U	1.2 U	NA	1.0 U	0.92 U	NA	0.98 U	NA	0.95 U	NA	0.97 U	NA	1.4 U
Bromobenzene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
N-Propyl Benzene	8,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
2-Chlorotoluene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,3,5-Trimethylbenzene	800,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
4-Chlorotoluene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
T-Butyl Benzene	8,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2,4-Trimethylbenzene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
S-Butyl Benzene	8,000,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
P-Isopropyltoluene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,3 Dichlorobenzene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,4-Dichlorobenzene	190,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
N-Butylbenzene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2-Dichlorobenzene	7,200,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2-Dibromo 3-Chloropropane	1,300	50 U	50 U	NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	50 U
1,2,4-Trichlorobenzene	35,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
Hexachlorobutadiene	13,000	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
1,2,3-Trichlorobenzene	--	10 U	10 U	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	10 U
SVOCs (µg/kg)														
Method EPA-8270														
Pyridine	80,000	200 U	200 U	NA	200 U	200 U	NA	200 U	NA	200 U	NA	200 U	NA	200 U
N-Nitrosodimethylamine	20	26 U	25 U	NA	29 U	23 U	NA	29 U	NA	31 U	NA	29 U	NA	35 U
Phenol	24,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Aniline	180,000	45 U	42 U	NA	51 U	40 U	NA	50 U	NA	53 U	NA	50 U	NA	61 U
Bis(2-Chloroethyl)Ether	910	93 U	89 U	NA	110 U	83 U	NA	100 U	NA	110 U	NA	100 U	NA	130 U
2-Chlorophenol	400,000	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
Benzyl Alcohol	8,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2-Methylphenol	4,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Bis(2-Chloroisopropyl)Ether	--	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
3&4-Methylphenol	4,000,000	100 U	**400**	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
N-Nitroso-Di-N-Propylamine	140	90 U	86 U	NA	100 U	80 U	NA	100 U	NA	110 U	NA	100 U	NA	120 U
Hexachloroethane	25,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Nitrobenzene	160,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Isophorone	1,050,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2-Nitrophenol	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2,4-Dimethylphenol	1,600,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Benzoic Acid	320,000,000	1000 U	1000 U	NA	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
Bis(2-Chloroethoxy)Methane	--	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
2,4-Dichlorophenol	240,000	240 U	230 U	NA	270 U	210 U	NA	270 U	NA	280 U	NA	260 U	NA	320 U
4-Chloroaniline	5,000	1000 U	1000 U	NA	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
2,6-Dichlorophenol	--	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
4-Chloro-3-Methylphenol	--	500 U	500 U	NA	500 U	500 U	NA	500 U	NA	500 U	NA	500 U	NA	500 U
Hexachlorocyclopentadiene	480,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2,4,6-Trichlorophenol	80,000	38 U	36 U	NA	43 U	34 U	NA	43 U	NA	46 U	NA	43 U	NA	52 U
2,4,5-Trichlorophenol	8,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2-Chloronaphthalene	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2-Nitroaniline	800,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Dimethylphthalate	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2,6-Dinitrotoluene	670	36 U	34 U	NA	41 U	32 U	NA	40 U	NA	43 U	NA	40 U	NA	49 U
3-Nitroaniline	--	1000 U	1000 U	NA	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U
2,4-Dinitrophenol	160,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
4-Nitrophenol	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Dibenzofuran	80,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
2,4-Dinitrotoluene	3,200	21 U	20 U	NA	24 U	19 U	NA	23 U	NA	25 U	NA	23 U	NA	28 U
2,3,4,6-Tetrachlorophenol	2,400,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Diethylphthalate	64,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
4-Chlorophenyl-Phenylether	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-100	MW-101	MW-102	MW-102	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106	MW-107	MW-107
Depth:	Preliminary	(13.5-14)	(17.5-18.5)	(4-5)	(15-15.5)	(20.5-21.5)	(2.5-3)	(19-20)	(2.5-3.5)	(17.5-19)	(2.5-3.5)	(13.5-14.5)	(2.5-3.5)	(16-17)
Laboratory ID:	Screening	EV14090067-02	EV14090040-04	EV14090051-01	EV14090051-02	EV14090040-03	EV14090022-03	EV14090022-04	EV14090022-01	EV14090022-02	EV14090051-05	EV14090067-01	EV14090051-03	EV14090051-04
Sample Date:	Levels	9/11/2014	9/5/2014	9/8/2014	9/8/2014	9/5/2014	9/3/2014	9/3/2014	9/2/2014	9/2/2014	9/9/2014	9/10/2014	9/9/2014	9/9/2014
4-Nitroaniline	--	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
4,6-Dinitro-2-Methylphenol	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
N-Nitrosodiphenylamine	100	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	**110**	NA	100 U
Azobenzene	9,100	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
4-Bromophenyl-Phenylether	--	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Hexachlorobenzene	630	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Carbazole	--	250 U	250 U	NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	250 U
Di-N-Butylphthalate	8,000,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
Butylbenzylphthalate	530,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
3,3'-Dichlorobenzidine	213	170 U	160 U	NA	190 U	150 U	NA	180 U	NA	200 U	NA	180 U	NA	230 U
Bis(2-Ethylhexyl)Phthalate	2,600	**110**	**140**	NA	**110**	100 U	NA	**120**	NA	100 U	NA	**820**	NA	**540**
Di-N-Octylphthalate	800,000	100 U	100 U	NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	100 U
PAHs (µg/kg)														
Method EPA-8270 SIM														
Naphthalene	5,000	20 U	20 U	**36**	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-Methylnaphthalene	320,000	20 U	20 U	**26**	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**95**	20 U	20 U
1-Methylnaphthalene	35,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**61**	20 U	20 U
Acenaphthylene	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Acenaphthene	4,800,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Fluorene	3,200,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Pentachlorophenol	2,500	48 U	58 U	54 U	61 U	61 U	63 U	62 U	69 U	59 U	53 U	55 U	57 U	76 U
Phenanthrene	--	20 U	20 U	**23**	20 U	20 U	**28**	20 U	**78**	20 U	**21**	**29**	20 U	20 U
Anthracene	24,000,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Fluoranthene	3,200,000	20 U	20 U	**31**	20 U	20 U	**170**	20 U	**240**	20 U	20 U	**28**	20 U	20 U
Pyrene	2,400,000	20 U	20 U	**33**	20 U	20 U	**45**	20 U	**120**	20 U	20 U	**24**	20 U	20 U
Benzo[a]Anthracene	1,400	20 U	20 U	20 U	20 U	20 U	**21**	20 U	**99**	20 U	20 U	20 U	20 U	20 U
Chrysene	140,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**63**	20 U	20 U	20 U	20 U	20 U
Benzo[b]Fluoranthene	1,400	20 U	20 U	20 U	20 U	20 U	**30**	20 U	**110**	20 U	**21**	20 U	20 U	20 U
Benzo[k]Fluoranthene	14,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**31**	20 U	20 U	20 U	20 U	20 U
Benzo[a]Pyrene	100	20 U	20 U	20 U	20 U	20 U	**22**	20 U	**71**	20 U	20 U	20 U	20 U	20 U
Indeno[1,2,3-cd]Pyrene	1,400	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**38**	20 U	20 U	20 U	20 U	20 U
Dibenz[a,h]Anthracene	140	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzo[g,h,i]Perylene	--	20 U	20 U	20 U	20 U	20 U	**25**	20 U	**64**	20 U	20 U	20 U	20 U	20 U
cPAH TEQ	100	NA	NA	NA	NA	NA	**27.1**	NA	**99.4**	NA	**2.1**	NA	NA	NA

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-108	MW-108	MW-109	MW-109	GP-23	GP-24	GP-26
Depth:	Preliminary	(2.5-3.5)	(21.5-22.5)	(5-5.5)	(12.5-13)	(15.0-15.5)	(12.5-13.0)	(7.5-8.5)
Laboratory ID:	Screening	EV14090040-01	EV14090040-02	EV14090067-03	EV14090067-04	EV14100222-03	EV14100222-02	EV14100222-01
Sample Date:	Levels	9/4/2014	9/4/2014	9/11/2014	9/11/2014	10/30/2014	10/30/2014	10/29/2014
TOTAL PETROLEUM HYDROCARBONS (mg/kg)								
HCID								
Gas Range	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Diesel Range	--	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Oil Range	--	**>100**	100 U	100 U	100 U	100 U	**>100**	100 U
NWTPH-Gx								
Gasoline Range	30/100 (a)	NA	NA	NA	NA	NA	NA	NA
NWTPH-Dx								
Diesel Range (w/SGC)	2,000	25 U	NA	NA	NA	NA	**140**	NA
Diesel Range (wo/SGC)	2,000	25 U	NA	NA	NA	NA	**160**	NA
Oil Range (w/SGC)	2,000	**130**	NA	NA	NA	NA	**280**	NA
Oil Range (wo/SGC)	2,000	**160**	NA	NA	NA	NA	**300**	NA
TOTAL METALS (mg/kg) Methods EPA-6020/EPA-7471								
Arsenic	20	**3.5**	**4.1**	**5.4**	**1.7**	**2.3**	**2.0**	**2.3**
Barium	16,000	**140**	**73**	**150**	**63**	**110**	**140**	**170**
Cadmium	2.0	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2,000	**17**	**41**	**16**	**14**	**17**	**17**	**24**
Chromium (VI) (EPA-7196)	19	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Iron	151	**28,000**	**23,000**	**31,000**	**23,000**	**24,000**	**25,000**	**30,000**
Lead	250	**26**	**3.5**	**39**	**3.4**	**23**	**9.1**	**17**
Manganese	11,000	**570**	**240**	**680**	**360**	**240**	**280**	**340**
Selenium	400	5.0 U	5.0 U	5.0 U	5.0 U	5.6 U	5.0 U	5.3 U
Silver	400	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Sodium	--	**650**	**990**	**670**	**680**	**570**	**530**	**610**
Mercury	2.0	**0.12**	0.020 U	**0.061**	0.020 U	**0.13**	**0.077**	**0.12**
CONVENTIONALS (mg/kg)								
Fluoride (EPA-300.0M)	3,200	1.6 U	1.6 U	1.6 U	1.6 U	**3.7**	**2.2**	1.0 U
Nitrate as N (EPA-300.0M)	130,000	0.50 UJ	0.50 UJ	**21**	**1.2**	4.0 U	4.0 U	4.0 U
Nitrite as N (EPA-300.0M)	8,000	0.50 UJ	0.50 UJ	0.50 U	0.50 U	4.0 U	4.0 U	4.0 U
pH (lab)	--	NA	7.98	7.64	8.42	6.95	6.07	6.29
PESTICIDES (mg/kg) Method EPA-8081								
A-BHC	0.16	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
G-BHC (Lindane)	0.010	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
B-BHC	0.56	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Heptachlor	0.22	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
D-BHC	--	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Aldrin	0.059	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Heptachlor Epoxide	0.11	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Chlordane	2.9	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Endosulfan I (b)	480	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
4,4'-DDE	2.9	NA	0.0031 U	**0.022**	0.0026 U	0.0045 U	0.0032 U	**0.0059**
Dieldrin	0.063	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0058 U
Endrin (c)	24	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
4,4'-DDD	0.009	NA	0.0031 U	0.0026 U	0.0026 U	**0.0060**	0.0032 U	**0.045**
Endosulfan II (b)	480	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
4,4'-DDT	3.0	NA	0.0031 U	**0.032**	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Endrin Aldehyde (c)	24	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Endosulfan Sulfate (b)	480	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	**0.0053**
Methoxychlor	400	NA	0.0031 U	0.0026 U	0.0026 U	0.0045 U	0.0032 U	0.0040 U
Toxaphene	0.91	NA	0.16 U	0.13 U	0.13 U	0.23 U	0.16 U	0.20 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-108	MW-108	MW-109	MW-109	GP-23	GP-24	GP-26
Depth:	Preliminary	(2.5-3.5)	(21.5-22.5)	(5-5.5)	(12.5-13)	(15.0-15.5)	(12.5-13.0)	(7.5-8.5)
Laboratory ID:	Screening	EV14090040-01	EV14090040-02	EV14090067-03	EV14090067-04	EV14100222-03	EV14100222-02	EV14100222-01
Sample Date:	Levels	9/4/2014	9/4/2014	9/11/2014	9/11/2014	10/30/2014	10/30/2014	10/29/2014
PCBs (mg/kg)								
Method EPA-8082								
PCB-1016	5.6	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
PCB-1221	--	NA	0.013 U	0.011 U	0.011 U	0.036 U	0.025 U	0.032 U
PCB-1232	--	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
PCB-1242	--	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
PCB-1248	--	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
PCB-1254	0.50	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
PCB-1260	0.50	NA	0.0062 U	0.0052 U	0.0052 U	0.018 U	0.013 U	0.016 U
Total PCBs	1.0	NA	NA	NA	NA	NA	NA	NA
VOCs (µg/kg)								
Method EPA-8260								
Dichlorodifluoromethane	16,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	0.2	NA	0.032 U	0.041 U	0.033 U	0.053 U	0.040 U	0.058 U
Bromomethane	110,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Tetrachloride	14,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane	24,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	8,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	72,000,000	NA	50 U	50 U	50 U	50 U	130 U	**250**
1,1-Dichloroethene	4,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Methylene Chloride	20	NA	20 U	20 U	20 U	20 U	20 U	20 U
Acrylonitrile	1,900	NA	50 U	50 U	50 U	50 U	50 U	50 U
Methyl T-Butyl Ether (MTBE)	100	NA	10 U	10 U	10 U	10 U	10 U	10 U
Trans-1,2-Dichloroethene	1,600,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	180,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone (MEK)	48,000,000	NA	50 U	50 U	50 U	50 U	50 U	50 U
Cis-1,2-Dichloroethene	160,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
2,2-Dichloropropane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Bromochloromethane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	8	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	2,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloropropene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	11,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	30	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Trichloroethene	30	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	28,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dibromomethane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	16,000	NA	0.78 U	0.99 U	0.80 U	1.3 U	0.96 U	1.4 U
Trans-1,3-Dichloropropene	10,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone (MIBK)	6,400,000	NA	50 U	50 U	50 U	50 U	50 U	50 U
Toluene	7,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,3-Dichloropropene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	18,000	NA	0.83 U	1.0 U	0.85 U	1.4 U	1.0 U	1.5 U
2-Hexanone	--	NA	50 U	50 U	50 U	50 U	50 U	50 U
1,3-Dichloropropane	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene (PCE)	50	NA	10 U	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	12,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (EDB)	5.0	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Chlorobenzene	1,600,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,1,1,2-Tetrachloroethane	38,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	6,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
m,p-Xylene (d)	16,000,000	NA	20 U	20 U	20 U	20 U	20 U	20 U
Styrene	16,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
o-Xylene	16,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	130,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene (cumene)	8,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-108	MW-108	MW-109	MW-109	GP-23	GP-24	GP-26
Depth:	Preliminary	(2.5-3.5)	(21.5-22.5)	(5-5.5)	(12.5-13)	(15.0-15.5)	(12.5-13.0)	(7.5-8.5)
Laboratory ID:	Screening	EV14090040-01	EV14090040-02	EV14090067-03	EV14090067-04	EV14100222-03	EV14100222-02	EV14100222-01
Sample Date:	Levels	9/4/2014	9/4/2014	9/11/2014	9/11/2014	10/30/2014	10/30/2014	10/29/2014
1,1,2,2-Tetrachloroethane	5,000	NA	0.86 U	1.1 U	0.88 U	1.4 U	1.1 U	1.6 U
1,2,3-Trichloropropane	33	NA	0.90 U	1.1 U	0.92 U	1.5 U	1.1 U	1.6 U
Bromobenzene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
N-Propyl Benzene	8,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorotoluene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,3,5-Trimethylbenzene	800,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorotoluene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
T-Butyl Benzene	8,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trimethylbenzene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
S-Butyl Benzene	8,000,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
P-Isopropyltoluene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,3 Dichlorobenzene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	190,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
N-Butylbenzene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	7,200,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo 3-Chloropropane	1,300	NA	50 U	50 U	50 U	50 U	50 U	50 U
1,2,4-Trichlorobenzene	35,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	13,000	NA	10 U	10 U	10 U	10 U	10 U	10 U
1,2,3-Trichlorobenzene	--	NA	10 U	10 U	10 U	10 U	10 U	10 U
SVOCs (µg/kg) **Method EPA-8270**								
Pyridine	80,000	NA	200 U	200 U	200 U	200 U	200 U	200 U
N-Nitrosodimethylamine	20	NA	27 U	26 U	24 U	56 U	34 U	42 U
Phenol	24,000,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Aniline	180,000	NA	47 U	45 U	42 U	96 U	59 U	72 U
Bis(2-Chloroethyl)Ether	910	NA	98 U	93 U	87 U	200 U	120 U	150 U
2-Chlorophenol	400,000	NA	250 U	250 U	250 U	250 U	250 U	250 U
Benzyl Alcohol	8,000,000	NA	100 U	100 U	100 U	110 U	100 U	100 U
2-Methylphenol	4,000,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Bis(2-Chloroisopropyl)Ether	--	NA	250 U	250 U	250 U	260 U	250 U	250 U
3&4-Methylphenol	4,000,000	NA	100 U	100 U	100 U	100 U	100 U	**170**
N-Nitroso-Di-N-Propylamine	140	NA	95 U	90 U	84 U	190 U	120 U	150 U
Hexachloroethane	25,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Nitrobenzene	160,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Isophorone	1,050,000	NA	100 U	100 U	100 U	150 U	100 U	110 U
2-Nitrophenol	--	NA	100 U	100 U	100 U	100 U	100 U	100 U
2,4-Dimethylphenol	1,600,000	NA	100 U	100 U	100 U	130 U	100 U	100 U
Benzoic Acid	320,000,000	NA	1000 U	1000 U	1000 U	1500 U	1000 U	1100 U
Bis(2-Chloroethoxy)Methane	--	NA	250 U	250 U	250 U	250 U	250 U	250 U
2,4-Dichlorophenol	240,000	NA	250 U	240 U	220 U	510 U	310 U	380 U
4-Chloroaniline	5,000	NA	1000 U	1000 U	1000 U	1200 U	1000 U	1000 U
2,6-Dichlorophenol	--	NA	250 U	250 U	250 U	380 U	250 U	290 U
4-Chloro-3-Methylphenol	--	NA	500 U	500 U	500 U	670 U	500 U	500 U
Hexachlorocyclopentadiene	480,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
2,4,6-Trichlorophenol	80,000	NA	40 U	38 U	36 U	82 U	50 U	62 U
2,4,5-Trichlorophenol	8,000,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
2-Chloronaphthalene	--	NA	100 U	100 U	100 U	100 U	100 U	100 U
2-Nitroaniline	800,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Dimethylphthalate	--	NA	100 U	100 U	100 U	100 U	100 U	100 U
2,6-Dinitrotoluene	670	NA	38 U	36 U	33 U	77 U	47 U	58 U
3-Nitroaniline	--	NA	1000 U	1000 U	1000 U	1200 U	1000 U	1000 U
2,4-Dinitrophenol	160,000	NA	100 U	100 U	100 U	110 U	100 U	100 U
4-Nitrophenol	--	NA	100 U	100 U	100 U	110 U	100 U	100 U
Dibenzofuran	80,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
2,4-Dinitrotoluene	3,200	NA	22 U	21 U	19 U	45 U	27 U	34 U
2,3,4,6-Tetrachlorophenol	2,400,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Diethylphthalate	64,000,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
4-Chlorophenyl-Phenylether	--	NA	100 U	100 U	100 U	100 U	100 U	100 U

TABLE 10
SOIL ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:		MW-108	MW-108	MW-109	MW-109	GP-23	GP-24	GP-26
Depth:	Preliminary	(2.5-3.5)	(21.5-22.5)	(5-5.5)	(12.5-13)	(15.0-15.5)	(12.5-13.0)	(7.5-8.5)
Laboratory ID:	Screening	EV14090040-01	EV14090040-02	EV14090067-03	EV14090067-04	EV14100222-03	EV14100222-02	EV14100222-01
Sample Date:	Levels	9/4/2014	9/4/2014	9/11/2014	9/11/2014	10/30/2014	10/30/2014	10/29/2014
4-Nitroaniline	--	NA	250 U	250 U	250 U	260 U	250 U	250 U
4,6-Dinitro-2-Methylphenol	--	NA	100 U	100 U	100 U	100 U	100 U	100 U
N-Nitrosodiphenylamine	100	NA	100 U	100 U	100 U	100 U	100 U	100 U
Azobenzene	9,100	NA	100 U	100 U	100 U	100 U	100 U	100 U
4-Bromophenyl-Phenylether	--	NA	100 U	100 U	100 U	100 U	100 U	100 U
Hexachlorobenzene	630	NA	100 U	100 U	100 U	100 U	100 U	100 U
Carbazole	--	NA	250 U	250 U	250 U	250 U	250 U	250 U
Di-N-Butylphthalate	8,000,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
Butylbenzylphthalate	530,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
3,3'-Dichlorobenzidine	213	NA	170 U	170 U	150 U	360 U	220 U	270 U
Bis(2-Ethylhexyl)Phthalate	2,600	NA	100 U	**100**	**190**	100 U	100 U	100 U
Di-N-Octylphthalate	800,000	NA	100 U	100 U	100 U	100 U	100 U	100 U
PAHs (µg/kg) **Method EPA-8270 SIM**								
Naphthalene	5,000	20 U	20 U	**28**	20 U	**250**	20 U	**120**
2-Methylnaphthalene	320,000	20 U	20 U	20 U	20 U	**32**	20 U	**22**
1-Methylnaphthalene	35,000	20 U	20 U	20 U	20 U	**22**	20 U	20 U
Acenaphthylene	--	20 U	20 U	20 U	20 U	**81**	20 U	20 U
Acenaphthene	4,800,000	20 U	20 U	20 U	20 U	**22**	20 U	20 U
Fluorene	3,200,000	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Pentachlorophenol	2,500	65 U	55 U	48 U	51 U	110 U	67 U	79 U
Phenanthrene	--	20 U	20 U	**35**	20 U	**170**	20 U	**100**
Anthracene	24,000,000	20 U	20 U	20 U	20 U	**28**	20 U	20 U
Fluoranthene	3,200,000	**23**	20 U	**61**	20 U	**250**	20 U	**120**
Pyrene	2,400,000	20 U	20 U	**47**	20 U	**170**	20 U	**93**
Benzo[a]Anthracene	1,400	**52**	20 U	20 U	20 U	**44**	20 U	**29**
Chrysene	140,000	20 U	20 U	**24**	20 U	**45**	20 U	20 U
Benzo[b]Fluoranthene	1,400	20 U	20 U	20 U	20 U	**88**	20 U	**37**
Benzo[k]Fluoranthene	14,000	20 U	20 U	**21**	20 U	20 U	20 U	20 U
Benzo[a]Pyrene	100	20 U	20 U	20 U	20 U	**35**	20 U	20 U
Indeno[1,2,3-cd]Pyrene	1,400	20 U	20 U	20 U	20 U	**27**	20 U	20 U
Dibenz[a,h]Anthracene	140	20 U	20 U	20 U	20 U	20 U	20 U	20 U
Benzo[g,h,i]Perylene	--	20 U	20 U	20 U	20 U	**58**	20 U	**43**
cPAH TEQ	100	**5.2**	NA	**2.3**	NA	**51.4**	NA	**6.6**

µg/kg = micrograms per kilogram
mg/kg = milligram per kilogram
PCBs = polychlorinated biphenyls
PQL = practical quantitation limit
SGC = silica gel cleanup
SVOCs = semivolatile organic compounds
VOCs = volatile organic compounds
NA = not analyzed
HCID = hydrocarbon identification method
cPAH = carcinogenic polycyclic aromatic hydrocarbon
TEQ = Toxic Equivalent
Ecology = Washington State Department of Ecology
EPA = U.S. Environmental Protection Agency

J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
U = Indicates the compound was not detected at the reported concentration.

Bold = Detected compound.

Green Box = Exceedance of preliminary screening level.

(a) Preliminary screening level is 30 mg/kg when benzene is present, 100 when benzene is not detectable.
(b) Preliminary screening level for endosulfan isomers based on criteria for endosulfan.
(c) Preliminary screening level for endrin isomers based on criteria for endrin.
(d) Preliminary screening criteria is value for m-xylene.

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:	Preliminary Screening Levels (a)	Targeted ALS QLs (b)	TP-MW-1	TP-MW-1	FPP-MW-1	TP-MW-2	TP-MW-2	FPP-MW-2	FFP-MW-3	FFP-MW-3-Dup	FPP-MW-3	FPP-MW-3-Dup	MW-6	MW-6
Laboratory ID(S):			EV14090107-22	EV14120162-04	EV14120162-08	EV14090107-23	EV14120162-03	EV14120151-03 EV14120162-14	EV14090091-01 EV14090107-24	EV14090091-10 EV14090107-25	EV14120151-04 EV14120162-16	EV14120151-09 EV14120162-20	EV14090107-01	EV14120162-07
Sample Date:			9/17/2014	12/19/2014	12/19/2014	9/17/2014	12/19/2014	12/18/2014	9/16/2014	9/16/2014	12/18/2014	12/18/2014	9/17/2014	12/19/2014
TOTAL PETROLEUM HYDROCARBONS (µg/L)														
HCID														
Gas Range	--		130 U	130 U	NA	130 U	130 U	NA	130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	--		310 U	310 U	NA	310 U	310 U	NA	310 U	310 U	310 U	310 U	310 U	310 U
Oil Range	--		310 U	310 U	NA	310 U	**>310**	NA	310 U	310 U	310 U	310 U	310 U	310 U
NWTPH-G (c)	1,000													
NWTPH-Dx														
Diesel Range (w/SGC)	500		NA	NA	**1400**	NA	**470**	**220**	NA	NA	NA	NA	NA	NA
Diesel Range (wo/SGC)	500		NA	NA	**3600**	NA	**1500**	**670**	NA	NA	NA	NA	NA	NA
Oil Range (w/SGC)	500		NA	NA	**260** J	NA	**300**	250 U	NA	NA	NA	NA	NA	NA
Oil Range (wo/SGC)	500		NA	NA	**1000** J	NA	**450**	**270**	NA	NA	NA	NA	NA	NA
DISSOLVED METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	1.0 U	0.45 U	**2.3**	**3.9**	**2.7**	**4.2**	**1.4**	**1.4**	**0.58**	**0.83**	**1.3**	**1.7**
Barium	1,000		**8.3**	**5.3**	**99**	**17**	**19**	**33**	**15**	**15**	**20**	**20**	**44**	**55**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**19,000**	**14,000**	**64,000**	**30,000**	**33,000**	**36,000**	**22,000**	**22,000**	**25,000**	**24,000**	**32,000**	**35,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		NS	NS	NS	NS	NS	NS	10 UJ	10 UJ	NS	NS	NS	NS
Iron	300		50 U	50 U	**43,000**	**12,000**	**12,000**	**17,000**	**7600**	**7500**	**7900**	**8000**	**3100**	**23,000**
Lead	0.54		1.0 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**6600**	**4600**	**19,000**	**10,000**	**12,000**	**13,000**	**8500**	**8500**	**9700**	**9300**	**12,000**	**12,000**
Manganese	50		2.0 U	**2.5**	**3700**	**1300**	**1500**	**1500**	**440**	**440**	**390**	**390**	**1300**	**2300**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**11,000**	**9700**	**53,000**	**21,000**	**20,000**	**36,000**	**16,000**	**16,000**	**15,000**	**15,000**	**15,000**	**14,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U
TOTAL METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	1.0 U	0.45 U	**2.3**	**3.8**	**3.3**	**4.2**	**1.2**	**1.7**	0.45 UJ	**1.2** J	**1.3**	**2.5**
Barium	1,000		**9.2**	**6.7**	**100**	**18**	**21**	**36**	**15**	**15**	**20**	**19**	**44**	**55**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**20,000**	**13,000**	**65,000**	**30,000**	**32,000**	**38,000**	**22,000**	**22,000**	**25,000**	**24,000**	**33,000**	**34,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		NS	NS	NS	NS	NS	NS	10 UJ	10 UJ	NS	NS	NS	NS
Iron	300		50 U	**130**	**43,000**	**12,000**	**12,000**	**18,000**	**7700**	**7500**	**7600**	**8000**	**2800**	**24,000**
Lead	0.54		1.0 U	0.28 U	0.28 U	1.0 U	0.28 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**6700**	**4500**	**19,000**	**10,000**	**11,000**	**13,000**	**8700**	**8600**	**9600**	**9400**	**12,000**	**11,000**
Manganese	50		**5.8**	**9.7**	**3800**	**1300**	**1500**	**1600**	**450**	**440**	**390**	**410**	**1300**	**2300**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	0.20 U	1.0 U	0.20 U	0.20 U	1.0 U	1.0 U	0.20 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**11,000**	**9300**	**53,000**	**21,000**	**19,000**	**38,000**	**16,000**	**16,000**	**15,000**	**15,000**	**14,000**	**14,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U	0.20 U	0.11 U
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	--		NS	**150**	**490**	NS	**270**	**240**	**170**	**180**	**140**	**170**	NS	**250**
Chloride (EPA-300.0)	230		**7.2**	**5.5**	**44**	**14**	**9.0**	**18**	**9.7**	**9.2**	**8.7**	**8.7**	**20**	**17**
Fluoride (EPA-300.0)	0.64		0.16 U	**0.34**	**0.29**	**0.20**	**0.47**	**0.49**	**0.33** J	0.16 UJ	**0.50** J	**0.17** J	**0.17**	**0.41**
Nitrate as N (EPA-300.0)	10		**1.9** J	**0.16**	**0.038**	0.034 UJ	0.034 U	**0.063**	0.034 U	0.034 U	0.034 U	0.034 U	**0.36** J	0.034 U
Nitrite as N (EPA-300.0)	1.0		0.043 UJ	0.043 U	0.043 U	0.043 UJ	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 UJ	0.043 U
Sulfate (EPA-300.0)	--		**9.0**	**5.5**	0.26 U	**6.8**	**1.2**	0.26 U	**9.7**	**9.5**	**10**	**10**	**2.0**	0.26 U
Ammonia (EPA-350.1)	--		NS	0.050 U	**3.6**	NS	**0.79**	**2.1**	**0.43**	**0.52**	**0.27** J	**0.62** J	NS	**1.1**
Alkalinity as CaCO3, Total (SM2320B)	--		NS	**64**	**320**	NS	**170**	**240**	**120**	**120**	**120**	**120**	NS	**160**
Bicarbonate as CaCO3 (SM2320B)	--		NS	**64**	**320**	NS	**170**	**240**	**120**	**120**	**120**	**120**	NS	**160**
Total Organic Carbon (TOC) (SM5310C)	--		NS	**1.9**	**21**	NS	**9.6**	**6.2**	**1.8**	**1.8**	**1.4**	**1.2**	NS	**4.7**

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			TP-MW-1	TP-MW-1	FPP-MW-1	TP-MW-2	TP-MW-2	FPP-MW-2	FFP-MW-3	FFP-MW-3-Dup	FPP-MW-3	FPP-MW-3-Dup	MW-6	MW-6
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-22	EV14120162-04	EV14120162-08	EV14090107-23	EV14120162-03	EV14120151-03 EV14120162-14	EV14090091-01 EV14090107-24	EV14090091-10 EV14090107-25	EV14120151-04 EV14120162-16	EV14120151-09 EV14120162-20	EV14090107-01	EV14120162-07
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/19/2014	12/19/2014	9/17/2014	12/19/2014	12/18/2014	9/16/2014	9/16/2014	12/18/2014	12/18/2014	9/17/2014	12/19/2014
FIELD PARAMETERS														
Temperature (°C)	--		16.93	14.54	16.54	16.47	14.60	15.13	16.49	16.52	16.50	16.54	20.15	15.35
Specific Conductivity (uS/cm)	--		443	113	768	832	283	434	367	385	362	362	762	510
Dissolved Oxygen (mg/L)	--		8.96	3.85	2.16	2.50	2.73	1.11	1.66	1.69	0.19	0.19	1.07	0.30
pH (S.U.)	6.5 to 8.5		6.28	6.54	6.38	6.54	6.46	6.47	6.48	6.50	7 (f)	7 (f)	6.65	7 (f)
Oxidation Reduction Potential (mV)	--		48.8	23.5	-87.3	-78.5	-35.5	-61.1	-133.5	-134.5	-97.2	-97.2	-43.75	-76.2
Turbidity (NTU)	--		8.56	27.0	7.19	6.84	13.8	3.27	2.84	2.77	2.82	3.00	17.75	2.21
PESTICIDES (µg/L) **Method EPA-8081**														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
G-BHC (Lindane)	0.019	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Heptachlor	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Aldrin	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Heptachlor Epoxide	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Chlordane	0.20	0.20	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Endosulfan I (g)	0.056		NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
4,4'-DDE	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Dieldrin	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Endrin	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
4,4'-DDD	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Endosulfan II (g)	0.056		NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
4,4'-DDT	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Endrin Aldehyde (h)	0.01	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Endosulfan Sulfate (g)	0.056		NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Methoxychlor	0.030	0.01	NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
Hexachlorobenzene (i)	0.01	0.01	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.010 U	0.010 U	NS	NS
Toxaphene	0.50	0.50	NS	NS	NS	NS	NS	NS	0.53 U	0.52 U	0.50 U	0.50 U	NS	NS
PCBs (µg/L) **Method EPA-8082**														
PCB-1016	0.005	0.005	NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
PCB-1221	--		NS	NS	NS	NS	NS	NS	0.011 U	0.011 U	0.010 U	0.010 U	NS	NS
PCB-1232	--		NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
PCB-1242	--		NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
PCB-1248	--		NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
PCB-1254	0.005	0.005	NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
PCB-1260	0.014	0.005	NS	NS	NS	NS	NS	NS	0.0053 U	0.0052 U	0.0050 U	0.0050 U	NS	NS
Total PCBs (j)	0.10		NS	NS	NS	NS	NS	NS	ND	ND	ND	ND	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			TP-MW-1	TP-MW-1	FPP-MW-1	TP-MW-2	TP-MW-2	FPP-MW-2	FFP-MW-3	FFP-MW-3-Dup	FPP-MW-3	FPP-MW-3-Dup	MW-6	MW-6
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-22	EV14120162-04	EV14120162-08	EV14090107-23	EV14120162-03	EV14120151-03 EV14120162-14	EV14090091-01 EV14090107-24	EV14090091-10 EV14090107-25	EV14120151-04 EV14120162-16	EV14120151-09 EV14120162-20	EV14090107-01	EV14120162-07
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/19/2014	12/19/2014	9/17/2014	12/19/2014	12/18/2014	9/16/2014	9/16/2014	12/18/2014	12/18/2014	9/17/2014	12/19/2014
VOCs (µg/L)														
Method EPA-8260														
Dichlorodifluoromethane	1,600		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Chloromethane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromomethane	11		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Chloroethane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Trichlorofluoromethane	2,400		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Carbon Disulfide	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Acetone	7,200		NS	NS	NS	NS	NS	NS	25 U	25 U	25 U	25 U	NS	NS
1,1-Dichloroethene	0.057	0.014	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.014 U	0.014 U	NS	NS
Methylene Chloride	4.6	0.68	NS	NS	NS	NS	NS	NS	5.0 U	5.0 U	0.68 U	0.68 U	NS	NS
Acrylonitrile	0.0572	0.0572	NS	NS	NS	NS	NS	NS	10 U	10 U	0.057 U	0.057 U	NS	NS
Methyl T-Butyl Ether (MTBE)	20		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Trans-1,2-Dichloroethene	100		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1-Dichloroethane	7.7		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Butanone (MEK)	4,800		NS	NS	NS	NS	NS	NS	10 U	10 U	10 U	10 U	NS	NS
Cis-1,2-Dichloroethene	16		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Hexane (k)	480		NS	NS	NS	NS	NS	NS	NA	NA	2.0 U	2.0 U	NS	NS
2,2-Dichloropropane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromochloromethane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1,1-Trichloroethane	200		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1-Dichloropropene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dichloroethane	0.38	0.014	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.014 U	0.014 U	NS	NS
Benzene	1.2	0.028	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.028 U	0.028 U	NS	NS
Dibromomethane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromodichloromethane	0.080	0.059	NS	NS	NS	NS	NS	NS	0.059 U	0.059 U	0.059 U	0.059 U	NS	NS
4-Methyl-2-Pentanone (MIBK)	640		NS	NS	NS	NS	NS	NS	10 U	10 U	10 U	10 U	NS	NS
Toluene	640		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Cis-1,3-Dichloropropene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Hexanone	--		NS	NS	NS	NS	NS	NS	10 U	10 U	10 U	10 U	NS	NS
1,3-Dichloropropane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Tetrachloroethene (PCE)	0.69	0.023	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.023 U	0.023 U	NS	NS
1,2-Dibromoethane (EDB)	0.022		NS	NS	NS	NS	NS	NS	0.01 U	0.01 U	0.010 U	0.010 U	NS	NS
Chlorobenzene	100		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Ethylbenzene	70		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
m,p-Xylene (l)	1,600		NS	NS	NS	NS	NS	NS	4.0 U	4.0 U	4.0 U	4.0 U	NS	NS
Styrene	100		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
o-Xylene	1,600		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromoform	4.3		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Isopropylbenzene (cumene)	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2,3-Trichloropropane	0.023	0.023	NS	NS	NS	NS	NS	NS	0.023 U	0.023 U	0.023 U	0.023 U	NS	NS
Bromobenzene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Propyl Benzene	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Chlorotoluene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,3,5-Trimethylbenzene	80		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chlorotoluene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
T-Butyl Benzene	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2,4-Trimethylbenzene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
S-Butyl Benzene	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
P-Isopropyltoluene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,3 Dichlorobenzene	320		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,4-Dichlorobenzene	8.1		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Butylbenzene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dichlorobenzene	420		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	NS	NS	NS	NS	NS	NS	10 U	10 U	0.10 U	0.10 U	NS	NS
Hexachlorobutadiene	0.44		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.069 U	0.069 U	NS	NS
1,2,3-Trichlorobenzene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			TP-MW-1	TP-MW-1	FPP-MW-1	TP-MW-2	TP-MW-2	FPP-MW-2	FFP-MW-3	FFP-MW-3-Dup	FPP-MW-3	FPP-MW-3-Dup	MW-6	MW-6
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-22	EV14120162-04	EV14120162-08	EV14090107-23	EV14120162-03	EV14120151-03 EV14120162-14	EV14090091-01 EV14090107-24	EV14090091-10 EV14090107-25	EV14120151-04 EV14120162-16	EV14120151-09 EV14120162-20	EV14090107-01	EV14120162-07
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/19/2014	12/19/2014	9/17/2014	12/19/2014	12/18/2014	9/16/2014	9/16/2014	12/18/2014	12/18/2014	9/17/2014	12/19/2014
VOCs (µg/L)														
Method EPA-8260SIM (m)														
Vinyl Chloride	0.031	0.031	NS	NS	NS	NS	NS	NS	0.20 U	0.20 U	0.031 U	0.031 U	NS	NS
Carbon Tetrachloride	0.23		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Chloroform	1.4		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.14 U	0.14 U	NS	NS
Trichloroethene (TCE)	2.5		NS	NS	NS	NS	NS	NS	0.020 U	0.020 U	0.054 U	0.054 U	NS	NS
1,2-Dichloropropane	0.50		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Trans-1,3-Dichloropropene	0.34		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.058 U	0.058 U	NS	NS
1,1,2-Trichloroethane	0.59		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Dibromochloromethane	0.40		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,1,1,2-Tetrachloroethane	1.7		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,1,2,2-Tetrachloroethane	0.17		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,2,4-Trichlorobenzene	1.5		NS	NS	NS	NS	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
SVOCs (µg/L)														
Method EPA-8270														
Pyridine	8.0		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitrosodimethylamine	1.51	1.51	NS	NS	NS	NS	NS	NS	1.5 U	1.5 U	1.4 U	1.4 U	NS	NS
Phenol	2,400		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Aniline	7.7		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bis(2-Chloroethyl)Ether	0.94	0.94	NS	NS	NS	NS	NS	NS	0.94 U	0.94 U	0.87 U	0.87 U	NS	NS
2-Chlorophenol	40		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Benzyl Alcohol	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Methylphenol	400		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bis(2-Chloroisopropyl)Ether	1,400		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
3&4-Methylphenol (n)	400		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitroso-Di-N-Propylamine	2.0	2.0	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	1.9 U	1.9 U	NS	NS
Hexachloroethane	2.0	2.0	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	1.9 U	1.9 U	NS	NS
Nitrobenzene	16		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Isophorone	8.4		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Nitrophenol	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dimethylphenol	160		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Benzoic Acid	64,000		NS	NS	NS	NS	NS	NS	10 U	10 U	10 U	10 U	NS	NS
Bis(2-Chloroethoxy)Methane	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dichlorophenol	24		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	1.8 U	1.8 U	NS	NS
2,6-Dichlorophenol	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chloro-3-Methylphenol	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Hexachlorocyclopentadiene	40		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4,6-Trichlorophenol	1.4	0.90	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	0.83 U	0.83 U	NS	NS
2,4,5-Trichlorophenol	800		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Chloronaphthalene	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Nitroaniline	160		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Dimethylphthalate	270,000		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,6-Dinitrotoluene	1.82	1.82	NS	NS	NS	NS	NS	NS	1.8 U	1.8 U	1.7 U	1.7 U	NS	NS
3-Nitroaniline	--		NS	NS	NS	NS	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	NS	NS
2,4-Dinitrophenol	32		NS	NS	NS	NS	NS	NS	10 U	10 U	10 U	10 U	NS	NS
4-Nitrophenol	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Dibenzofuran	16		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dinitrotoluene	0.78	0.78	NS	NS	NS	NS	NS	NS	0.78 U	0.78 U	0.72 U	0.72 U	NS	NS
2,3,4,6-Tetrachlorophenol	480		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Diethylphthalate	13,000		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chlorophenyl-Phenylether	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Nitroaniline	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4,6-Dinitro-2-Methylphenol	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitrosodiphenylamine	3.3		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Azobenzene	1.63	1.63	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	1.5 U	1.5 U	NS	NS
4-Bromophenyl-Phenylether	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Carbazole	--		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location: / Laboratory ID(S): / Sample Date:	Preliminary Screening Levels (a)	Targeted ALS QLs (b)	TP-MW-1 EV14090107-22 9/17/2014	TP-MW-1 EV14120162-04 12/19/2014	FPP-MW-1 EV14120162-08 12/19/2014	TP-MW-2 EV14090107-23 9/17/2014	TP-MW-2 EV14120162-03 12/19/2014	FPP-MW-2 EV14120151-03 EV14120162-14 12/18/2014	FFP-MW-3 EV14090091-01 EV14090107-24 9/16/2014	FFP-MW-3-Dup EV14090091-10 EV14090107-25 9/16/2014	FPP-MW-3 EV14120151-04 EV14120162-16 12/18/2014	FPP-MW-3-Dup EV14120151-09 EV14120162-20 12/18/2014	MW-6 EV14090107-01 9/17/2014	MW-6 EV14120162-07 12/19/2014
Di-N-Butylphthalate	1,600		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Butylbenzylphthalate	8.3		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
3,3'-Dichlorobenzidine	2.0	2.0	NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	1.9 U	1.9 U	NS	NS
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	NS	NS	NS	NS	NS	NS	**2.1**	2.0 U	0.75 U	0.75 U	NS	NS
Di-N-Octylphthalate	160		NS	NS	NS	NS	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
PAHs (µg/L) Method EPA-8270 SIM														
Naphthalene	160		**0.029**	NS	0.014 U	0.020 U	NS	0.014 U	0.020 U	**0.031**	0.013 U	0.013 U	0.020 U	NS
2-Methylnaphthalene	32		0.020 U	NS	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
1-Methylnaphthalene	1.5		0.020 U	NS	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
Acenaphthylene	--		0.020 U	NS	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
Acenaphthene	650		0.020 U	NS	0.014 U	0.020 U	NS	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.020 U	NS
Fluorene	640		0.020 U	NS	**0.013**	0.020 U	NS	0.0092 U	0.020 U	0.020 U	0.0090 U	**0.0097**	0.020 U	NS
Pentachlorophenol	0.23	0.23	0.13 U	NS	0.12 U	0.13 U	NS	0.12 U	0.13 U	0.13 U	0.12 U	0.12 U	0.13 U	NS
Phenanthrene	--		0.020 U	NS	**0.018**	0.020 U	NS	0.014 U	0.020 U	0.020 U	0.013 U	0.013 U	0.020 U	NS
Anthracene	4,800		0.020 U	NS	0.01 U	0.020 U	NS	0.01 U	0.020 U	0.020 U	0.01 U	0.01 U	0.020 U	NS
Fluoranthene	86		0.020 U	NS	0.0093 U	0.020 U	NS	0.0093 U	0.020 U	0.020 U	0.0092 U	0.0092 U	0.020 U	NS
Pyrene	480		0.020 U	NS	0.011 U	0.020 U	NS	0.011 U	0.020 U	0.020 U	**0.010**	**0.014**	0.020 U	NS
Benzo[A]Anthracene	0.009	0.009	0.020 U	NS	0.017 U	0.020 U	NS	0.017 U	0.020 U	0.020 U	0.017 U	0.017 U	0.020 U	NS
Chrysene	0.80	0.80	0.020 U	NS	0.018 U	0.020 U	NS	0.018 U	0.020 U	0.020 U	0.018 U	0.018 U	0.020 U	NS
Benzo[B]Fluoranthene	0.007	0.007	0.020 U	NS	0.0068 U	0.020 U	NS	0.0068 U	0.020 U	0.020 U	0.0068 U	0.0068 U	0.020 U	NS
Benzo[K]Fluoranthene	0.024	0.024	0.020 U	NS	0.013 U	0.020 U	NS	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U	0.020 U	NS
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	NS	0.027 U	0.027 U	NS	0.027 U	0.029 U	0.029 U	0.027 U	0.027 U	0.029 U	NS
Indeno[1,2,3-Cd]Pyrene	0.016	0.016	0.020 U	NS	0.014 U	0.020 U	NS	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U	0.020 U	NS
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	NS	0.011 U	0.011 U	NS	0.011 U	0.012 U	0.012 U	0.011 U	0.011 U	0.012 U	NS
Benzo[G,H,I]Perylene	--		0.020 U	NS	0.019 U	0.020 U	NS	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U	0.020 U	NS
cPAH TEQ (o)	0.10		ND	NS	ND	ND	NS	ND	ND	ND	ND	ND	ND	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-7	MW-7	MW-8	MW-8	MW-9A	MW-9A	MW-11	MW-11	MW-12	MW-12	MW-14	MW-14
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-06 EV14090107-02	EV14120119-04 EV14120162-25	EV14090091-05 EV14090107-03	EV14120162-11	EV14090080-01 EV14090107-04	EV14120143-01 EV14120162-23	EV14090080-03 EV14090107-05	EV14120162-09	EV14090080-05 EV14090107-06	EV14120151-01 EV14120162-17	EV14090107-07	EV14120151-06 EV14120162-19
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/16/2014	9/16/2014	12/19/2014	9/15/2014	12/17/2014	9/15/2014	12/19/2014	9/15/2014	12/18/2014	9/17/2014	12/18/2014
TOTAL PETROLEUM HYDROCARBONS (µg/L)														
HCID														
Gas Range	--		130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130	130 U	130 U
Diesel Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	**>310**	310	310 U	310 U
Oil Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	**>310**	310 U	310 U
NWTPH-G (c)	1,000													
NWTPH-Dx														
Diesel Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	**1200**	**390** J	NA	NA
Diesel Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	**3700**	**990** J	NA	NA
Oil Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	**370**	**980**	NA	NA
Oil Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	**1400**	**1100**	NA	NA
DISSOLVED METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	**1.3**	**2.8**	**3.7**	**0.68**	**1.1**	**0.67**	**3.6**	**4.1**	**1.2**	0.45 U	1.0 U	0.45 U
Barium	1,000		**28**	**52**	**77**	**64**	**8.5**	**4.9**	**46**	**54**	**59**	**47**	**6.0**	**4.9**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**23,000**	**37,000**	**31,000**	**38,000**	**21,000**	**14,000**	**34,000**	**38,000**	**40,000**	**40,000**	**13,000**	**13,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 UJ	NS	10 U	NS	10 U	NS	10 U	NS	NS	NS
Iron	300		**6800**	**23,000**	**14,000**	**7700**	50 U	50 U	**29,000**	**32,000**	**13,000**	**11,000**	50 U	50 U
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**7900**	**13,000**	**13,000**	**17,000**	**6600**	**4600**	**11,000**	**13,000**	**13,000**	**14,000**	**4500**	**4600**
Manganese	50		**1600**	**1900**	**1900**	**2000**	2.0 U	2.0 U	**2000**	**1900**	**1800**	**1700**	2.0 U	**2.9**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**13,000**	**19,000**	**25,000**	**28,000**	**11,000**	**9400**	**16,000**	**19,000**	**69,000**	**43,000**	**5700**	**5100**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
TOTAL METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	**1.7**	**2.6**	**4.8**	**1.2**	1.0 U	**0.97**	**3.7**	**3.9**	**1.3**	0.45 U	1.0 U	0.45 U
Barium	1,000		**30**	**49**	**98**	**65**	**8.5**	**5.1**	**52**	**52**	**70**	**45**	**5.7**	**5.0**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**23,000**	**37,000**	**32,000**	**39,000**	**20,000**	**14,000**	**36,000**	**38,000**	**45,000**	**39,000**	**13,000**	**13,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 UJ	NS	10 U	NS	10 U	NS	10 U	NS	NS	NS
Iron	300		**7100**	**22,000**	**17,000**	**6300**	50 U	50 U	**30,000**	**31,000**	**14,000**	**10,000**	50 U	50 U
Lead	0.54		1.0 U	0.28 U	**2.1**	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**8000**	**13,000**	**14,000**	**18,000**	**6600**	**4400**	**12,000**	**13,000**	**15,000**	**14,000**	**4500**	**4800**
Manganese	50		**1700**	**2000**	**2000**	**2000**	2.0 U	2.0 U	**2100**	**1900**	**2100**	**1700**	**5.6**	**3.8**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**13,000**	**19,000**	**26,000**	**28,000**	**11,000**	**9000**	**16,000**	**19,000**	**80,000**	**44,000**	**5800**	**5400**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	--		**130**	**240**	**230**	**300**	**170** J	**100**	**210** J	**240**	**370** J	**290**	NS	**72**
Chloride (EPA-300.0)	230		**12**	**19**	**18**	**21**	**8.8**	**6.0**	**16**	**20**	**18**	**18**	**4.5**	**3.7**
Fluoride (EPA-300.0)	0.64		**0.25**	**0.39**	**0.23**	**0.26**	**0.41**	**0.32**	0.16 U	**0.22**	**0.44**	**0.39**	0.16 U	0.16 U
Nitrate as N (EPA-300.0)	10		**0.39**	**0.35**	0.034 U	**0.44**	**3.3**	**0.53**	**0.045**	0.034 U	0.034 U	**0.041**	**0.20** J	**0.22**
Nitrite as N (EPA-300.0)	1.0		0.043 U	0.043 U	0.043 U	0.043	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 UJ	0.043 U
Sulfate (EPA-300.0)	--		**1.8**	0.26 U	**0.41**	**0.82**	**10**	**6.4**	0.26 U	**0.29**	**18**	**0.35**	**3.0**	**3.3**
Ammonia (EPA-350.1)	--		**2.8**	**5.0**	**8.4**	**8.9**	**0.060**	0.050 U	**1.3**	**1.3**	**1.5**	**1.4**	NS	0.050 U
Alkalinity as CaCO3, Total (SM2320B)	--		**140**	**220**	**250**	**260**	**88**	**67**	**190**	**180**	**350**	**260**	NS	**58**
Bicarbonate as CaCO3 (SM2320B)	--		**140**	**220**	**250**	**260**	**88**	**67**	**190**	**180**	**350**	**260**	NS	**58**
Total Organic Carbon (TOC) (SM5310C)	--		**3.2**	**4.2**	**8.0**	**4.5**	**1.6**	**1.0**	**5.0**	**4.0**	**16**	**7.0**	NS	**0.72**

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-7	MW-7	MW-8	MW-8	MW-9A	MW-9A	MW-11	MW-11	MW-12	MW-12	MW-14	MW-14
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-06 EV14090107-02	EV14120119-04 EV14120162-25	EV14090091-05 EV14090107-03	EV14120162-11	EV14090080-01 EV14090107-04	EV14120143-01 EV14120162-23	EV14090080-03 EV14090107-05	EV14120162-09	EV14090080-05 EV14090107-06	EV14120151-01 EV14120162-17	EV14090107-07	EV14120151-06 EV14120162-19
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/16/2014	9/16/2014	12/19/2014	9/15/2014	12/17/2014	9/15/2014	12/19/2014	9/15/2014	12/18/2014	9/17/2014	12/18/2014
FIELD PARAMETERS														
Temperature (°C)	--		18.02	14.20	17.93	15.88	16.96	15.26	16.50	15.30	19.81	16.54	17.46	9.93
Specific Conductivity (uS/cm)	--		224	366	495	698	248	131	384	558	1251	683	305	131
Dissolved Oxygen (mg/L)	--		1.40	1.78	0.50	0.34	6.20	4.60	0.68	0.31	1.09	0.35	1.10	3.84
pH (S.U.)	6.5 to 8.5		5.84	6.39	5.95	7 (f)	9.76	9.10	5.46	7 (f)	7.23	7 (f)	6.59	6 (f)
Oxidation Reduction Potential (mV)	--		29.2	-44.1	-64.6	-13.0	-259.3	39.7	53.8	-61.7	-353.33	-71.7	-84.2	37.7
Turbidity (NTU)	--		13.3	4.07	45.6	2.46	7.15	0.49	6.51	3.44	4.20	4.28	7.06	1.93
PESTICIDES (µg/L) **Method EPA-8081**														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
G-BHC (Lindane)	0.019	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Heptachlor	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Aldrin	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Heptachlor Epoxide	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.018 U	0.011 U	NS	NS
Chlordane	0.20	0.20	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.047 U	0.011 U	NS	NS
Endosulfan I (g)	0.056		0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
4,4'-DDE	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Dieldrin	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Endrin	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
4,4'-DDD	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
Endosulfan II (g)	0.056		0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.012 U	0.017 U	0.056 U	0.011 U	NS	NS
4,4'-DDT	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.13 U	0.011 U	NS	NS
Endrin Aldehyde (h)	0.01	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.071 U	0.011 U	NS	NS
Endosulfan Sulfate (g)	0.056		0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.023 U	0.011 U	NS	NS
Methoxychlor	0.030	0.01	0.011 U	0.011 U	0.011 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.040 U	0.011 U	NS	NS
Hexachlorobenzene (i)	0.01	0.01	2.0 U	0.011 U	2.0 U	0.011 U	2.0 U	0.010 U	2.0 U	0.010 U	2.0 U	0.011 U	NS	NS
Toxaphene	0.50	0.50	0.52 U	0.52 U	0.51 U	0.53 U	0.50 U	0.50 U	0.51 U	0.50 U	2.5 U	0.52 U	NS	NS
PCBs (µg/L) **Method EPA-8082**														
PCB-1016	0.005	0.005	0.0052 U	0.0052 U	0.022 U	0.0053 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0064 U	0.0051 U	NS	NS
PCB-1221	--		0.011 U	0.011 U	0.017 U	0.011 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	NS	NS
PCB-1232	--		0.0052 U	0.0052 U	0.047 U	0.0053 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0056 U	0.0051 U	NS	NS
PCB-1242	--		0.0052 U	**0.040**	0.028 U	**0.010**	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0051 U	NS	NS
PCB-1248	--		0.0052 U	0.0052 U	0.012 U	0.0053 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0051 U	NS	NS
PCB-1254	0.005	0.005	0.0052 U	0.0052 U	0.017 U	0.0053 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0051 U	NS	NS
PCB-1260	0.014	0.005	0.0052 U	0.0052 U	0.0051 U	0.0053 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0051 U	NS	NS
Total PCBs (j)	0.10		ND	**0.040**	ND	**0.010**	ND	ND	ND	ND	ND	ND	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-7	MW-7	MW-8	MW-8	MW-9A	MW-9A	MW-11	MW-11	MW-12	MW-12	MW-14	MW-14
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-06 EV14090107-02	EV14120119-04 EV14120162-25	EV14090091-05 EV14090107-03	EV14120162-11	EV14090080-01 EV14090107-04	EV14120143-01 EV14120162-23	EV14090080-03 EV14090107-05	EV14120162-09	EV14090080-05 EV14090107-06	EV14120151-01 EV14120162-17	EV14090107-07	EV14120151-06 EV14120162-19
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/16/2014	9/16/2014	12/19/2014	9/15/2014	12/17/2014	9/15/2014	12/19/2014	9/15/2014	12/18/2014	9/17/2014	12/18/2014
VOCs (µg/L)														
Method EPA-8260														
Dichlorodifluoromethane	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Chloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromomethane	11		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Chloroethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Trichlorofluoromethane	2,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Carbon Disulfide	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Acetone	7,200		25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	NS	NS
1,1-Dichloroethene	0.057	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	NS	NS
Methylene Chloride	4.6	0.68	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	NS	NS
Acrylonitrile	0.0572	0.0572	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	NS	NS
Methyl T-Butyl Ether (MTBE)	20		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Trans-1,2-Dichloroethene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1-Dichloroethane	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Butanone (MEK)	4,800		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	NS
Cis-1,2-Dichloroethene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Hexane (k)	480		NA	2.0 U	NA	2.0 U	NA	2.0 U	NA	2.0 U	NA	2.0 U	NS	NS
2,2-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromochloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1,1-Trichloroethane	200		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,1-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dichloroethane	0.38	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	NS	NS
Benzene	1.2	0.028	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	NS	NS
Dibromomethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	NS	NS
4-Methyl-2-Pentanone (MIBK)	640		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	NS
Toluene	640		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Cis-1,3-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Hexanone	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	NS
1,3-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Tetrachloroethene (PCE)	0.69	0.023	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	NS	NS
1,2-Dibromoethane (EDB)	0.022		0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	NS	NS
Chlorobenzene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Ethylbenzene	70		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
m,p-Xylene (l)	1,600		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	NS	NS
Styrene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
o-Xylene	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bromoform	4.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Isopropylbenzene (cumene)	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	NS	NS
Bromobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Propyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,3,5-Trimethylbenzene	80		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
T-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2,4-Trimethylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
S-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
P-Isopropyltoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,3 Dichlorobenzene	320		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,4-Dichlorobenzene	8.1		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Butylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dichlorobenzene	420		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	NS	NS
Hexachlorobutadiene	0.44		2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	NS	NS
1,2,3-Trichlorobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-7	MW-7	MW-8	MW-8	MW-9A	MW-9A	MW-11	MW-11	MW-12	MW-12	MW-14	MW-14
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-06 EV14090107-02	EV14120119-04 EV14120162-25	EV14090091-05 EV14090107-03	EV14120162-11	EV14090080-01 EV14090107-04	EV14120143-01 EV14120162-23	EV14090080-03 EV14090107-05	EV14120162-09	EV14090080-05 EV14090107-06	EV14120151-01 EV14120162-17	EV14090107-07	EV14120151-06 EV14120162-19
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/16/2014	9/16/2014	12/19/2014	9/15/2014	12/17/2014	9/15/2014	12/19/2014	9/15/2014	12/18/2014	9/17/2014	12/18/2014
VOCs (µg/L)														
Method EPA-8260SIM (m)														
Vinyl Chloride	0.031	0.031	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	NS	NS
Carbon Tetrachloride	0.23		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Chloroform	1.4		0.10 U	0.14 U	0.10 U	0.14 U	**1.7**	**22**	0.10 U	0.14 U	0.10 U	0.14 U	NS	NS
Trichloroethene (TCE)	2.5		0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	NS	NS
1,2-Dichloropropane	0.50		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Trans-1,3-Dichloropropene	0.34		2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	NS	NS
1,1,2-Trichloroethane	0.59		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
Dibromochloromethane	0.40		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,1,1,2-Tetrachloroethane	1.7		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,1,2,2-Tetrachloroethane	0.17		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
1,2,4-Trichlorobenzene	1.5		**0.17**	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	NS	NS
SVOCs (µg/L)														
Method EPA-8270														
Pyridine	8.0		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitrosodimethylamine	1.51	1.51	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	NS	NS
Phenol	2,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Aniline	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bis(2-Chloroethyl)Ether	0.94	0.94	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	NS	NS
2-Chlorophenol	40		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Benzyl Alcohol	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Methylphenol	400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Bis(2-Chloroisopropyl)Ether	1,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
3&4-Methylphenol (n)	400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitroso-Di-N-Propylamine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	NS	NS
Hexachloroethane	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	NS	NS
Nitrobenzene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Isophorone	8.4		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Nitrophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dimethylphenol	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Benzoic Acid	64,000		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	NS
Bis(2-Chloroethoxy)Methane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dichlorophenol	24		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	NS	NS
2,6-Dichlorophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chloro-3-Methylphenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Hexachlorocyclopentadiene	40		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4,6-Trichlorophenol	1.4	0.90	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.83 U	NS	NS
2,4,5-Trichlorophenol	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Chloronaphthalene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2-Nitroaniline	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Dimethylphthalate	270,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,6-Dinitrotoluene	1.82	1.82	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	NS	NS
3-Nitroaniline	--		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NS	NS
2,4-Dinitrophenol	32		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	NS
4-Nitrophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Dibenzofuran	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
2,4-Dinitrotoluene	0.78	0.78	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	NS	NS
2,3,4,6-Tetrachlorophenol	480		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Diethylphthalate	13,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Chlorophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4-Nitroaniline	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
4,6-Dinitro-2-Methylphenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
N-Nitrosodiphenylamine	3.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Azobenzene	1.63	1.63	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	NS	NS
4-Bromophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Carbazole	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-7	MW-7	MW-8	MW-8	MW-9A	MW-9A	MW-11	MW-11	MW-12	MW-12	MW-14	MW-14
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-06 EV14090107-02	EV14120119-04 EV14120162-25	EV14090091-05 EV14090107-03	EV14120162-11	EV14090080-01 EV14090107-04	EV14120143-01 EV14120162-23	EV14090080-03 EV14090107-05	EV14120162-09	EV14090080-05 EV14090107-06	EV14120151-01 EV14120162-17	EV14090107-07	EV14120151-06 EV14120162-19
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/16/2014	9/16/2014	12/19/2014	9/15/2014	12/17/2014	9/15/2014	12/19/2014	9/15/2014	12/18/2014	9/17/2014	12/18/2014
Di-N-Butylphthalate	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
Butylbenzylphthalate	8.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
3,3'-Dichlorobenzidine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	NS	NS
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	2.0 U	0.75 U	**10**	**49**	2.0 U	0.75 U	2.0 U	**53**	2.0 U	0.75 U	NS	NS
Di-N-Octylphthalate	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NS	NS
PAHs (µg/L) Method EPA-8270 SIM														
Naphthalene	160		0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	**0.034**	**0.11**	**0.024**	NS
2-Methylnaphthalene	32		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
1-Methylnaphthalene	1.5		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
Acenaphthylene	--		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NS
Acenaphthene	650		0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	**0.017**	0.020 U	NS
Fluorene	640		0.020 U	0.0090 U	0.020 U	0.0090 U	0.020 U	**0.0092**	0.020 U	0.0090 U	0.020 U	0.0090 U	0.020 U	NS
Pentachlorophenol	0.23	0.23	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	NS
Phenanthrene	--		0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	NS
Anthracene	4,800		0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	NS
Fluoranthene	86		0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	NS
Pyrene	480		0.020 U	**0.011**	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	**0.015**	0.020 U	NS
Benzo[A]Anthracene	0.009	0.009	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	NS
Chrysene	0.80	0.80	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	NS
Benzo[B]Fluoranthene	0.007	0.007	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	NS
Benzo[K]Fluoranthene	0.024	0.024	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	NS
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	NS
Indeno[1,2,3-Cd]Pyrene	0.016	0.016	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	NS
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	NS
Benzo[G,H,I]Perylene	--		0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	NS
cPAH TEQ (o)	0.10		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location: Laboratory ID(S): Sample Date:	Preliminary Screening Levels (a)	Targeted ALS QLs (b)	MW-15 EV14090107-08 9/17/2014	MW-15 EV14120151-05 EV14120162-15 12/18/2014	MW-16 EV14090107-09 9/17/2014	MW-16 EV14120151-07 EV14120162-21 12/18/2014	MW-17 EV14090107-10 9/17/2014	MW-17 EV14120151-08 EV14120162-18 12/18/2014	MW-18 EV14090080-02 EV14090107-11 9/15/2014	MW-18 EV14120162-02 12/19/2014	MW-100 EV14090091-09 EV14090107-12 9/16/2014	MW-100 EV14120143-03 EV14120162-22 12/17/2014	MW-101 EV14090107-13 9/17/2014	MW-101 EV14120151-02 EV14120162-13 12/18/2014
TOTAL PETROLEUM HYDROCARBONS (µg/L)														
HCID														
Gas Range	--		130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	**>310**	310 U
Oil Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	**>310**	**>310** U
NWTPH-G (c)	1,000													
NWTPH-Dx														
Diesel Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**520**	**140**
Diesel Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1800**	**450**
Oil Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**360**	250 U
Oil Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1500**	**410**
DISSOLVED METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	**1.1**	0.45 U	1.0 U	0.45 U	**2.6**	**1.4**	**8.0**	**7.3**	1.0 U	0.45 U	**2.9**	**1.5**
Barium	1,000		**23**	**28**	**45**	**19**	**55**	**72**	**36**	**37**	**8.2**	**5.9**	**74**	**51**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**20,000**	**24,000**	**87,000**	**41,000**	**34,000**	**43,000**	**47,000**	**42,000**	**22,000**	**28,000**	**65,000**	**48,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	NS	NS	10 U	NS	10 U	NS	10 U	NS	10 U	NS
Iron	300		**6300**	**5500**	50 U	50 U	**16,000**	**21,000**	**41,000**	**37,000**	50 U	50 U	**19,000**	**23,000**
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**7900**	**9600**	**12,000**	**11,000**	**11,000**	**15,000**	**19,000**	**16,000**	**9400**	**9000**	**20,000**	**15,000**
Manganese	50		**890**	**850**	**110**	**210**	**2000**	**2100**	**4400**	**3300**	**190**	**230**	**3000**	**2000**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**8900**	**10,000**	**36,000**	**20,000**	**22,000**	**25,000**	**14,000**	**15,000**	**20,000**	**11,000**	**29,000**	**22,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
TOTAL METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	**1.3**	0.45 U	1.0 U	**0.97**	**2.4**	**1.8**	**8.0**	**7.5**	1.0 U	**0.88**	**3.1**	**1.6**
Barium	1,000		**25**	**28**	**47**	**21**	**57**	**74**	**39**	**42**	**11**	**8.2**	**93**	**50**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**21,000**	**23,000**	**89,000**	**42,000**	**34,000**	**46,000**	**50,000**	**46,000**	**22,000**	**29,000**	**71,000**	**47,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.6**	2.0 U
Chromium (VI) (e)	10		10 U	NS	NS	NS	10 U	NS	10 U	NS	10 U	NS	10 U	NS
Iron	300		**7900**	**6400**	**320**	**190**	**17,000**	**22,000**	**44,000**	**40,000**	**400**	**260**	**23,000**	**22,000**
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	**1.5**	0.28 U
Magnesium	--		**8500**	**9000**	**13,000**	**11,000**	**12,000**	**16,000**	**20,000**	**17,000**	**9900**	**9000**	**22,000**	**15,000**
Manganese	50		**910**	**830**	**120**	**190**	**2000**	**2300**	**4700**	**3600**	**200**	**320**	**3200**	**2000**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**9500**	**9900**	**38,000**	**20,000**	**23,000**	**27,000**	**15,000**	**15,000**	**21,000**	**11,000**	**31,000**	**21,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	--		**180**	**160**	NS	**230**	**280**	**250**	**310** J	**250**	**230**	**150**	**430**	**260**
Chloride (EPA-300.0)	230		**12**	**13**	**22**	**20**	**10**	**20**	**19**	**18**	**12**	**10**	**20**	**12**
Fluoride (EPA-300.0)	0.64		0.16 U	0.16 U	0.16 U	**0.37**	**0.21**	0.16 U	**0.19**	0.16 U	**0.37**	**0.31**	**0.71**	**0.19**
Nitrate as N (EPA-300.0)	10		0.034 U	0.034 U	**2.8** J	**0.13**	**0.054**	**0.072**	0.034 U	**0.047**	**1.1**	**1.3**	**3.5**	0.034 U
Nitrite as N (EPA-300.0)	1.0		0.043 U	0.043 U	0.043 UJ	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	**0.60**	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	--		**1.2**	**0.90**	**170**	**15**	**3.5**	0.26 U	**0.36**	0.26 U	**14**	**12**	0.26 U	0.26 U
Ammonia (EPA-350.1)	--		**3.0**	**0.63**	NS	0.050 U	**3.1**	**3.0**	**1.2**	**0.65**	**0.21**	**0.056**	**1.8**	**1.7**
Alkalinity as CaCO3, Total (SM2320B)	--		**110**	**110**	NS	**190**	**210**	**230**	**260**	**220**	**130**	**120**	**360**	**230**
Bicarbonate as CaCO3 (SM2320B)	--		**110**	**110**	NS	**190**	**210**	**230**	**260**	**220**	**130**	**120**	**360**	**230**
Total Organic Carbon (TOC) (SM5310C)	--		**2.7**	**1.9**	NS	**2.0**	**4.3**	**4.2**	**8.2**	**5.7**	**1.6**	**1.0**	**33**	**8.6**

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-15	MW-15	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-100	MW-100	MW-101	MW-101
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-08	EV14120151-05 EV14120162-15	EV14090107-09	EV14120151-07 EV14120162-21	EV14090107-10	EV14120151-08 EV14120162-18	EV14090080-02 EV14090107-11	EV14120162-02	EV14090091-09 EV14090107-12	EV14120143-03 EV14120162-22	EV14090107-13	EV14120151-02 EV14120162-13
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/15/2014	12/19/2014	9/16/2014	12/17/2014	9/17/2014	12/18/2014
FIELD PARAMETERS														
Temperature (°C)	--		17.34	15.51	21.10	15.39	19.97	16.14	17.30	15.44	18.02	15.50	17.17	13.34
Specific Conductivity (uS/cm)	--		209	217	745	347	1005	656	617	680	269	227	714	397
Dissolved Oxygen (mg/L)	--		0.31	0.81	0.43	0.61	0.66	0.37	1.43	0.19	0.38	12.35	0.36	2.81
pH (S.U.)	6.5 to 8.5		5.44	6.32	5.58	6.51	6.66	7 (f)	6.37	7 (f)	6.13	6.93	6.02	6.40
Oxidation Reduction Potential (mV)	--		39.6	-4.8	97.4	27.3	-125.6	-91.7	-29.2	-99.1	-6.7	7.5	-2.7	-26.3
Turbidity (NTU)	--		23.7	79	11.6	13.24	32.79	4.66	12.20	1.77	20.0	12.33	34	13.76
PESTICIDES (µg/L) Method EPA-8081										18.33				
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
G-BHC (Lindane)	0.019	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Heptachlor	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Aldrin	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Heptachlor Epoxide	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Chlordane	0.20	0.20	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Endosulfan I (g)	0.056		0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
4,4'-DDE	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Dieldrin	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Endrin	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
4,4'-DDD	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Endosulfan II (g)	0.056		0.012 U	0.011 U	NS	NS	0.01 U	0.010 U	0.022 U	0.019 U	0.012 U	**0.014**	0.040 U	0.011 U
4,4'-DDT	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Endrin Aldehyde (h)	0.01	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Endosulfan Sulfate (g)	0.056		0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Methoxychlor	0.030	0.01	0.01 U	0.011 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
Hexachlorobenzene (i)	0.01	0.01	2.0 U	0.011 U	NS	NS	2.0 U	0.010 U	2.0 U	0.010 U	2.0 U	0.010 U	2.0 U	0.011 U
Toxaphene	0.50	0.50	0.50 U	0.52 U	NS	NS	0.50 U	0.50 U	0.50 U	0.50 U	0.51 U	0.50 U	0.51 U	0.52 U
PCBs (µg/L) Method EPA-8082														
PCB-1016	0.005	0.005	0.0050 U	0.0051 U	NS	NS	0.0069 U	0.0050 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
PCB-1221	--		0.01 U	0.011 U	NS	NS	0.013 U	0.010 U	0.01 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U
PCB-1232	--		0.0050 U	0.0051 U	NS	NS	0.0086 U	0.0050 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
PCB-1242	--		0.0050 U	0.0051 U	NS	NS	0.0062 U	**0.0082**	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
PCB-1248	--		0.0050 U	0.0051 U	NS	NS	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
PCB-1254	0.005	0.005	0.0050 U	0.0051 U	NS	NS	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
PCB-1260	0.014	0.005	0.0050 U	0.0051 U	NS	NS	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0051 U	0.0050 U	0.0051 U	0.0052 U
Total PCBs (j)	0.10		ND	ND	NS	NS	ND	**0.0082**	ND	ND	ND	ND	ND	ND

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-15	MW-15	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-100	MW-100	MW-101	MW-101
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-08	EV14120151-05 EV14120162-15	EV14090107-09	EV14120151-07 EV14120162-21	EV14090107-10	EV14120151-08 EV14120162-18	EV14090080-02 EV14090107-11	EV14120162-02	EV14090091-09 EV14090107-12	EV14120143-03 EV14120162-22	EV14090107-13	EV14120151-02 EV14120162-13
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/15/2014	12/19/2014	9/16/2014	12/17/2014	9/17/2014	12/18/2014
VOCs (µg/L)														
Method EPA-8260														
Dichlorodifluoromethane	1,600		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200		25 U	25 U	NS	NS	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	2.0 U	0.014 U	NS	NS	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U
Methylene Chloride	4.6	0.68	5.0 U	0.68 U	NS	NS	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U
Acrylonitrile	0.0572	0.0572	10 U	0.057 U	NS	NS	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800		10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480		NA	2.0 U	NS	NS	NA	2.0 U	NA	2.0 U	NA	2.0 U	NA	2.0 U
2,2-Dichloropropane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	2.0 U	0.014 U	NS	NS	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U
Benzene	1.2	0.028	2.0 U	0.028 U	NS	NS	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U
Dibromomethane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	NS	NS	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640		10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	--		10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	2.0 U	0.023 U	NS	NS	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U
1,2-Dibromoethane (EDB)	0.022		0.01 U	0.010 U	NS	NS	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U
Chlorobenzene	100		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600		4.0 U	4.0 U	NS	NS	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	NS	NS	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	8.1		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	10 U	0.10 U	NS	NS	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U
Hexachlorobutadiene	0.44		2.0 U	0.069 U	NS	NS	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U
1,2,3-Trichlorobenzene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-15	MW-15	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-100	MW-100	MW-101	MW-101
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-08	EV14120151-05 EV14120162-15	EV14090107-09	EV14120151-07 EV14120162-21	EV14090107-10	EV14120151-08 EV14120162-18	EV14090080-02 EV14090107-11	EV14120162-02	EV14090091-09 EV14090107-12	EV14120143-03 EV14120162-22	EV14090107-13	EV14120151-02 EV14120162-13
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/15/2014	12/19/2014	9/16/2014	12/17/2014	9/17/2014	12/18/2014
VOCs (µg/L)														
Method EPA-8260SIM (m)														
Vinyl Chloride	0.031	0.031	0.20 U	0.031 U	NS	NS	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U
Carbon Tetrachloride	0.23		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4		0.10 U	0.14 U	NS	NS	0.10 U	0.14 U	0.10 U	0.14 U	**1.2**	**1.2**	0.10 U	0.14 U
Trichloroethene (TCE)	2.5		0.020 U	0.054 U	NS	NS	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U
1,2-Dichloropropane	0.50		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34		2.0 U	0.058 U	NS	NS	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U
1,1,2-Trichloroethane	0.59		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5		0.10 U	0.10 U	NS	NS	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L)														
Method EPA-8270														
Pyridine	8.0		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.5 U	1.4 U	NS	NS	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U
Phenol	2,400		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.94 U	0.87 U	NS	NS	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.89 U	0.94 U	0.89 U
2-Chlorophenol	40		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**110**	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	2.0 U	1.9 U	NS	NS	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Hexachloroethane	2.0	2.0	2.0 U	1.9 U	NS	NS	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Nitrobenzene	16		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000		10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	2.0 U	1.8 U	NS	NS	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U
2,6-Dichlorophenol	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	2.0 U	0.83 U	NS	NS	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.85 U	2.0 U	0.85 U
2,4,5-Trichlorophenol	800		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.8 U	1.7 U	NS	NS	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U
3-Nitroaniline	--		5.0 U	5.0 U	NS	NS	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32		10 U	10 U	NS	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.78 U	0.72 U	NS	NS	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.73 U	0.78 U	0.73 U
2,3,4,6-Tetrachlorophenol	480		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	2.0 U	1.5 U	NS	NS	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U
4-Bromophenyl-Phenylether	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	--		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-15	MW-15	MW-16	MW-16	MW-17	MW-17	MW-18	MW-18	MW-100	MW-100	MW-101	MW-101
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-08	EV14120151-05 EV14120162-15	EV14090107-09	EV14120151-07 EV14120162-21	EV14090107-10	EV14120151-08 EV14120162-18	EV14090080-02 EV14090107-11	EV14120162-02	EV14090091-09 EV14090107-12	EV14120143-03 EV14120162-22	EV14090107-13	EV14120151-02 EV14120162-13
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/17/2014	12/18/2014	9/15/2014	12/19/2014	9/16/2014	12/17/2014	9/17/2014	12/18/2014
Di-N-Butylphthalate	1,600		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	**13**	1.9 U	NS	NS	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	2.0 U	0.75 U	NS	NS	2.0 U	0.75 U	2.0 U	**32**	2.0 U	0.76 U	2.0 U	**30**
Di-N-Octylphthalate	160		2.0 U	2.0 U	NS	NS	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L) Method EPA-8270 SIM														
Naphthalene	160		0.020 U	**0.037**	**0.051**	NS	**0.025**	0.013 U	0.020 U	0.013 U	0.020 U	0.014 U	**0.060**	**0.014**
2-Methylnaphthalene	32		0.020 U	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5		0.020 U	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	--		0.020 U	0.020 U	0.020 U	NS	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650		0.020 U	0.014 U	0.020 U	NS	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U
Fluorene	640		0.020 U	0.0090 U	0.020 U	NS	0.020 U	**0.010**	0.020 U	**0.012**	0.020 U	0.0092 U	0.020 U	0.0092 U
Pentachlorophenol	0.23	0.23	0.13 U	0.12 U	0.13 U	NS	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U
Phenanthrene	--		0.020 U	0.013 U	0.020 U	NS	0.020 U	0.013 U	0.020 U	**0.015**	0.020 U	0.014 U	0.020 U	0.014 U
Anthracene	4,800		0.020 U	0.01 U	0.020 U	NS	0.020 U	0.01 U	0.020 U	**0.015**	0.020 U	0.01 U	0.020 U	0.01 U
Fluoranthene	86		0.020 U	0.0092 U	0.020 U	NS	0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0093 U	0.020 U	0.0093 U
Pyrene	480		0.020 U	**0.028**	0.020 U	NS	0.020 U	**0.016**	0.020 U	0.01 U	0.020 U	0.011 U	0.020 U	0.011 U
Benzo[A]Anthracene	0.009	0.009	0.020 U	0.017 U	0.020 U	NS	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U
Chrysene	0.80	0.80	0.020 U	0.018 U	0.020 U	NS	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U
Benzo[B]Fluoranthene	0.007	0.007	0.020 U	0.0068 U	0.020 U	NS	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U
Benzo[K]Fluoranthene	0.024	0.024	0.020 U	0.013 U	0.020 U	NS	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	0.027 U	0.029 U	NS	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.016	0.016	0.020 U	0.014 U	0.020 U	NS	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	0.011 U	0.012 U	NS	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U
Benzo[G,H,I]Perylene	--		0.020 U	0.019 U	0.020 U	NS	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U
cPAH TEQ (o)	0.10		ND	ND	ND	NS	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:	Preliminary Screening Levels (a)	Targeted ALS QLs (b)	MW-102	MW-102	MW-103	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106-Dup	MW-106	MW-106-Dup
Laboratory ID(S):			EV14090091-02 EV14090107-14	EV14120162-05	EV14090091-03 EV14090107-15	EV14120162-06	EV14090091-04 EV14090107-16	EV14120119-02 EV14120162-26	EV14090080-04 EV14090107-17	EV14120119-01 EV14120162-27	EV14090091-07 EV14090107-18	EV14090091-11 EV14090107-26	EV14120162-10	EV14120162-12
Sample Date:			9/16/2014	12/19/2014	9/16/2014	12/19/2014	9/16/2014	12/16/2014	9/15/2014	12/16/2014	9/16/2014	9/16/2014	12/19/2014	12/19/2014
TOTAL PETROLEUM HYDROCARBONS (µg/L)														
HCID														
Gas Range	--		130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U
Oil Range	--		310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	310 U	**>310**	**>310**
NWTPH-G (c)	1,000													
NWTPH-Dx														
Diesel Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**170**	**190**
Diesel Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**670**	**640**
Oil Range (w/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U
Oil Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**300**	**310**
DISSOLVED METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	**1.3**	0.45 U	**3.8**	**4.9**	**5.7**	**5.4**	**3.7**	**4.2**	**5.7**	**5.3**	**8.4**	**7.9**
Barium	1,000		**21**	**27**	**50**	**55**	**49**	**48**	**54**	**62**	**45**	**45**	**140**	**140**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**22,000**	**26,000**	**35,000**	**43,000**	**36,000**	**37,000**	**29,000**	**37,000**	**28,000**	**29,000**	**76,000**	**77,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 U	NS	10 U	NS	10 U	NS	10 U	10 UJ	NS	NS
Iron	300		**4200**	**5400**	**22,000**	**29,000**	**26,000**	**27,000**	**20,000**	**30,000**	**7000**	**6900**	**56,000**	**56,000**
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U
Magnesium	--		**8300**	**9900**	**12,000**	**15,000**	**12,000**	**13,000**	**9100**	**12,000**	**11,000**	**11,000**	**23,000**	**23,000**
Manganese	50		**710**	**720**	**2500**	**2900**	**2300**	**2100**	**2700**	**2900**	**2000**	**1900**	**5700**	**5600**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	1.0 U	0.20 U	0.20 U
Sodium	20,000		**14,000**	**16,000**	**22,000**	**23,000**	**18,000**	**18,000**	**28,000**	**16,000**	**57,000**	**62,000**	**30,000**	**30,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U
TOTAL METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196														
Arsenic	0.45	0.45	1.0 U	0.45 U	**3.5**	**5.3**	**5.8**	**4.8**	**3.7**	**3.9**	**5.2**	**5.1**	**7.9**	**8**
Barium	1,000		**22**	**27**	**53**	**58**	**51**	**56**	**60**	**64**	**46**	**45**	**140**	**140**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**22,000**	**25,000**	**36,000**	**43,000**	**36,000**	**37,000**	**29,000**	**38,000**	**27,000**	**28,000**	**75,000**	**76,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 U	NS	10 U	NS	10 U	NS	10 U	10 UJ	NS	NS
Iron	300		**4700**	**5300**	**22,000**	**29,000**	**27,000**	**27,000**	**20,000**	**31,000**	**7300**	**6800**	**57,000**	**55,000**
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	**1.0**	**1.7**	1.0 U	0.28 U	1.0 U	1.0 U	0.28 U	0.28 U
Magnesium	--		**8900**	**9300**	**13,000**	**15,000**	**13,000**	**13,000**	**9600**	**12,000**	**10,000**	**11,000**	**23,000**	**23,000**
Manganese	50		**740**	**710**	**2500**	**2900**	**2400**	**2000**	**2700**	**2900**	**1800**	**1800**	**5500**	**5400**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	1.0 U	0.20 U	0.20 U
Sodium	20,000		**15,000**	**14,000**	**23,000**	**23,000**	**18,000**	**18,000**	**35,000**	**17,000**	**64,000**	**65,000**	**30,000**	**31,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.20 U	0.11 U	0.11 U
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)	--		**190**	**190**	**230**	**300**	**220**	**250**	**900**	**220**	**320**	**320**	**460**	**490**
Chloride (EPA-300.0)	230		**11**	**11**	**19**	**24**	**18**	**18**	**18**	**17**	**18**	**18**	**17**	**19**
Fluoride (EPA-300.0)	0.64		**0.26**	**0.28**	**0.24**	**0.46**	**0.19**	**0.26**	**0.22**	0.16 U	**0.51**	**0.37**	**0.26**	**0.24**
Nitrate as N (EPA-300.0)	10		0.034 U	0.034 U	0.034 U	0.034 U	**0.036**	0.034 U	**0.081**	0.034 U	**0.043** J	**0.12** J	0.034 U	0.034 U
Nitrite as N (EPA-300.0)	1.0		0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U	0.043 U
Sulfate (EPA-300.0)	--		**13**	**10**	**0.30**	**0.29**	0.26 U	0.26 U	**2.5**	0.26 U	**20**	**20**	**0.29**	**0.31**
Ammonia (EPA-350.1)	--		**2.5**	**2.2**	**3.1**	**2.0**	**2.0**	**2.1**	**0.13**	**1.7**	**5.3**	**5.6**	**9.0**	**9.0**
Alkalinity as CaCO3, Total (SM2320B)	--		**130**	**130**	**220**	**210**	**200**	**200**	**220**	**190**	**280**	**280**	**400**	**400**
Bicarbonate as CaCO3 (SM2320B)	--		**130**	**130**	**220**	**210**	**200**	**200**	**220**	**190**	**280**	**280**	**400**	**400**
Total Organic Carbon (TOC) (SM5310C)	--		**1.9**	**1.5**	**4.0**	**4.3**	**4.9**	**4.1**	**6.2**	**5.3**	**5.8**	**5.8**	**11**	**11**

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-102	MW-102	MW-103	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106-Dup	MW-106	MW-106-Dup
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-02 EV14090107-14	EV14120162-05	EV14090091-03 EV14090107-15	EV14120162-06	EV14090091-04 EV14090107-16	EV14120119-02 EV14120162-26	EV14090080-04 EV14090107-17	EV14120119-01 EV14120162-27	EV14090091-07 EV14090107-18	EV14090091-11 EV14090107-26	EV14120162-10	EV14120162-12
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/19/2014	9/16/2014	12/19/2014	9/16/2014	12/16/2014	9/15/2014	12/16/2014	9/16/2014	9/16/2014	12/19/2014	12/19/2014
FIELD PARAMETERS														
Temperature (°C)	--		15.79	14.90	16.51	14.87	16.86	14.51	17.87	14.57	19.57	19.72	19.42	19.42
Specific Conductivity (uS/cm)	--		319	363	521	634	501	368	422	363	640	637	1219	1216
Dissolved Oxygen (mg/L)	--		0.62	0.25	1.03	0.28	0.93	18.65	0.56	1.16	0.55	0.50	0.24	0.25
pH (S.U.)	6.5 to 8.5		5.93	7 (f)	7.26	7 (f)	7.62	6.43	5.34	6.38	5.90	5.96	7 (f)	7 (f)
Oxidation Reduction Potential (mV)	--		-178.8	-65.0	-333.9	-85.6	-377.5	-83.3	-15.7	-85.6	6.3	-3.0	-102.2	-102.5
Turbidity (NTU)	--		97.45	3.24	17.37	3.42	18.34	6.69	15.4	6.82	14.7	13.5	2.23	3.01
PESTICIDES (µg/L) **Method EPA-8081**														
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
G-BHC (Lindane)	0.019	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Heptachlor	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Aldrin	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Heptachlor Epoxide	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Chlordane	0.20	0.20	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan I (g)	0.056		0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDE	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Dieldrin	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Endrin	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDD	0.01	0.01	0.011 U	0.010 U	**0.15**	**0.12**	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan II (g)	0.056		0.011 U	0.011 U	0.017 U	0.019 U	0.011 U	0.011 U	0.014 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
4,4'-DDT	0.01	0.01	0.011 U	0.010 U	**0.090**	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Endrin Aldehyde (h)	0.01	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Endosulfan Sulfate (g)	0.056		0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Methoxychlor	0.030	0.01	0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
Hexachlorobenzene (i)	0.01	0.01	2.0 U	0.010 U	2.0 U	0.010 U	2.0 U	0.011 U	2.0 U	0.011 U	2.0 U	2.0 U	0.010 U	0.010 U
Toxaphene	0.50	0.50	0.51 U	0.50 U	0.51 U	0.50 U	0.52 U	0.52 U	0.52 U	0.52 U	0.51 U	0.52 U	0.50 U	0.50 U
PCBs (µg/L) **Method EPA-8082**														
PCB-1016	0.005	0.005	0.0051 U	0.0050 U	0.0051 U	0.0050 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U
PCB-1221	--		0.011 U	0.010 U	0.011 U	0.010 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.011 U	0.010 U	0.010 U
PCB-1232	--		0.0051 U	0.0050 U	0.0051 U	0.0050 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U
PCB-1242	--		**0.0085**	0.0050 U	**0.022**	**0.0080**	**0.027**	**0.040**	**0.031**	**0.015**	**0.035**	**0.036**	**0.023** J	**0.017** J
PCB-1248	--		0.0051 U	0.0050 U	0.0051 U	0.0050 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U
PCB-1254	0.005	0.005	0.0051 U	0.0050 U	0.0066 U	0.0057 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U
PCB-1260	0.014	0.005	0.0051 U	0.0050 U	0.0051 U	0.0050 U	0.0052 U	0.0052 U	0.0052 U	0.0052 U	0.0051 U	0.0052 U	0.0050 U	0.0050 U
Total PCBs (j)	0.10		**0.0085**	ND	**0.022**	**0.0080**	**0.027**	**0.040**	**0.031**	**0.015**	**0.035**	**0.036**	**0.023** J	**0.017** J

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-102	MW-102	MW-103	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106-Dup	MW-106	MW-106-Dup
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-02 EV14090107-14	EV14120162-05	EV14090091-03 EV14090107-15	EV14120162-06	EV14090091-04 EV14090107-16	EV14120162-26	EV14090080-04 EV14090107-17	EV14120119-01 EV14120162-27	EV14090091-07 EV14090107-18	EV14090091-11 EV14090107-26	EV14120162-10	EV14120162-12
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/19/2014	9/16/2014	12/19/2014	9/16/2014	12/16/2014	9/15/2014	12/16/2014	9/16/2014	9/16/2014	12/19/2014	12/19/2014
VOCs (µg/L)														
Method EPA-8260														
Dichlorodifluoromethane	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200		25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	2.0 U	0.014 U	0.014 U
Methylene Chloride	4.6	0.68	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	5.0 U	0.68 U	0.68 U
Acrylonitrile	0.0572	0.0572	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U	10 U	10 U	0.057 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480		NA	2.0 U	NA	2.0 U	NA	2.0 U	NA	2.0 U	NA	NA	2.0 U	2.0 U
2,2-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	2.0 U	0.014 U	0.014 U
Benzene	1.2	0.028	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	2.0 U	0.028 U	0.028 U
Dibromomethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	--		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	2.0 U	0.023 U	0.023 U
1,2-Dibromoethane (EDB)	0.022		0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.01 U	0.010 U	0.010 U
Chlorobenzene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**2.8**	**3.0**
Ethylbenzene	70		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	8.1		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U	10 U	10 U	0.10 U	0.10 U
Hexachlorobutadiene	0.44		2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	2.0 U	0.069 U	0.069 U
1,2,3-Trichlorobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-102	MW-102	MW-103	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106-Dup	MW-106	MW-106-Dup
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-02 EV14090107-14	EV14120162-05	EV14090091-03 EV14090107-15	EV14120162-06	EV14090091-04 EV14090107-16	EV14120119-02 EV14120162-26	EV14090080-04 EV14090107-17	EV14120119-01 EV14120162-27	EV14090091-07 EV14090107-18	EV14090091-11 EV14090107-26	EV14120162-10	EV14120162-12
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/19/2014	9/16/2014	12/19/2014	9/16/2014	12/16/2014	9/15/2014	12/16/2014	9/16/2014	9/16/2014	12/19/2014	12/19/2014
VOCs (µg/L)														
Method EPA-8260SIM (m)														
Vinyl Chloride	0.031	0.031	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.20 U	**0.38**	**0.39**
Carbon Tetrachloride	0.23		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4		0.10 U	0.14 U	0.10 U	0.14 U	0.10 U	0.14 U	0.10 U	0.14 U	0.10 U	0.10 U	0.14 U	0.14 U
Trichloroethene (TCE)	2.5		0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.020 U	0.054 U	0.054 U
1,2-Dichloropropane	0.50		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34		2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	2.0 U	0.058 U	0.058 U
1,1,2-Trichloroethane	0.59		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L)														
Method EPA-8270														
Pyridine	8.0		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U
Phenol	2,400		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.94 U	0.87 U	0.87 U
2-Chlorophenol	40		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U
Hexachloroethane	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U
Nitrobenzene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	--		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000		10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	2.0 U	1.8 U	1.8 U
2,6-Dichlorophenol	--		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	--		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	2.0 UJ	0.83 U	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	2.0 U	0.83 U	0.83 U
2,4,5-Trichlorophenol	800		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U
3-Nitroaniline	--		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32		10 UJ	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	--		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.78 U	0.72 U	0.72 U
2,3,4,6-Tetrachlorophenol	480		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	--		2.0 UJ	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	**4.2**	**3.6**
Azobenzene	1.63	1.63	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	2.0 U	1.5 U	1.5 U
4-Bromophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-102	MW-102	MW-103	MW-103	MW-104	MW-104	MW-105	MW-105	MW-106	MW-106-Dup	MW-106	MW-106-Dup
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090091-02 EV14090107-14	EV14120162-05	EV14090091-03 EV14090107-15	EV14120162-06	EV14090091-04 EV14090107-16	EV14120119-02 EV14120162-26	EV14090080-04 EV14090107-17	EV14120119-01 EV14120162-27	EV14090091-07 EV14090107-18	EV14090091-11 EV14090107-26	EV14120162-10	EV14120162-12
Sample Date:	Levels (a)	QLs (b)	9/16/2014	12/19/2014	9/16/2014	12/19/2014	9/16/2014	12/16/2014	9/15/2014	12/16/2014	9/16/2014	9/16/2014	12/19/2014	12/19/2014
Di-N-Butylphthalate	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	2.0 U	1.9 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	2.0 U	**26**	2.0 U	**38**	2.0 U	0.75 U	2.0 U	0.75 U	2.0 U	2.0 U	**60** J	**81** J
Di-N-Octylphthalate	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L) **Method EPA-8270 SIM**														
Naphthalene	160		0.020 U	**0.015**	**0.042**	**0.020**	**0.039**	0.013 U	**0.034**	**0.082**	**0.064**	**0.074**	0.013 U	0.013 U
2-Methylnaphthalene	32		**0.029**	**0.028**	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.055** J	**0.079** J	**0.052**	**0.045**
1-Methylnaphthalene	1.5		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	**0.080** J	**0.12** J	**0.22**	**0.19**
Acenaphthylene	--		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650		0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	**0.097**	**0.16**	**0.042**	**0.056**	**0.13** J	**0.10** J
Fluorene	640		0.020 U	0.0090 U	0.020 U	0.0090 U	0.020 U	0.0090 U	0.020 U	0.0090 U	0.020 U	0.020 U	0.0090 U	0.0090 U
Pentachlorophenol	0.23	0.23	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.13 U	0.12 U	0.12 U
Phenanthrene	--		0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	**0.030**	**0.031**	0.013 U	**0.025**
Anthracene	4,800		0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	**0.010**	0.020 U	**0.010**	0.020 U	**0.036**	0.01 U	0.01 U
Fluoranthene	86		0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	**0.018**	0.020 U	0.020 U	**0.010**	**0.012**
Pyrene	480		0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	**0.015**	0.020 U	0.020 U	0.01 U	**0.011**
Benzo[A]Anthracene	0.009	0.009	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.020 U	0.017 U	0.017 U
Chrysene	0.80	0.80	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.020 U	0.018 U	0.018 U
Benzo[B]Fluoranthene	0.007	0.007	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.020 U	0.0068 U	0.0068 U
Benzo[K]Fluoranthene	0.024	0.024	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.020 U	0.013 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.029 U	0.027 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.016	0.016	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.020 U	0.014 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.012 U	0.011 U	0.011 U
Benzo[G,H,I]Perylene	--		0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.020 U	0.019 U	0.019 U
cPAH TEQ (o)	0.10		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-107	MW-107	MW-108	MW-108	MW-109	MW-109
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-19	EV14120119-05 EV14120162-24	EV14090107-20	EV14120119-03 EV14120162-28 EV14120143-02	EV14090091-08 EV14090107-21	EV14120162-01
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/16/2014	9/17/2014	12/16/2014	9/16/2014	12/19/2014
TOTAL PETROLEUM HYDROCARBONS (µg/L)								
HCID								
Gas Range	--		130 U	130 U	130 U	130 U	130 U	130 U
Diesel Range	--		310 U	310 U	310 U	310 U	310 U	310 U
Oil Range	--		310 U	310 U	310 U	310 U	310 U	310 U
NWTPH-G (c)	1,000							
NWTPH-Dx								
Diesel Range (w/SGC)	500		NA	NA	NA	NA	NA	NA
Diesel Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA
Oil Range (w/SGC)	500		NA	NA	NA	NA	NA	NA
Oil Range (wo/SGC)	500		NA	NA	NA	NA	NA	NA
DISSOLVED METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196								
Arsenic	0.45	0.45	**3.6**	**2.7**	**4.8**	**5.1**	1.0 U	0.45 U
Barium	1,000		**62**	**56**	**53**	**59**	**11**	**11**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**38,000**	**36,000**	**36,000**	**40,000**	**26,000**	**28,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 U	NS	10 U	NS
Iron	300		**24,000**	**22,000**	**29,000**	**32,000**	50 U	50 U
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**13,000**	**13,000**	**12,000**	**14,000**	**9900**	**9500**
Manganese	50		**2400**	**1900**	**2300**	**2200**	**860**	**110**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**21,000**	**20,000**	**16,000**	**18,000**	**14,000**	**13,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
TOTAL METALS (µg/L) Methods EPA-200.8/EPA-7470/EPA-7196								
Arsenic	0.45	0.45	**3.5**	**3.4**	**4.5**	**4.8**	1.0 U	0.45 U
Barium	1,000		**63**	**60**	**53**	**55**	**13**	**11**
Cadmium	5.0		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Calcium	--		**39,000**	**38,000**	**37,000**	**39,000**	**27,000**	**29,000**
Chromium (d)	57		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI) (e)	10		10 U	NS	10 U	NS	10 U	NS
Iron	300		**24,000**	**24,000**	**29,000**	**30,000**	**280**	**92**
Lead	0.54		1.0 U	0.28 U	1.0 U	0.28 U	1.0 U	0.28 U
Magnesium	--		**14,000**	**13,000**	**13,000**	**14,000**	**10,000**	**9600**
Manganese	50		**2400**	**2000**	**2400**	**2100**	**890**	**150**
Selenium	5.0		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Silver	0.32		1.0 U	0.20 U	1.0 U	0.20 U	1.0 U	0.20 U
Sodium	20,000		**22,000**	**21,000**	**17,000**	**18,000**	**15,000**	**13,000**
Mercury	0.11	0.11	0.20 U	0.11 U	0.20 U	0.11 U	0.20 U	0.11 U
CONVENTIONALS (mg/L)								
Total Dissolved Solids (SM2540C)	--		**180**	**280**	**260**	**300**	**200**	**140**
Chloride (EPA-300.0)	230		**32**	**18**	**19**	**18**	**10**	**9.5**
Fluoride (EPA-300.0)	0.64		0.16 U	**0.22**	**0.23**	**0.25**	**0.28**	0.16 U
Nitrate as N (EPA-300.0)	10		0.034 U	0.034 U	**0.059**	0.034 U	**0.94**	**0.29**
Nitrite as N (EPA-300.0)	1.0		0.043 U	0.043 U	0.043 U	0.043 U	**0.14**	0.043 U
Sulfate (EPA-300.0)	--		0.26 U	0.26 U	0.26 U	0.26 U	**13**	**16**
Ammonia (EPA-350.1)	--		**4.0**	**3.6**	**3.0**	**2.8**	**0.18**	**0.15**
Alkalinity as CaCO3, Total (SM2320B)	--		**220**	**200**	**210**	**210**	**130**	**110**
Bicarbonate as CaCO3 (SM2320B)	--		**220**	**200**	**210**	**210**	**130**	**110**
Total Organic Carbon (TOC) (SM5310C)	--		**4.6**	**3.5**	**5.2**	**4.7**	**1.1**	**1.2**

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-107	MW-107	MW-108	MW-108	MW-109	MW-109
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-19	EV14120119-05 EV14120162-24	EV14090107-20	EV14120119-03 EV14120162-28 EV14120143-02	EV14090091-08 EV14090107-21	EV14120162-01
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/16/2014	9/17/2014	12/16/2014	9/16/2014	12/19/2014
FIELD PARAMETERS								
Temperature (°C)	--		15.46	14.71	15.96	14.58	18.46	15.21
Specific Conductivity (uS/cm)	--		1115	362	415	384	270	213
Dissolved Oxygen (mg/L)	--		1.12	0.69	0.57	1.61	0.90	2.57
pH (S.U.)	6.5 to 8.5		5.81	6.28	5.46	6.26	5.73	6.59
Oxidation Reduction Potential (mV)	--		-46.4	-85.9	84.6	-80.3	18.3	16.0
Turbidity (NTU)	--		3.7	4.65	16.4	6.79	61.8	9.20
PESTICIDES (µg/L) **Method EPA-8081**								
hexachlorocyclohexane, alpha (A-BHC)	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
G-BHC (Lindane)	0.019	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
hexachlorocyclohexane; beta (B-BHC)	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Heptachlor	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
hexachlorocyclohexane, delta (D-BHC)	0.012	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Aldrin	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Heptachlor Epoxide	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Chlordane	0.20	0.20	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Endosulfan I (g)	0.056		0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
4,4'-DDE	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Dieldrin	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Endrin	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
4,4'-DDD	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Endosulfan II (g)	0.056		0.013 U	0.010 U	0.011 U	0.011 U	0.018 U	0.021 U
4,4'-DDT	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Endrin Aldehyde (h)	0.01	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Endosulfan Sulfate (g)	0.056		0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Methoxychlor	0.030	0.01	0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
Hexachlorobenzene (i)	0.01	0.01	2.0 U	0.010 U	2.0 U	0.011 U	2.0 U	0.010 U
Toxaphene	0.50	0.50	0.50 U	0.50 U	0.51 U	0.52 U	0.52 U	0.50 U
PCBs (µg/L) **Method EPA-8082**								
PCB-1016	0.005	0.005	0.0050 U	0.0050 U	0.0051 U	0.0051 U	0.0052 U	0.0050 U
PCB-1221	--		0.01 U	0.010 U	0.011 U	0.011 U	0.011 U	0.010 U
PCB-1232	--		0.0050 U	0.0050 U	0.0051 U	0.0051 U	0.0052 U	0.0050 U
PCB-1242	--		**0.021**	**0.018**	**0.035**	**0.034**	0.0052 U	0.0050 U
PCB-1248	--		0.0050 U	0.0050 U	0.0051 U	0.0051 U	0.0052 U	0.0050 U
PCB-1254	0.005	0.005	0.0050 U	0.0050 U	0.0051 U	0.0051 U	0.0052 U	0.0050 U
PCB-1260	0.014	0.005	0.0050 U	0.0050 U	0.0051 U	0.0051 U	0.0052 U	0.0050 U
Total PCBs (j)	0.10		**0.021**	**0.018**	**0.035**	**0.034**	ND	ND

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-107	MW-107	MW-108	MW-108	MW-109	MW-109
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-19	EV14120119-05 EV14120162-24	EV14090107-20	EV14120119-03 EV14120162-28 EV14120143-02	EV14090091-08 EV14090107-21	EV14120162-01
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/16/2014	9/17/2014	12/16/2014	9/16/2014	12/19/2014
VOCs (µg/L) **Method EPA-8260**								
Dichlorodifluoromethane	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane	11		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane	2,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Acetone	7,200		25 U	25 U	25 U	25 U	25 U	25 U
1,1-Dichloroethene	0.057	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U
Methylene Chloride	4.6	0.68	5.0 U	0.68 U	5.0 U	0.68 U	5.0 U	0.68 U
Acrylonitrile	0.0572	0.0572	10 U	0.057 U	10 U	0.057 U	10 U	0.057 U
Methyl T-Butyl Ether (MTBE)	20		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone (MEK)	4,800		10 U	10 U	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexane (k)	480		NA	2.0 U	NA	2.0 U	NA	2.0 U
2,2-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1-Trichloroethane	200		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	0.38	0.014	2.0 U	0.014 U	2.0 U	0.014 U	2.0 U	0.014 U
Benzene	1.2	0.028	2.0 U	0.028 U	2.0 U	0.028 U	2.0 U	0.028 U
Dibromomethane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane	0.080	0.059	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U
4-Methyl-2-Pentanone (MIBK)	640		10 U	10 U	10 U	10 U	10 U	10 U
Toluene	640		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone	--		10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichloropropane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethene (PCE)	0.69	0.023	2.0 U	0.023 U	2.0 U	0.023 U	2.0 U	0.023 U
1,2-Dibromoethane (EDB)	0.022		0.01 U	0.010 U	0.01 U	0.010 U	0.01 U	0.010 U
Chlorobenzene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	70		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene (l)	1,600		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Styrene	100		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform	4.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene (cumene)	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane	0.023	0.023	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U	0.023 U
Bromobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene	80		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene	320		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	8.1		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	420		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane	0.0997	0.0997	10 U	0.10 U	10 U	0.10 U	10 U	0.10 U
Hexachlorobutadiene	0.44		2.0 U	0.069 U	2.0 U	0.069 U	2.0 U	0.069 U
1,2,3-Trichlorobenzene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-107	MW-107	MW-108	MW-108	MW-109	MW-109
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-19	EV14120119-05 EV14120162-24	EV14090107-20	EV14120119-03 EV14120162-28 EV14120143-02	EV14090091-08 EV14090107-21	EV14120162-01
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/16/2014	9/17/2014	12/16/2014	9/16/2014	12/19/2014
VOCs (µg/L) **Method EPA-8260SIM (m)**								
Vinyl Chloride	0.031	0.031	0.20 U	0.031 U	0.20 U	0.031 U	0.20 U	0.031 U
Carbon Tetrachloride	0.23		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroform	1.4		0.10 U	0.14 U	0.10 U	0.14 U	**0.57**	0.14 U
Trichloroethene (TCE)	2.5		0.020 U	0.054 U	0.020 U	0.054 U	0.020 U	0.054 U
1,2-Dichloropropane	0.50		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Trans-1,3-Dichloropropene	0.34		2.0 U	0.058 U	2.0 U	0.058 U	2.0 U	0.058 U
1,1,2-Trichloroethane	0.59		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Dibromochloromethane	0.40		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,1,2-Tetrachloroethane	1.7		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1,2,2-Tetrachloroethane	0.17		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	1.5		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
SVOCs (µg/L) **Method EPA-8270**								
Pyridine	8.0		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine	1.51	1.51	1.5 U	1.4 U	1.5 U	1.4 U	1.5 U	1.4 U
Phenol	2,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Aniline	7.7		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether	0.94	0.94	0.94 U	0.87 U	0.94 U	0.87 U	0.94 U	0.89 U
2-Chlorophenol	40		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol	400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether	1,400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol (n)	400		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Hexachloroethane	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Nitrobenzene	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone	8.4		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Benzoic Acid	64,000		10 U	10 U	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol	24		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline (p-Chloroaniline)	1.89	1.89	2.0 U	1.8 U	2.0 U	1.8 U	2.0 U	1.8 U
2,6-Dichlorophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene	40		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol	1.4	0.90	2.0 U	0.83 U	2.0 U	0.83 U	2.0 U	0.85 U
2,4,5-Trichlorophenol	800		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate	270,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene	1.82	1.82	1.8 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U
3-Nitroaniline	--		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol	32		10 U	10 U	10 U	10 U	10 U	10 U
4-Nitrophenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran	16		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene	0.78	0.78	0.78 U	0.72 U	0.78 U	0.72 U	0.78 U	0.73 U
2,3,4,6-Tetrachlorophenol	480		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate	13,000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine	3.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene	1.63	1.63	2.0 U	1.5 U	2.0 U	1.5 U	2.0 U	1.5 U
4-Bromophenyl-Phenylether	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole	--		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:			MW-107	MW-107	MW-108	MW-108	MW-109	MW-109
Laboratory ID(S):	Preliminary Screening	Targeted ALS	EV14090107-19	EV14120119-05 EV14120162-24	EV14090107-20	EV14120119-03 EV14120162-28 EV14120143-02	EV14090091-08 EV14090107-21	EV14120162-01
Sample Date:	Levels (a)	QLs (b)	9/17/2014	12/16/2014	9/17/2014	12/16/2014	9/16/2014	12/19/2014
Di-N-Butylphthalate	1,600		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate	8.3		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
3,3'-Dichlorobenzidine	2.0	2.0	2.0 U	1.9 U	2.0 U	1.9 U	2.0 U	1.9 U
Bis(2-Ethylhexyl)Phthalate	1.2	0.81	2.0 U	0.75 U	2.0 U	0.75 U	2.0 U	0.76 U
Di-N-Octylphthalate	160		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
PAHs (µg/L) **Method EPA-8270 SIM**								
Naphthalene	160		0.020 U	**0.060**	0.020 U	**0.053**	0.020 U	0.014 U
2-Methylnaphthalene	32		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
1-Methylnaphthalene	1.5		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthylene	--		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Acenaphthene	650		0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U
Fluorene	640		0.020 U	0.0090 U	0.020 U	**0.018**	0.020 U	0.0092 U
Pentachlorophenol	0.23	0.23	0.13 U	0.12 U	0.13 U	0.12 U	0.13 U	0.12 U
Phenanthrene	--		0.020 U	**0.015**	0.020 U	0.013 U	0.020 U	0.014 U
Anthracene	4,800		0.020 U	**0.015**	0.020 U	**0.013**	0.020 U	**0.012**
Fluoranthene	86		0.020 U	0.0092 U	0.020 U	0.0092 U	0.020 U	0.0093 U
Pyrene	480		0.020 U	0.01 U	0.020 U	0.01 U	0.020 U	0.011 U
Benzo[A]Anthracene	0.009	0.009	0.020 U	0.017 U	0.020 U	0.017 U	0.020 U	0.017 U
Chrysene	0.80	0.80	0.020 U	0.018 U	0.020 U	0.018 U	0.020 U	0.018 U
Benzo[B]Fluoranthene	0.007	0.007	0.020 U	0.0068 U	0.020 U	0.0068 U	0.020 U	0.0068 U
Benzo[K]Fluoranthene	0.024	0.024	0.020 U	0.013 U	0.020 U	0.013 U	0.020 U	0.013 U
Benzo[A]Pyrene	0.0104	0.0104	0.029 U	0.027 U	0.029 U	0.027 U	0.029 U	0.027 U
Indeno[1,2,3-Cd]Pyrene	0.016	0.016	0.020 U	0.014 U	0.020 U	0.014 U	0.020 U	0.014 U
Dibenz[A,H]Anthracene	0.0127	0.0127	0.012 U	0.011 U	0.012 U	0.011 U	0.012 U	0.011 U
Benzo[G,H,I]Perylene	--		0.020 U	0.019 U	0.020 U	0.019 U	0.020 U	0.019 U
cPAH TEQ (o)	0.10		ND	ND	ND	ND	ND	ND

TABLE 11
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS (2014-2015)
CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

°C = degrees Celsius
cPAH = carcinogenic polycyclic aromatic hydrocarbons
EPA = U.S. Environmental Protection Agency
mg/L = milligrams per liter
mV = millivolts
NA = Not Analyzed
ND = Not Detected
NS = Not Sampled
NTU = nephelometric turbidity units
PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
PQL = practical quantitation limit
QL = quantitation limit
SGC = silica gel cleanup.
S.U. = standard units
SVOCs = semivolatile organic compounds
TEQ = Toxicity Equivalency
VOCs = volatile organic compounds
w/SGC = with silica gel cleanup
wo/SGC = without silica gel cleanup
µg/L = micrograms per liter
µS/cm = microsiemens per centimeter

U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
Bold = Detected compound.
Green Box = Exceedance of preliminary screening level (see Tables 6 through 8)

(a) Preliminary screening levels developed using methodology presented in the draft Site work plan (Landau Associates 2014) and subsequent revisions per discussions with Ecology (see Tables 6 through 8).
(b) Targeted laboratory QL (i.e, laboratory PQL) used for results comparison when the laboratory's standard reporting limit could not meet the preliminary screening level (see Table 8).
(c) Preliminary screening level is 1,000 µg/L when benzene is not detectable, 800 µg/L when benzene is present.
(d) Preliminary screening level presented is for Chromium III.
(e) Hexavalent chromium was not analyzed at all locations during the September sampling event; based on the September results and holding time requirements, hexavalent chromium was not sampled for during the December sampling event.
(f) pH strips used to measure pH value, due to field meter issues.
(g) Endosulfan isomers compared to preliminary screening level based on total Endosulfan criteria.
(h) Endrin isomers compared to preliminary screening level based on total Endrin criteria.
(i) Hexachlorobenzene analyzed by EPA Method 8270 for September sampling event.
(j) Total PCBs represents the sum of detected concentrations of the seven individual PCB Aroclors.
(k) Hexane was not analyzed for during the September sampling event due to issues at the laboratory.
(l) m,p-xylene results compared to m-or p-xylene preliminary screening levels (both individual compounds have the same preliminary screening level).
(m) Compounds analyzed by EPA Method 8260 for September sampling event.
(n) 3&4-Methylphenol compared to 3-Methylphenol preliminary screening level (the more conservative value of the two individual compound preliminary screening levels).
(o) cPAH TEQ calculated following the method outlined in WAC 173-340-708(8)(e).

TABLE 12
LANDFILL GAS MONITORING DATA - JANUARY 2015
CLOSED CITY OF YAKIMA LANDFILL SITE

Location	Time	Purged Volume (ft^3)	Stabilization Time (s)	CH_4 (%)	CO_2 (%)	O_2 (%)	Balance (%)	H_2 (ppm)	CO (ppm)	H_2S (ppm)	Differential Pressure (inch WC)	Notes
Ambient Air	10:00	--	--	0.0	0.2	20.6	79.1	low	0	0	--	
GP-1	10:01	0.545	262	1.41	17.7	0.0	81.4	low	0	0	0.9	Peak CH_4 = 1.4
GP-2	14:43	0.38	104	0.0	6.4	12.3	81.2	low	0	0	0.0	
GP-3	15:17	0.37	155	9.5	17.5	0.0	73.2	low	0	0	0.0	
GP-4	14:51	0.60	151	15.8	17.7	0.0	66.5	low	0	0	0.0	
GP-5	12:02	0.72	130	13.6	17.4	0.1	68.9	low	0	0	0.0	
GP-6	11:27	0.80	120	0.0	14.6	5.4	79.9	low	0	0	0.4	
GP-7	14:30	0.47	139	0.0	1.0	20.0	79.0	low	0	0	0.0	
GP-8	14:13	0.51	405	0.0	1.4	19.4	79.0	low	0	0	0.0	
GP-9	14:03	0.49	125	0.0	3.1	16.5	80.1	low	0	0	0.0	
GP-11	15:37	0.97	137	36.4	35.7	0.0	27.8	low	0	0	0.0	
GP-12	12:13	0.99	152	10.3	21.7	0.0	67.8	low	0	0	0.0	
GP-13	10:25	0.64	144	9.9	28.5	0.0	61.4	low	0	0	0.8	Peak CH_4 = 9.9
GP-14	16:53	0.53	94	0.0	2.0	18.3	79.6	low	0	0	0.0	
GP-15	16:41	0.61	114	0.0	1.2	18.9	79.8	low	0	0	0.1	
GP-16	15:50	0.69	126	0.1	1.9	18.2	80.0	low	0	0	0.0	
GP-17	16:15	0.69	84	0.0	1.7	18.3	80.0	low	0	0	0.0	
GP-18	16:25	0.71	98	0.1	1.2	18.9	79.7	low	0	0	0.0	
GP-19	11:47	0.92	120	67.3	37.8	0.1	0.0	low	0	0	0.5	
GP-20	11:40	0.88	160	57.2	37.6	0.0	4.9	low	0	19	0.0	
GP-23	15:05	0.18	267	16.6	21.3	0.0	62.1	low	0	0	0.0	
GP-24	10:44	0.17	198	0.1	21.2	0.7	78.0	low	0	0	0.0	
GP-25	10:56	0.18	164	0.9	23.4	0.0	75.7	low	0	0	0.0	
GP-26	11:16	0.18	149	11.6	23.3	0.0	65.1	low	0	0	0.0	

Notes: GP-10 not located and assumed destroyed.

CH_4 = methane
CO = carbon monoxide
CO_2 = carbon dioxide
ft^3 = cubic feet
H_2 = hydrogen
H_2S = hydrogen sulfide
O_2 = oxygen
ppm = parts per million
s = seconds
WC = water column

APPENDIX A

Historical Investigation Data Summary

TABLE A-1
HISTORICAL FIELD PARAMETER MEASUREMENTS
CLOSED CITY OF YAKIMA MILL SITE
YAKIMA, WASHINGTON

Monitoring Well ID	Date Measured	pH (standard units)	Specific Conductance (micro mhos/cm)	Temperature (°C)
MW-1	7/29/1998	6.57	274	14.3
MW-3	7/29/1998	6.77	1770	17.1
MW-4	7/29/1998	6.54	318	15.0
MW-5	7/28/1998	7.08	359	16.4
MW-6	7/28/1998	6.59	325	16.4
MW-7	7/28/1998	6.64	643	17.1
MW-8	7/28/1998	6.84	611	18.1
MW-9	7/29/1998	6.58	253	16.1
MW-10	7/28/1998	6.91	348	14.1

TABLE A-2
2008 Groundwater and Surface Water Data

PARAMETERS	Units	Analytical Method	Groundwater Regulatory Standards MCL		MTCA A		MTCA B carcin.	non-carc.	MW-7 02/06/08		MW-7D 02/06/08		MW-8 02/06/08		MW-8D**** 8/13/2008		MW-9A 03/25/08		TRIP BLANK 02/05/08		TRIP BLANK 03/25/08		TRIP BLANK 08/13/08
FIELD DATA																							
Conductivity	µmhos/cm		700	**					561		- -		681		- -		319		- -		- -		- -
pH (units)	std units		6.5-8.5	**					NA		- -		NA		- -		6.79		- -		- -		- -
Temperature (C)	Celsius								15.77		- -		15.23		- -		14.70		- -		- -		- -
Dissolved Oxygen (mg/L)	mg/L								0.9		- -		3.61		- -		3.12		- -		- -		- -
TOTAL PETROLEUM HYDROCARBONS																							
Diesel Range Hydrocarbons	mg/L	NWTPH-Dx			0.5				0.25	U	0.25	U	0.25	U	- -		0.25	U	- -		- -		- -
Motor Oil	mg/L	NWTPH-Dx			0.5				0.50	U	0.50	U	0.50	U	- -		0.50	U	- -		- -		- -
Gasoline Range Hydrocarbons	mg/L	NWTPH-Gx			1				0.25	U	0.25	U	0.25	U	- -		0.25	U	0.25	U	0.25	U	- -
Benzene	µg/L	SW8021BMod	5		5		0.795	32	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Toluene	µg/L	SW8021BMod	1000		1000			640	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Ethylbenzene	µg/L	SW8021BMod	700		700			800	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
m,p-Xylene	µg/L	SW8021BMod	10000	*XY	1000	*XY		1600	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
o-Xylene	µg/L	SW8021BMod	10000	*XY	1000	*XY		1600	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
CONVENTIONALS																							
pH	std units	EPA 150.1	6.5-8.5	**					6.49		6.50		6.76		- -		6.77		- -		- -		- -
Alkalinity	mg/L CaCO3	SM 2320							274		274		306		- -		127		- -		- -		- -
Carbonate	mg/L CaCO3	SM 2320							1.0	U	1.0	U	1.0	U	- -		- -		- -		- -		- -
Bicarbonate	mg/L CaCO3	SM 2320							274		274		306		- -		- -		- -		- -		- -
Total Dissolved Solids	mg/L	EPA 160.1	500	**					336		318		333		- -		210		- -		- -		- -
Hydroxide	mg/L CaCO3	SM 2320							1.0	U	1.0	U	1.0	U	- -		- -		- -		- -		- -
Chloride	mg/L	EPA 325.2	250	**					19.4		19.0		32.8		- -		15.6		- -		- -		- -
N-Ammonia	mg-N/L	EPA 350.1M							6.35		6.18		21.2		- -		0.038		- -		- -		- -
N-Nitrate	mg-N/L	Calculated	10						0.050	U	0.050	U	0.196		- -		1.41		- -		- -		- -
N-Nitrite	mg-N/L	EPA 353.2	1						0.050	U	0.050	U	0.019		- -		0.223		- -		- -		- -
Nitrate + Nitrite	mg-N/L	EPA 353.2							0.050	U	0.050	U	0.215		- -		1.63		- -		- -		- -
Sulfate	mg/L	EPA 375.2	250	**					5.5		5.5		5.6		- -		17.9		- -		- -		- -
Total Organic Carbon	mg/L	EPA 415.1							6.51		6.47		8.77		- -		1.50	U	- -		- -		- -
TOTAL METALS																							
Arsenic	mg/L	SW6010B-Total	0.01		0.005		0.000058	0.0048	0.05	U	0.05	U	0.05	U	- -		0.05	U	- -		- -		- -
Barium	mg/L	SW6010B-Total	2					3.2	0.062		0.064		0.068		- -		0.404		- -		- -		- -
Cadmium	mg/L	SW6010B-Total	0.005		0.005			0.008	0.002	U	0.002	U	0.002	U	- -		0.002	U	- -		- -		- -
Calcium	mg/L	SW6010B-Total							43.3		45.5		37.2		- -		51.5		- -		- -		- -
Chromium	mg/L	SW6010B-Total	0.1	***	0.05			0.048	0.005	U	0.005	U	0.005	U	- -		0.278		- -		- -		- -
Iron	mg/L	SW6010B-Total	0.3	**					33.6		35.1		11.5		- -		96.8		- -		- -		- -
Lead	mg/L	SW6010B-Total	0.015		0.015				0.02	U	0.02	U	0.02	U	- -		0.02	U	- -		- -		- -
Manganese	mg/L	SW6010B-Total	0.05	**				2.2	2.26		2.36		2.24		- -		3.24		- -		- -		- -
Mercury	mg/L	SW7470A-Total	0.002		0.002			0.0048	0.0001	U	0.0001	U	0.0001	U	- -		0.0002		- -		- -		- -
Potassium	mg/L	SW6010B-Total							10.3		10.7		29.0		- -		10.3		- -		- -		- -
Selenium	mg/L	SW6010B-Total	0.05					0.08	0.05	U	0.05	U	0.05	U	- -		0.05	U	- -		- -		- -
Silver	mg/L	SW6010B-Total						0.08	0.003	U	0.003	U	0.003	U	- -		0.003	U	- -		- -		- -
Sodium	mg/L	SW6010B-Total							20.5		21.2		32.5		- -		21.1		- -		- -		- -
DISSOLVED METALS																							
Arsenic	mg/L	SW6010B-Diss	0.01		0.005		0.000058	0.0048	0.05	U	0.05	U	0.05	U	- -		0.05	U	- -		- -		- -
Barium	mg/L	SW6010B-Diss	2					3.2	0.069		0.071		0.072		- -		0.013		- -		- -		- -
Cadmium	mg/L	SW6010B-Diss	0.005		0.005			0.008	0.002	U	0.002	U	0.002	U	- -		0.002	U	- -		- -		- -
Calcium	mg/L	SW6010B-Diss							48.1		48.5		39.1		- -		29.4		- -		- -		- -
Chromium	mg/L	SW6010B-Diss	0.1	***	0.05			0.048	0.005	U	0.005	U	0.005	U	- -		0.005	U	- -		- -		- -
Iron	mg/L	SW6010B-Diss	0.3	**					37.5		37.7		12.2		- -		0.27		- -		- -		- -
Lead	mg/L	SW6010B-Diss	0.015		0.015				0.02	U	0.02	U	0.02	U	- -		0.02	U	- -		- -		- -
Manganese	mg/L	SW6010B-Diss	0.05	**				2.2	2.52		2.53		2.34		- -		0.872		- -		- -		- -
Mercury	mg/L	SW7470A-Diss	0.002		0.002			0.0048	0.0001	U	0.0001	U	0.0001	U	- -		0.0001	U	- -		- -		- -
Potassium	mg/L	SW6010B-Diss							11.4		11.3		29.9		- -		4.4		- -		- -		- -
Selenium	mg/L	SW6010B-Diss	0.05					0.08	0.05	U	0.05	U	0.05	U	- -		0.05	U	- -		- -		- -
Silver	mg/L	SW6010B-Diss						0.08	0.003	U	0.003	U	0.003	U	- -		0.003	U	- -		- -		- -
Sodium	mg/L	SW6010B-Diss							22.9		22.9		33.8		- -		15.7		- -		- -		- -
VOLATILE ORGANICS																							
Chloromethane	µg/L	SW8260					3.37		1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Bromomethane	µg/L	SW8260						11.2	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Vinyl Chloride	µg/L	SW8260	2		0.2		0.0292	24	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Chloroethane	µg/L	SW8260							1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Methylene Chloride	µg/L	SW8260			5				2.0	U	2.0	U	2.0	U	- -		2.0	U	2.0	U	2.0	U	- -
Acetone	µg/L	SW8260						800	5.0	U	5.0	U	5.0	U	- -		5.0	U	5.0	U	5.0	U	- -
Carbon Disulfide	µg/L	SW8260						800	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
1,1-Dichloroethene	µg/L	SW8260	7					400	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
1,1-Dichloroethane	µg/L	SW8260						800	1.0	U	1.0	U	**2.4**		- -		1.0	U	1.0	U	1.0	U	- -
trans-1,2-Dichloroethene	µg/L	SW8260						160	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
cis-1,2-Dichloroethene	µg/L	SW8260						80	1.0	U	1.0	U	1.0	U	- -		1.0	U	1.0	U	1.0	U	- -
Chloroform	µg/L	SW8260	100	*TH			7.17	80	1.0	U	1.0	U	1.0	U	- -		**3.3**		1.0	U	1.0	U	- -

Presentation as provided in Final Phase II Environmental Site Assessment, Former City of Yakima Municipal Landfill, Yakima, Washington, prepared by Parametrix, October 2008.

TABLE A-2
2008 Groundwater and Surface Water Data

PARAMETERS	Units	Analytical Method	Groundwater Regulatory Standards MCL		MTCA A		MTCA B carcin.	non-carc.	MW-7 02/06/08		MW-7D 02/06/08		MW-8 02/06/08		MW-8D**** 8/13/2008	MW-9A 03/25/08		TRIP BLANK 02/05/08		TRIP BLANK 03/25/08		TRIP BLANK 08/13/08	
1,2-Dichloroethane	µg/L	SW8260	5		5		0.481	160	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
2-Butanone	µg/L	SW8260							5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
1,1,1-Trichloroethane	µg/L	SW8260	200		200			7200	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Carbon Tetrachloride	µg/L	SW8260	5				0.337	5.6	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Vinyl Acetate	µg/L	SW8260						8000	5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
Bromodichloromethane	µg/L	SW8260	100	*TH			0.706	160	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,2-Dichloropropane	µg/L	SW8260					0.643		1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
cis-1,3-Dichloropropene	µg/L	SW8260					0.24	240	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Trichloroethene	µg/L	SW8260	5		5		0.11	2.4	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Dibromochloromethane	µg/L	SW8260					0.521	160	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,1,2-Trichloroethane	µg/L	SW8260	5				0.768	32	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Benzene	µg/L	SW8260	5		5		0.795	32	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
trans-1,3-Dichloropropene	µg/L	SW8260					0.24	240	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
2-Chloroethylvinylether	µg/L	SW8260							- -		- -		- -		- -	5.0	U	- -		5.0	U	- -		
Bromoform	µg/L	SW8260	100	*TH			5.54	160	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
4-Methyl-2-Pentanone (MIBK)	µg/L	SW8260							5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
2-Hexanone	µg/L	SW8260							5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
Tetrachloroethene	µg/L	SW8260	5		5		0.081	80	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,1,2,2-Tetrachloroethane	µg/L	SW8260					0.219		1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Toluene	µg/L	SW8260	1000		1000			640	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Chlorobenzene	µg/L	SW8260						160	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Ethylbenzene	µg/L	SW8260	700		700			800	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Styrene	µg/L	SW8260	100				1.46	1600	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Trichlorofluoromethane	µg/L	SW8260						2400	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
m,p-Xylene	µg/L	SW8260	10000	*XY	1000	*XY		1600	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
o-Xylene	µg/L	SW8260	10000	*XY	1000	*XY		1600	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,2-Dichlorobenzene	µg/L	SW8260						720	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,4-Dichlorobenzene	µg/L	SW8260					1.8		1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Methyl Iodide	µg/L	SW8260							1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Acrylonitrile	µg/L	SW8260					0.081	8	5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
Dibromomethane	µg/L	SW8260							1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,1,1,2-Tetrachloroethane	µg/L	SW8260					1.7	240	1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
1,2-Dibromo-3-chloropropane	µg/L	SW8260					0.031		5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
1,2,3-Trichloropropane	µg/L	SW8260					0.0063	48	2.0	U	2.0	U	2.0	U	- -	2.0	U	2.0	U	2.0	U	- -		
trans-1,4-Dichloro-2-butene	µg/L	SW8260							5.0	U	5.0	U	5.0	U	- -	5.0	U	5.0	U	5.0	U	- -		
Ethylene Dibromide	µg/L	SW8260	0.05		0.01		0.000515		1.0	U	1.0	U	1.0	U	- -	1.0	U	1.0	U	1.0	U	- -		
Bromochloromethane	µg/L	SW8260							1.0	U	1.0	U	1.0	U	- -	- -		1.0	U	- -		- -		
Vinyl Chloride	µg/L	SW8260 SIM	2		0.2		0.0292	24	**0.060**		**0.063**		**0.034**		- -	- -		- -		- -		- -		
Vinyl Chloride*	µg/L	SW8260 SIM	2		0.2		0.0292	24	0.020	U	- -		0.027		0.028	0.020	U	- -		- -		0.020	U	
POLYCHLORINATED BIPHENYLS																								
Aroclor 1016	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1242	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1248	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1254	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1260	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1221	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Aroclor 1232	µg/L	SW8082	0.5		0.1		0.044		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
SEMIVOLATILE ORGANICS																								
Phenol	µg/L	SW8270D						4800	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D					0.04		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
2-Chlorophenol	µg/L	SW8270D						40	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
1,3-Dichlorobenzene	µg/L	SW8270D							1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
1,4-Dichlorobenzene	µg/L	SW8270D	75				1.8		1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Benzyl Alcohol	µg/L	SW8270D						2400	5.0	U	5.0	U	5.0	U	- -	5.0	U	- -		- -		- -		
1,2-Dichlorobenzene	µg/L	SW8270D	600					720	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
2-Methylphenol	µg/L	SW8270D							1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D							1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
4-Methylphenol	µg/L	SW8270D							1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D							5.0	U	5.0	U	5.0	U	- -	5.0	U	- -		- -		- -		
Hexachloroethane	µg/L	SW8270D					3.1	8	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Nitrobenzene	µg/L	SW8270D						4	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Isophorone	µg/L	SW8270D					46	1600	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
2-Nitrophenol	µg/L	SW8270D							5.0	U	5.0	U	5.0	U	- -	5.0	U	- -		- -		- -		
2,4-Dimethylphenol	µg/L	SW8270D						160	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Benzoic Acid	µg/L	SW8270D						64000	10	U	10	U	10	U	- -	10	U	- -		- -		- -		
bis(2-Chloroethoxy) Methane	µg/L	SW8270D							1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
2,4-Dichlorophenol	µg/L	SW8270D						24	5.0	U	5.0	U	5.0	U	- -	5.0	U	- -		- -		- -		
1,2,4-Trichlorobenzene	µg/L	SW8270D						80	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		
Naphthalene	µg/L	SW8270D			160			160	1.0	U	1.0	U	1.0	U	- -	1.0	U	- -		- -		- -		

TABLE A-2
2008 Groundwater and Surface Water Data

PARAMETERS	Units	Analytical Method	Groundwater Regulatory Standards MCL	MTCA A	MTCA B carcin.	non-carc.	MW-7 02/06/08	MW-7D 02/06/08	MW-8 02/06/08	MW-8D**** 8/13/2008	MW-9A 03/25/08	TRIP BLANK 02/05/08	TRIP BLANK 03/25/08	TRIP BLANK 08/13/08
4-Chloroaniline	µg/L	SW8270D				32	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Hexachlorobutadiene	µg/L	SW8270D			0.56	1.6	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
4-Chloro-3-methylphenol	µg/L	SW8270D					5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
2-Methylnaphthalene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Hexachlorocyclopentadiene	µg/L	SW8270D	50			48	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
2,4,6-Trichlorophenol	µg/L	SW8270D			4		5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
2,4,5-Trichlorophenol	µg/L	SW8270D				800	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
2-Chloronaphthalene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
2-Nitroaniline	µg/L	SW8270D					5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Dimethylphthalate	µg/L	SW8270D				16000	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Acenaphthylene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
3-Nitroaniline	µg/L	SW8270D					5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Acenaphthene	µg/L	SW8270D				960	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
2,4-Dinitrophenol	µg/L	SW8270D				32	10 U	10 U	10 U	- -	10 U	- -	- -	- -
4-Nitrophenol	µg/L	SW8270D					5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Dibenzofuran	µg/L	SW8270D				32	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
2,6-Dinitrotoluene	µg/L	SW8270D				16	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
2,4-Dinitrotoluene	µg/L	SW8270D				32	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Diethylphthalate	µg/L	SW8270D				13000	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
4-Chlorophenyl-phenylether	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Fluorene	µg/L	SW8270D				640	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
4-Nitroaniline	µg/L	SW8270D					5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D					10 U	10 U	10 U	- -	10 U	- -	- -	- -
N-Nitrosodiphenylamine	µg/L	SW8270D			29000		**1.6**	**1.5**	1.0 U	- -	1.0 U	- -	- -	- -
4-Bromophenyl-phenylether	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Hexachlorobenzene	µg/L	SW8270D	1		0.055	13	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Pentachlorophenol	µg/L	SW8270D	1		0.73	480	5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Phenanthrene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Carbazole	µg/L	SW8270D			4.4		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Anthracene	µg/L	SW8270D				4800	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Di-n-Butylphthalate	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Fluoranthene	µg/L	SW8270D				640	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Pyrene	µg/L	SW8270D				480	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Butylbenzylphthalate	µg/L	SW8270D				3200	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
3,3'-Dichlorobenzidine	µg/L	SW8270D			0.19		5.0 U	5.0 U	5.0 U	- -	5.0 U	- -	- -	- -
Benzo(a)anthracene	µg/L	SW8270D			0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D	6		6.3	320	1.0 U	1.0 U	1.0 U	- -	**1.5**	- -	- -	- -
Chrysene	µg/L	SW8270D			0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Di-n-Octyl phthalate	µg/L	SW8270D				320	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Benzo(b)fluoranthene	µg/L	SW8270D			0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Benzo(k)fluoranthene	µg/L	SW8270D			0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Benzo(a)pyrene	µg/L	SW8270D	0.2	0.1	0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Indeno(1,2,3-cd)pyrene	µg/L	SW8270D			0.012		1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Dibenz(a,h)anthracene	µg/L	SW8270D				32	1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
Benzo(g,h,i)perylene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -
1-Methylnaphthalene	µg/L	SW8270D					1.0 U	1.0 U	1.0 U	- -	1.0 U	- -	- -	- -

NOTES:

J =	Approximate Value
** =	Secondary MCL
*** =	Chromium Standards based on Chromium VI
*TH =	Primary MCL for the sum of all trihalomethanes
*XY =	Primary MCL for the sum of all xylenes
Bold =	For volatiles and semivolatiles only, marks a detection
=	Exceeds one or more MTCA and/or MCL standards
* =	Second set of vinyl chloride data sampled 8/13/08.
**** =	Lab data and COC identify MW-8 field duplicate as MW-8A.

TABLE A-3
PREVIOUS GROUNDWATER INVESTIGATION DATA (2008-2012)
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location: / Date Collected:	MW-7 2/6/2008	MW-7 2/26/2009	MW-7 11/4/2009	MW-7 2/4/2010	Dup of MW-7 2/4/2010	MW-7 5/10/2012	MW-8 2/6/2008	MW-8 2/26/2009	MW-8 11/4/2009	MW-8 2/4/2010	Dup of MW-8 2/4/2010	MW-8 5/10/2012
DISSOLVED METALS (µg/L) EPA Methods 200.8/6010B												
Arsenic	50 U	3.83	3.06	0.39	1.20	0.15 U	50 U	1 U	0.98 E	0.93	0.97	0.54
Barium	69	67.2	NA	NA	NA	NA	72	78.7	NA	NA	NA	NA
Cadmium	2 U	1 U	NA	NA	NA	NA	2 U	1 U	NA	NA	NA	NA
Calcium	48,100	39,900	49,100	52,400	57,500	NA	39,100	35,400	51,400	118,000	109,000	NA
Cobalt	NA	1 U	NA	NA	NA	NA	NA	4.4	NA	NA	NA	NA
Copper	NA	1 U	NA	NA	NA	NA	NA	1 U	NA	NA	NA	NA
Chromium	5 U	1 U	NA	NA	NA	NA	5 U	1 U	NA	NA	NA	NA
Iron	37,500	23,700	18,500	22	851	23	12,200	3,330	45	20 U	20 U	20 U
Lead	20 U	1 U	NA	NA	NA	NA	20 U	1 U	NA	NA	NA	NA
Magnesium	NA	15,000	18,200	17,900	18,100	NA	NA	15,600	27,600	54,500	54,200	NA
Manganese	2,520	1,950	2,330	1,590	1,750	346	2,340	2,380	2,690	6,290	6,210	1,880
Nickel	NA	2.4	NA	NA	NA	NA	NA	9.24	NA	NA	NA	NA
Potassium	11,400	11,200	NA	NA	NA	NA	29,900	23,400	NA	NA	NA	NA
Selenium	50 U	1 U	NA	NA	NA	NA	50 U	1.54	NA	NA	NA	NA
Sodium	22,900	19,300	22,900	28,600	28,900	7,490	33,800	27,000	48,300	52,600	51,800	34,100
Thallium	NA	1 U	NA	NA	NA	NA	NA	1 U	NA	NA	NA	NA
Zinc	NA	1.66	NA	NA	NA	NA	NA	2.91	NA	NA	NA	NA
VOLATILES (µg/L) Method EPA 8260C												
Vinyl Chloride	0.06	0.03 U	0.2 U	0.03 UJ	0.03 UJ	0.06 UE	0.034	0.03 U	0.2 U	0.03 UJ	0.03 UJ	0.06 UE
CONVENTIONALS												
pH (SU; EPA Method 150.1/field reading)	6.49	6.28	6.45	6.47	6.36	5.77	6.76	6.54	6.34	6.28	6.23	5.62
Alkalinity (mg CaCO3/L; EPA Method SM2320/310.1)	274	264	241	263	264	NA	306	284	174	187	188	NA
Carbonate (mg CaCO3/L; EPA Method SM2320/310.1)	1 U	1 U	NA	NA	NA	NA	1 U	1 U	NA	NA	NA	NA
Bicarbonate (mg CaCO3/L; EPA Method SM2320/310.1)	274	121	NA	NA	NA	NA	306	173	NA	NA	NA	NA
Bromide (mg/L; EPA Method 300.0)	NA	0.02 U	NA	NA	NA	NA	NA	0.33	NA	NA	NA	NA
Chloride (mg/L; EPA Method 325.2/300.0)	19.4	20.7	21.9	24.1	23.6	NA	32.8	32.8	108	111	112	NA
Fluoride (mg/L; EPA Method 300.0)	NA	0.75	NA	NA	NA	NA	NA	0.39	NA	NA	NA	NA
Nitrate (mg/L; EPA Method 300.0)	0.050 U	1.61	0.199	10.3	11.2	0.621	0.20	14.4	17.9	95.3	94.7	86.2
Nitrite (mg/L; EPA Method 353.2/300.0)	0.050 U	0.015	NA	NA	NA	NA	0.019	0.026	NA	NA	NA	NA
Soluble Reactive Phosphate (mg/L; EPA Method 300.0)	NA	0.004	NA	NA	NA	NA	NA	0.001	NA	NA	NA	NA
Sulfate (mg/L; EPA Method 375.2/300.0)	5.5	1 U	9.12	1.40	1.0 U	NA	5.6	3.02	58.0	53.3	55.0	NA

TABLE A-3
PREVIOUS GROUNDWATER INVESTIGATION DATA (2008-2012)
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location: / Date Collected:	MW-9A 3/25/2008	MW-9A 2/26/2009	MW-9A 11/4/2009	MW-9A 2/4/2010	MW-9A 5/10/2012	MW-11 2/26/2009	MW-11 11/4/2009	MW-11 2/4/2010	MW-11 5/10/2012
DISSOLVED METALS (µg/L) EPA Methods 200.8/6010B									
Arsenic	50 U	1 U	0.93 E	1.00	0.64	4.33	4.80	3.01	5.02
Barium	13	11.3	NA	NA	NA	51.4	NA	NA	NA
Cadmium	2 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Calcium	29,400	26,600	23,800	26,800	NA	30,000	44,800	31,600	NA
Cobalt	NA	1 U	NA	NA	NA	1 U	NA	NA	NA
Copper	NA	1.14	NA	NA	NA	1 U	NA	NA	NA
Chromium	5 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Iron	270	10 U	20 U	20 U	20 U	24,100	35,400	7,200	35,100
Lead	20 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Magnesium	NA	8,570	8,020	8,920	NA	10,700	14,500	11,000	NA
Manganese	872	10 U	13.3	1 U	11.4	1,410	1,890	1,610	1,220
Nickel	NA	1.47	NA	NA	NA	1.62	NA	NA	NA
Potassium	4,400	3,680	NA	NA	NA	5,810	NA	NA	NA
Selenium	50 U	1 U	NA	NA	NA	1 U	NA	NA	NA
Sodium	15,700	10,900	11,100	14,400	11,500	15,300	17,300	20,100	18,000
Thallium	NA	1 U	NA	NA	NA	1 U	NA	NA	NA
Zinc	NA	1.25	NA	NA	NA	6.43	NA	NA	NA
VOLATILES (µg/L) Method EPA 8260C									
Vinyl Chloride	1 U	0.03 U	0.2 U	0.03 UJ	0.06 UE	0.03 U	0.2 U	0.03 UJ	0.06 UE
CONVENTIONALS									
pH (SU; EPA Method 150.1/field reading)	6.77	6.69	6.72	6.65	6.02	6.28	6.47	6.50	5.97
Alkalinity (mg CaCO3/L; EPA Method SM2320/310.1)	127	118	97.5	118	NA	216	202	196	NA
Carbonate (mg CaCO3/L; EPA Method SM2320/310.1)	NA	1 U	NA	NA	NA	1 U	NA	NA	NA
Bicarbonate (mg CaCO3/L; EPA Method SM2320/310.1)	NA	80.6	NA	NA	NA	99.1	NA	NA	NA
Bromide (mg/L; EPA Method 300.0)	NA	0.05	NA	NA	NA	0.11	NA	NA	NA
Chloride (mg/L; EPA Method 325.2/300.0)	15.6	15.2	10.9	13.1	NA	11.9	13.5	11.9	NA
Fluoride (mg/L; EPA Method 300.0)	NA	0.32	NA	NA	NA	0.31	NA	NA	NA
Nitrate (mg/L; EPA Method 300.0)	1.41	2.18	3.13	2.80	4.56	0.033	0.027	0.028	0.051
Nitrite (mg/L; EPA Method 353.2/300.0)	0.22	0.014	NA	NA	NA	0.011	NA	NA	NA
Soluble Reactive Phosphate (mg/L; EPA Method 300.0)	NA	0.12	NA	NA	NA	0.022	NA	NA	NA
Sulfate (mg/L; EPA Method 375.2/300.0)	17.9	7.9	10.7	12.7	NA	1 U	1.0 U	1.0 U	NA

TABLE A-3
PREVIOUS GROUNDWATER INVESTIGATION DATA (2008-2012)
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:	MW-12	MW-12	MW-12	MW-12	MW-13	MW-13	MW-13	MW-13	MW-14	MW-14	MW-14
Date Collected:	2/26/2009	11/4/2009	2/4/2010	5/10/2012	2/26/2009	11/4/2009	2/4/2010	5/10/2012	11/5/2009	2/4/2010	5/10/2012
DISSOLVED METALS (µg/L) **EPA Methods 200.8/6010B**											
Arsenic	1 U	2.01	0.87	0.67	1 U	0.36 E	0.26	0.39	0.61 E	0.32	0.15
Barium	16.8	NA	NA	NA	24.5	NA	NA	NA	NA	NA	NA
Cadmium	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Calcium	9,140	14,200	17,400	NA	31,700	19,100	18,000	NA	17,300	19,900	NA
Cobalt	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Copper	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Chromium	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Iron	7,600	5,840	3,000	15,400	3,650	1,550	495	8,230	63	20 U	183
Lead	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Magnesium	3,530	4,320	5,670	NA	3,550	1,830	1,640	NA	8,290	7,330	NA
Manganese	503	745	767	2,780	649	287	192	3,190	331	2.88	30.8
Nickel	1 U	NA	NA	NA	1.37	NA	NA	NA	NA	NA	NA
Potassium	1,950	NA	NA	NA	2,940	NA	NA	NA	NA	NA	NA
Selenium	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Sodium	10,300	13,300	16,700	33,600	10,700	7,760	9,370	40,100	27,800	15,900	3,490
Thallium	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Zinc	1.39	NA	NA	NA	1.13	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L) **Method EPA 8260C**											
Vinyl Chloride	0.03 U	0.2 U	0.03 UJ	0.06 UE	0.03 U	0.2 U	0.03 UJ	0.06 UE	0.2 U	0.03 UJ	0.06 UE
CONVENTIONALS											
pH (SU; EPA Method 150.1/field reading)	6.01	6.53	6.34	6.09	6.49	6.85	7.22	5.87	6.90	7.19	6.27
Alkalinity (mg CaCO3/L; EPA Method SM2320/310.1)	67.5	84.0	98.4	NA	136	72.4	57.4	NA	117	62.2	NA
Carbonate (mg CaCO3/L; EPA Method SM2320/310.1)	1 U	NA	NA	NA	1 U	NA	NA	NA	NA	NA	NA
Bicarbonate (mg CaCO3/L; EPA Method SM2320/310.1)	21.2	NA	NA	NA	79.0	NA	NA	NA	NA	NA	NA
Bromide (mg/L; EPA Method 300.0)	0.02 U	NA	NA	NA	0.02 U	NA	NA	NA	NA	NA	NA
Chloride (mg/L; EPA Method 325.2/300.0)	7.62	6.96	10.6	NA	6.06	6.26	6.33	NA	35.4	29.8	NA
Fluoride (mg/L; EPA Method 300.0)	0.80	NA	NA	NA	0.71	NA	NA	NA	NA	NA	NA
Nitrate (mg/L; EPA Method 300.0)	0.014	0.016	0.024	0.039	0.018	0.026	0.201	0.01 U	0.265	2.71	0.147
Nitrite (mg/L; EPA Method 353.2/300.0)	0.002 U	NA	NA	NA	0.003	NA	NA	NA	NA	NA	NA
Soluble Reactive Phosphate (mg/L; EPA Method 300.0)	0.077	NA	NA	NA	0.21	NA	NA	NA	NA	NA	NA
Sulfate (mg/L; EPA Method 375.2/300.0)	6.17	1.0 U	3.68	NA	4.63	1.89	12.5	NA	12.1	14.6	NA

TABLE A-3
PREVIOUS GROUNDWATER INVESTIGATION DATA (2008-2012)
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Location:	MW-15	MW-15	MW-15	MW-16	MW-16	MW-16	MW-17	MW-17	MW-17	MW-18	MW-18	MW-18
Date Collected:	11/5/2009	2/4/2010	5/10/2012	11/5/2009	2/4/2010	5/10/2012	11/5/2009	2/4/2010	5/10/2012	11/5/2009	2/4/2010	5/10/2012
DISSOLVED METALS (µg/L) **EPA Methods 200.8/6010B**												
Arsenic	1.39	0.71	0.75	0.77 E	0.72	0.50	2.15	0.85	0.84	6.75	2.08	8.31
Barium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium	18,100	23,500	NA	49,400	37,800	NA	35,400	47,800	NA	49,700	69,400	NA
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	7,970	876	4,890	20 U	20 U	26	16,800	1,750	487	26,100	4,910	18,600
Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium	8,320	8,680	NA	18,600	12,200	NA	13,800	16,500	NA	24,400	25,200	NA
Manganese	993	1,080	773	587	917	915	2,150	2,580	1,500	4,450	5,360	3,460
Nickel	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	9,600	11,300	7,860	36,800	23,800	42,500	23,400	27,800	26,200	38,400	21,700	11,400
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L) **Method EPA 8260C**												
Vinyl Chloride	0.2 U	0.03 UJ	0.06 UE	0.2 U	0.03 UJ	0.06 UE	0.2 U	0.03 UJ	0.06 UE	0.2 U	0.03 UJ	0.06 UE
CONVENTIONALS												
pH (SU; EPA Method 150.1/field reading)	6.61	6.66	5.92	6.76	6.60	6.15	6.50	6.67	6.21	6.36	6.57	6.16
Alkalinity (mg CaCO3/L; EPA Method SM2320/310.1)	123	128	NA	190	192	NA	236	284	NA	345	356	NA
Carbonate (mg CaCO3/L; EPA Method SM2320/310.1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate (mg CaCO3/L; EPA Method SM2320/310.1)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromide (mg/L; EPA Method 300.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride (mg/L; EPA Method 325.2/300.0)	8.27	10.9	NA	28.5	26.7	NA	18.0	22.3	NA	37.0	19.7	NA
Fluoride (mg/L; EPA Method 300.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate (mg/L; EPA Method 300.0)	0.013	0.015	0.01 U	0.306	0.018	3.93	0.027	0.806	0.533	0.035	0.134	0.086
Nitrite (mg/L; EPA Method 353.2/300.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soluble Reactive Phosphate (mg/L; EPA Method 300.0)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate (mg/L; EPA Method 375.2/300.0)	1.0 U	1.0 U	NA	110	10.6	NA	1.0 U	3.12	NA	1.69	1.0 U	NA

E = Value was reported by the laboratory as an estimated because it is below the normal reporting limit.
U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
NA = Not Analyzed/Not Applicable.

TABLE A-4
HISTORICAL LANDFILL GAS MEASUREMENTS
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Soil Vapor Probe ID	Date Collected	% Methane	% CO_2	% Oxygen
GP-3	2/24/2009	19.5	14.8	0.0
	4/17/2009	17.8	12.0	0.3
	11/5/2009	13.7	15.8	0.0
	2/3/2010	13.2	12.2	0.0
	5/10/2012	8.1	12.2	0.0
GP-4	2/25/2009	22.4	9.2	0.0
	4/17/2009	21.6	11.9	0.0
	11/5/2009	37.2	17.1	0.0
	2/3/2010	37.8	10.2	0.5
	5/10/2012	24.7	15.7	1.7
GP-5	2/25/2009	17.6	13.7	0.0
	4/17/2009	16.2	12.7	0.0
	11/5/2009	27.2	17.2	0.8
	2/3/2010	19.9	13.5	0.0
	5/10/2012	15.2	10.9	2.9
GP-6	2/25/2009	0.1	12.7	6.1
	4/17/2009	0.2	11.3	8.5
	11/5/2009	0.0	18.4	3.9
	2/3/2010	0.0	13.4	5.6
	5/10/2012	0.0	11.3	9.3
GP-7	2/25/2009	0.0	1.8	19.2
	4/17/2009	0.1	2.7	19.4
	11/5/2009	0.0	1.8	19.2
	2/3/2010	0.0	2.5	18.9
	5/10/2012	0.0	0.2	20.1
GP-8	2/25/2009	0.0	3.8	15.3
	4/17/2009	0.1	4.8	14.2
	11/5/2009	0.0	2.9	17.9
	2/3/2010	0.0	2.7	17.8
	5/10/2012	0.0	4.6	16.2
GP-9	2/25/2009	0.1	2.0	17.5
	4/17/2009	0.1	3.3	17.8
	11/5/2009	0.0	3.1	18.3
	2/3/2010	0.0	4.5	15.9
	5/10/2012	0.0	3.2	16.9
GP-10	2/25/2009	22.6	16.8	0.0
	4/17/2009	32.4	21.4	0.0
	11/5/2009	41.3	31.4	1.5
	2/3/2010	50.0	24.1	0.0
	5/10/2012	34.0	22.7	1.5
GP-11	2/25/2009	58.5	33.9	0.0
	4/17/2009	51.7	35.6	0.0
	11/5/2009	57.4	39.0	0.0
	2/3/2010	62.4	36.2	0.0
	5/10/2012	40.3	34.9	0.0

TABLE A-4
HISTORICAL LANDFILL GAS MEASUREMENTS
YAKIMA MILL SITE AND CLOSED CITY OF YAKIMA LANDFILL SITE
YAKIMA, WASHINGTON

Soil Vapor Probe ID	Date Collected	% Methane	% CO_2	% Oxygen
GP-12	2/25/2009	15.4	18.8	0.0
	4/17/2009	21.3	21.1	0.0
	11/5/2009	24.2	24.8	3.2
	2/3/2010	28.1	23.3	0.0
	5/10/2012	13.9	17.1	4.9
GP-13	2/25/2009	51.6	40.1	0.0
	4/17/2009	53.7	43.1	0.0
	11/5/2009	41.9	40.8	0.0
	2/3/2010	45.4	39.9	0.0
	5/10/2012	14.3	23.4	4.6
GP-14	4/17/2009	0.0	3.9	15.0
	11/5/2009	0.0	4.2	16.3
	2/3/2010	0.0	3.3	16.5
	5/10/2012	0.0	2.0	18.2
GP-15	4/17/2009	0.0	2.0	18.5
	11/5/2009	0.0	0.7	20.2
	2/3/2010	0.0	1.1	19.4
	5/10/2012	0.0	0.1	20.0
GP-16	4/17/2009	0.0	1.7	19.0
	11/5/2009	0.0	1.3	19.7
	2/3/2010	0.0	1.8	18.8
	5/10/2012	0.0	0.5	19.4
GP-17	4/17/2009	0.2	1.5	19.6
	11/5/2009	0.0	1.9	17.3
	2/3/2010	0.0	1.3	19.1
	5/10/2012	0.0	2.2	17.7
GP-18	4/17/2009	0.1	0.5	21.0
	11/5/2009	0.0	0.7	20.4
	2/3/2010	0.0	0.7	20.0
	5/10/2012	0.0	0.9	19.1
GP-19	11/5/2009	61.3	39.8	0.0
	2/3/2010	69.5	35.5	0.0
	5/10/2012	62.6	34.9	0.4
GP-20	11/5/2009	65.9	35.8	0.0
	2/3/2010	77.7	26.0	0.0
	5/10/2012	53.1	30.2	2.6
GP-21	11/5/2009	69.3	25.7	0.0
	2/3/2010	75.7	24.8	0.0
	5/10/2012	Not measured. Probe had been destroyed.		
GP-22	11/5/2009	43.1	43.2	0.0
	2/3/2010	Not measured. Probe had been destroyed.		

The Lower Explosive Limit (LEL) and Upper Explosive Limit (UEL) for methane are 5 percent by volume and 15 percent by volume, respectively.

TABLE A-5
HISTORICAL SURFACE WATER ANALYTICAL RESULTS
CLOSED CITY OF YAKIMA MILL SITE
YAKIMA, WASHINGTON

Sampling Point ID (a)	Sample Collection Date	pH EPA 9040C (standard units)	Arsenic EPA 200.8 µg/L	Iron EPA 200.8 µg/L	Manganese EPA 200.8 µg/L	Nitrate EPA 300.0 µg/L	Sodium EPA 300.0 µg/L
River-1109	11/5/2009	6.80	0.52 E	20 U	6.96	171	5,020
RGI-0210	2/4/2010	8.04	0.45	20 U	2.72	321	6,540

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation													
Location:		FPP-B01	FPP-B01	FPP-B02	FPP-B02	FPP-B03	FPP-B03	FPP-B04	FPP-B04	FPP-B05	FPP-B05	FPP-B06	FPP-B07	FPP-B07	FPP-B08
Depth	MTCA Method A	(0.5-1.5)	(12-13)	(1-2)	(14-15.5)	(0.5-2)	(13-14)	(11-12)	(21-22)	(15-16.5)	(22.5-24)	(15-16)	(0.5-1)	(15-16)	(5-6.5)
Lab ID:	Soil Cleanup Levels for	EV13060128-15	EV13060128-16	EV13060128-19	EV13060128-20	EV13060128-17	EV13060128-18	EV13060128-13	EV13060128-14	EV13060128-25	EV13060128-26	EV13060128-11	EV13060128-23	EV13060128-24	EV13060128-12
Date Collected:	Unrestricted Land Uses	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013
TOTAL METALS (mg/kg) EPA Methods 6020/7471/7196															
Arsenic	20	2.5	2.0	2.2	2.0	2.5	2.3	2.2	4.7	2.3	1.4	2.5	2.1	2.6	3.2
Cadmium	2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2000	15	10	13	8.8	18	14	28	17	14	16	39	15	26	17
Chromium (VI)	19	NA	NA	NA	5.0 U	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA
Iron		23,000	20,000	21,000	21,000	24,000	23,000	26,000	20,000	22,000	22,000	22,000	37,000	25,000	23,000
Lead	250	14	2.7	15	3.2	8.5	2.8	3.5	14	4.8	2.4	4.0	4.2	3.7	15
Manganese		360	370	350	360	350	350	300	250	300	250	280	470	270	360
Mercury	2	0.040	0.033	0.040	0.031	0.036	0.024	0.028	0.035	0.028	0.020 U	0.037	0.020 U	0.034	0.052
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-DX															
TPH-Diesel Range	2000	25 U	25 U	25 U	25 U	25 U	25 U	250 U	25 U	100 U	25 U	50 U	120 U	25 U	220 J
TPH-Oil Range	2000	130	50 U	190	50 U	50 U	50 U	**9400**	710	**4500**	500	**2100**	1500	120	520
NWTPH-GX															
TPH-Gasoline Range	100 (a)	3.0 U	3.0 U	6.2	3.0 U	NA	NA	3.0 U	3.0 U	24	3.0 U	NA	NA	3.0 U	3.0 U
VOLATILES (µg/kg) Method EPA-8260															
Dichlorodifluoromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Chloromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Vinyl Chloride		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Bromomethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Chloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Carbon Tetrachloride		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Trichlorofluoromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Carbon Disulfide		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Acetone		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
1,1-Dichloroethene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Methylene Chloride	20	20 U	NA	20 U	20 U	20 U	NA	20 U	NA	20 U	20 U	NA	NA	20 U	20 U
Acrylonitrile		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
Methyl T-Butyl Ether		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Trans-1,2-Dichloroethene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1-Dichloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
2-Butanone		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
Cis-1,2-Dichloroethene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
2,2-Dichloropropane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Bromochloromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Chloroform		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1,1-Trichloroethane	2000	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1-Dichloropropene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2-Dichloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Benzene	30	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
Trichloroethene	30	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2-Dichloropropane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Dibromomethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Bromodichloromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Trans-1,3-Dichloropropene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
4-Methyl-2-Pentanone		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
Toluene	7000	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Cis-1,3-Dichloropropene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1,2-Trichloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
2-Hexanone		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
1,3-Dichloropropane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Tetrachloroethylene	50	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Dibromochloromethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2-Dibromoethane	5	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	NA	NA	5.0 U	5.0 U
Chlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1,1,2-Tetrachloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Ethylbenzene	6000	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
m,p-Xylene	9000 (c)	20 U	NA	20 U	20 U	20 U	NA	20 U	NA	20 U	20 U	NA	NA	20 U	20 U
Styrene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
o-Xylene	9000 (c)	10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Bromoform		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Isopropylbenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,1,2,2-Tetrachloroethane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation													
Location:		FPP-B01	FPP-B01	FPP-B02	FPP-B02	FPP-B03	FPP-B03	FPP-B04	FPP-B04	FPP-B05	FPP-B05	FPP-B06	FPP-B07	FPP-B07	FPP-B08
Depth	MTCA Method A	(0.5-1.5)	(12-13)	(1-2)	(14-15.5)	(0.5-2)	(13-14)	(11-12)	(21-22)	(15-16.5)	(22.5-24)	(15-16)	(0.5-1)	(15-16)	(5-6.5)
Lab ID:	Soil Cleanup Levels for	EV13060128-15	EV13060128-16	EV13060128-19	EV13060128-20	EV13060128-17	EV13060128-18	EV13060128-13	EV13060128-14	EV13060128-25	EV13060128-26	EV13060128-11	EV13060128-23	EV13060128-24	EV13060128-12
Date Collected:	Unrestricted Land Uses	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013
1,2,3-Trichloropropane		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Bromobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
N-Propyl Benzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
2-Chlorotoluene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,3,5-Trimethylbenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	22 J	10 U	NA	NA	10 U	10 U
4-Chlorotoluene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
T-Butyl Benzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2,4-Trimethylbenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	41 J	10 U	NA	NA	10 U	10 U
S-Butyl Benzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
P-Isopropyltoluene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	11 J	10 U	NA	NA	10 U	10 U
1,3 Dichlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,4-Dichlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
N-Butylbenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	12 J	10 U	NA	NA	10 U	10 U
1,2-Dichlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2-Dibromo 3-Chloropropane		50 U	NA	50 U	50 U	50 U	NA	50 U	NA	50 U	50 U	NA	NA	50 U	50 U
1,2,4-Trichlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Hexachlorobutadiene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
Naphthalene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
1,2,3-Trichlorobenzene		10 U	NA	10 U	10 U	10 U	NA	10 U	NA	10 U	10 U	NA	NA	10 U	10 U
SEMIVOLATILES (µg/kg) Method EPA-8270															
Pyridine		200 U	NA	200 U	200 U	200 U	NA	2000 U	NA	400 U	200 U	NA	400 U	200 U	400 U
N-Nitrosodimethylamine		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Phenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Aniline		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Bis(2-Chloroethyl)Ether		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2-Chlorophenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
1,3-Dichlorobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
1,4-Dichlorobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Benzyl Alcohol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
1,2-Dichlorobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2-Methylphenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Bis(2-Chloroisopropyl)Ether		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
3&4-Methylphenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
N-Nitroso-Di-N-Propylamine		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Hexachloroethane		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Nitrobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Isophorone		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2-Nitrophenol		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
2,4-Dimethylphenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Benzoic Acid		1000 U	NA	1000 U	1000 U	1000 U	NA	10000 U	NA	2000 U	1000 U	NA	2000 U	1000 U	2000 U
Bis(2-Chloroethoxy)Methane		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2,4-Dichlorophenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
1,2,4-Trichlorobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
4-Chloroaniline		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2,6-Dichlorophenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Hexachlorobutadiene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
4-Chloro-3-Methylphenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Hexachlorocyclopentadiene		500 U	NA	500 U	500 U	500 U	NA	5000 U	NA	1000 U	500 U	NA	1000 U	500 U	1000 U
2,4,6-Trichlorophenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2,4,5-Trichlorophenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2-Chloronaphthalene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2-Nitroaniline		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
Dimethylphthalate		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2,6-Dinitrotoluene		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
3-Nitroaniline		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
2,4-Dinitrophenol		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
4-Nitrophenol		500 U	NA	500 U	500 U	500 U	NA	5000 U	NA	1000 U	500 U	NA	1000 U	500 U	1000 U
Dibenzofuran		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
2,4-Dinitrotoluene		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
2,3,4,6-Tetrachlorophenol		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
Diethylphthalate		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
4-Chlorophenyl-Phenylether		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
4-Nitroaniline		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
4,6-Dinitro-2-Methylphenol		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
N-Nitrosodiphenylamine		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Azobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
4-Bromophenyl-Phenylether		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation													
Location:		FPP-B01	FPP-B01	FPP-B02	FPP-B02	FPP-B03	FPP-B03	FPP-B04	FPP-B04	FPP-B05	FPP-B05	FPP-B06	FPP-B07	FPP-B07	FPP-B08
Depth	MTCA Method A	(0.5-1.5)	(12-13)	(1-2)	(14-15.5)	(0.5-2)	(13-14)	(11-12)	(21-22)	(15-16.5)	(22.5-24)	(15-16)	(0.5-1)	(15-16)	(5-6.5)
Lab ID:	Soil Cleanup Levels for	EV13060128-15	EV13060128-16	EV13060128-19	EV13060128-20	EV13060128-17	EV13060128-18	EV13060128-13	EV13060128-14	EV13060128-25	EV13060128-26	EV13060128-11	EV13060128-23	EV13060128-24	EV13060128-12
Date Collected:	Unrestricted Land Uses	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013
Hexachlorobenzene		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Pentachlorophenol		500 U	NA	500 U	500 U	500 U	NA	5000 U	NA	1000 U	500 U	NA	1000 U	500 U	1000 U
Carbazole		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
Di-N-Butylphthalate		130 U	NA	130 U	130 U	130 U	NA	1300 U	NA	260 U	130 U	NA	260 U	130 U	260 U
Butylbenzylphthalate		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
3,3-Dichlorobenzidine		250 U	NA	250 U	250 U	250 U	NA	2500 U	NA	500 U	250 U	NA	500 U	250 U	500 U
Bis(2-Ethylhexyl)Phthalate		130 U	NA	130 U	130 U	130 U	NA	1300 U	NA	260 U	130 U	NA	260 U	130 U	260 U
Di-N-Octylphthalate		100 U	NA	100 U	100 U	100 U	NA	1000 U	NA	200 U	100 U	NA	200 U	100 U	200 U
PAHs (mg/kg) Method EPA-8270 SIM															
Naphthalene		0.052	NA	0.067	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
2-Methylnaphthalene		0.028	NA	0.025	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
1-Methylnaphthalene		0.019	NA	0.016	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Total Naphthalenes	5 (b)	0.099	NA	0.108	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Acenaphthylene		0.019	NA	0.031	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Acenaphthene		0.010 U	NA	0.010 U	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Fluorene		0.010 U	NA	0.012	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Phenanthrene		0.051	NA	0.089	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.048	0.010 U	0.038
Anthracene		0.010 U	NA	0.018	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Fluoranthene		0.049	NA	0.092	0.010 U	0.010	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.068	0.010 U	0.023
Pyrene		0.053	NA	0.11	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.12	0.010 U	0.045
Benzo[A]Anthracene		0.013	NA	0.028	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.044	0.010 U	0.020 U
Chrysene		0.021	NA	0.033	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.098	0.010 U	0.042
Benzo[B]Fluoranthene		0.019	NA	0.029	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.053	0.010 U	0.025
Benzo[K]Fluoranthene		0.011	NA	0.019	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.037	0.010 U	0.020 U
Benzo[A]Pyrene		0.014	NA	0.030	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.046	0.010 U	0.020 U
Indeno[1,2,3-Cd]Pyrene		0.012	NA	0.018	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.027	0.010 U	0.020 U
Dibenz[A,H]Anthracene		0.010 U	NA	0.010 U	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.020 U	0.010 U	0.020 U
Benzo[G,H,I]Perylene		0.019	NA	0.029	0.010 U	0.010 U	NA	0.10 U	NA	0.020 U	0.010 U	NA	0.037	0.010 U	0.021
cPAH TEQ	0.1	0.020	NA	0.040	ND	ND	NA	ND	NA	ND	ND	NA	0.063	ND	0.003
PCBs (mg/kg) Method EPA-8082															
PCB-1016		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1268		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1221		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1232		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1242		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1248		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1254		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
PCB-1260		0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
Total PCBs	1	0.10 U	NA	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	0.10 U	NA	NA	NA	NA
CONVENTIONALS															
Total Organic Carbon (%) (EPA-9060)		NA	NA	NA	0.10 U	NA	NA	NA	NA	0.65	NA	NA	NA	0.15	1.5
pH (SU) (EPA-9045)		NA	NA	NA	8.58	NA	NA	NA	NA	7.11	NA	NA	NA	7.80	8.22
Percent Solids (%) (EPA-160.3)		NA	NA	NA	92.3	NA	NA	NA	NA	90.5	NA	NA	NA	84.0	85.4

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation												
Location:		FPP-B09	FPP-B09	FPP-B10	FPP-B10	FPP-B11	FPP-B11	FPP-B12	FPP-B13	FPP-B13	FPP-B14	FPP-B14	FPP-B15	FPP-B16
Depth	MTCA Method A	(12-13)	(15-16.5)	(10-11)	(15-16)	(18-19)	(22-23)	(6-7)	(5.5-6.5)	(12-14.5)	(14-15)	(18.5-19.5)	(13.5-14.5)	(11.7-12.7)
Lab ID:	Soil Cleanup Levels for	EV13060128-22	EV13060128-21	EV13060128-09	EV13060128-10	EV13060128-08	EV13060128-48	EV13060128-07	EV13060128-06	EV13060128-05	EV13060128-03	EV13060128-04	EV13060128-02	EV13060128-01
Date Collected:	Unrestricted Land Uses	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013
TOTAL METALS (mg/kg) EPA Methods 6020/7471/7196														
Arsenic	20	2.1	2.9	2.1	2.4	2.4	1.4	1.6	1.6	1.6	1.8	8.4	1.2	2.3
Cadmium	2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2000	17	13	16	21	14	11	14	19	16	16	14	17	15
Chromium (VI)	19	NA	5.0 U	NA	NA	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA
Iron		25,000	21,000	22,000	22,000	21,000	20,000	18,000	23,000	25,000	23,000	20,000	26,000	22,000
Lead	250	3.5	7.8	4.4	3.6	7.6	2.9	2.1	3.3	2.9	3.0	67	1.7	13
Manganese		290	260	260	200	230	220	240	370	290	300	240	250	230
Mercury	2	0.025	0.025	0.061	0.027	0.032	0.040	0.020 U	0.020 U	0.022	0.020 U	0.075	0.020 U	0.032
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-DX														
TPH-Diesel Range	2000	25 U	560 J	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
TPH-Oil Range	2000	50 U	180	50 U	79	170	50 U	50 U	50 U	50 U	50 U	960	50 U	150
NWTPH-GX														
TPH-Gasoline Range	100 (a)	NA	3.0 U	3.0 U	NA	3.0 U	NA	3.0 U	NA	3.0 U	NA	NA	NA	NA
VOLATILES (µg/kg) Method EPA-8260														
Dichlorodifluoromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Chloromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Vinyl Chloride		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Bromomethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Chloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Carbon Tetrachloride		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Trichlorofluoromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Carbon Disulfide		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Acetone		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
1,1-Dichloroethene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Methylene Chloride	20	NA	20 U	20 U	NA	20 U	NA	20 U	NA	20 U	NA	NA	NA	NA
Acrylonitrile		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
Methyl T-Butyl Ether		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Trans-1,2-Dichloroethene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1-Dichloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
2-Butanone		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
Cis-1,2-Dichloroethene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
2,2-Dichloropropane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Bromochloromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Chloroform		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1,1-Trichloroethane	2000	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1-Dichloropropene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2-Dichloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Benzene	30	NA	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	NA	NA
Trichloroethene	30	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2-Dichloropropane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Dibromomethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Bromodichloromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Trans-1,3-Dichloropropene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
4-Methyl-2-Pentanone		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
Toluene	7000	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Cis-1,3-Dichloropropene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1,2-Trichloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
2-Hexanone		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
1,3-Dichloropropane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Tetrachloroethylene	50	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Dibromochloromethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2-Dibromoethane	5	NA	5.0 U	5.0 U	NA	5.0 U	NA	5.0 U	NA	5.0 U	NA	NA	NA	NA
Chlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Ethylbenzene	6000	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
m,p-Xylene	9000 (c)	NA	20 U	20 U	NA	20 U	NA	20 U	NA	20 U	NA	NA	NA	NA
Styrene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
o-Xylene	9000 (c)	NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Bromoform		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Isopropylbenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation													
Location:		FPP-B09	FPP-B09	FPP-B10	FPP-B10	FPP-B11	FPP-B11	FPP-B12	FPP-B13	FPP-B13	FPP-B14	FPP-B14	FPP-B15	FPP-B16
Depth	MTCA Method A	(12-13)	(15-16.5)	(10-11)	(15-16)	(18-19)	(22-23)	(6-7)	(5.5-6.5)	(12-14.5)	(14-15)	(18.5-19.5)	(13.5-14.5)	(11.7-12.7)
Lab ID:	Soil Cleanup Levels for	EV13060128-22	EV13060128-21	EV13060128-09	EV13060128-10	EV13060128-08	EV13060128-48	EV13060128-07	EV13060128-06	EV13060128-05	EV13060128-03	EV13060128-04	EV13060128-02	EV13060128-01
Date Collected:	Unrestricted Land Uses	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013
1,2,3-Trichloropropane		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Bromobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
N-Propyl Benzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
2-Chlorotoluene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,3,5-Trimethylbenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
4-Chlorotoluene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
T-Butyl Benzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2,4-Trimethylbenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
S-Butyl Benzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
P-Isopropyltoluene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,3 Dichlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,4-Dichlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
N-Butylbenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2-Dichlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2-Dibromo 3-Chloropropane		NA	50 U	50 U	NA	50 U	NA	50 U	NA	50 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Hexachlorobutadiene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
Naphthalene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
1,2,3-Trichlorobenzene		NA	10 U	10 U	NA	10 U	NA	10 U	NA	10 U	NA	NA	NA	NA
SEMIVOLATILES (µg/kg) Method EPA-8270														
Pyridine		NA	200 U	200 U	NA	200 U	NA	200 U	NA	200 U	NA	NA	NA	NA
N-Nitrosodimethylamine		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Phenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Aniline		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2-Chlorophenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
1,3-Dichlorobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
1,4-Dichlorobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Benzyl Alcohol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
1,2-Dichlorobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2-Methylphenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
3&4-Methylphenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamine		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Hexachloroethane		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Nitrobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Isophorone		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2-Nitrophenol		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
2,4-Dimethylphenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Benzoic Acid		NA	1000 U	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2,4-Dichlorophenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
4-Chloroaniline		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2,6-Dichlorophenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Hexachlorobutadiene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Hexachlorocyclopentadiene		NA	500 U	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA	NA	NA
2,4,6-Trichlorophenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2,4,5-Trichlorophenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2-Chloronaphthalene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2-Nitroaniline		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
Dimethylphthalate		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2,6-Dinitrotoluene		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
3-Nitroaniline		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
2,4-Dinitrophenol		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
4-Nitrophenol		NA	500 U	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA	NA	NA
Dibenzofuran		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
2,4-Dinitrotoluene		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
Diethylphthalate		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
4-Chlorophenyl-Phenylether		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
4-Nitroaniline		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
N-Nitrosodiphenylamine		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Azobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
4-Bromophenyl-Phenylether		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation													
Location:		FPP-B09	FPP-B09	FPP-B10	FPP-B10	FPP-B11	FPP-B11	FPP-B12	FPP-B13	FPP-B13	FPP-B14	FPP-B14	FPP-B15	FPP-B16
Depth	MTCA Method A	(12-13)	(15-16.5)	(10-11)	(15-16)	(18-19)	(22-23)	(6-7)	(5.5-6.5)	(12-14.5)	(14-15)	(18.5-19.5)	(13.5-14.5)	(11.7-12.7)
Lab ID:	Soil Cleanup Levels for	EV13060128-22	EV13060128-21	EV13060128-09	EV13060128-10	EV13060128-08	EV13060128-48	EV13060128-07	EV13060128-06	EV13060128-05	EV13060128-03	EV13060128-04	EV13060128-02	EV13060128-01
Date Collected:	Unrestricted Land Uses	06/19/2013	06/19/2013	06/18/2013	06/18/2013	06/18/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013	06/17/2013
Hexachlorobenzene		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Pentachlorophenol		NA	500 U	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA	NA	NA
Carbazole		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
Di-N-Butylphthalate		NA	130 U	130 U	NA	130 U	NA	130 U	NA	130 U	NA	NA	NA	NA
Butylbenzylphthalate		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
3,3-Dichlorobenzidine		NA	250 U	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA	NA	NA
Bis(2-Ethylhexyl)Phthalate		NA	130 U	130 U	NA	130 U	NA	130 U	NA	130 U	NA	NA	NA	NA
Di-N-Octylphthalate		NA	100 U	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA	NA	NA
PAHs (mg/kg) Method EPA-8270 SIM														
Naphthalene		NA	0.074	0.012	NA	0.14	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
2-Methylnaphthalene		NA	0.013	0.010 U	NA	0.012	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
1-Methylnaphthalene		NA	0.010 U	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Total Naphthalenes	5 (b)	NA	0.087	0.012	NA	0.152	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Acenaphthylene		NA	0.029	0.010 U	NA	0.054	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Acenaphthene		NA	0.010 U	0.010 U	NA	0.013	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Fluorene		NA	0.010 U	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Phenanthrene		NA	0.040	0.010 U	NA	0.075	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Anthracene		NA	0.010 U	0.010 U	NA	0.014	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Fluoranthene		NA	0.038	0.010 U	NA	0.069	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Pyrene		NA	0.046	0.010 U	NA	0.081	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo[A]Anthracene		NA	0.010 U	0.010 U	NA	0.011	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Chrysene		NA	0.010 U	0.010 U	NA	0.012	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo[B]Fluoranthene		NA	0.010 U	0.010 U	NA	0.011	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo[K]Fluoranthene		NA	0.010 U	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo[A]Pyrene		NA	0.010 U	0.010 U	NA	0.012	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene		NA	0.010 U	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Dibenz[A,H]Anthracene		NA	0.010 U	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
Benzo[G,H,I]Perylene		NA	0.010 U	0.010 U	NA	0.015	NA	0.010 U	NA	0.010 U	NA	NA	NA	NA
cPAH TEQ	0.1	NA	ND	ND	NA	0.014	NA	ND	NA	ND	NA	NA	NA	NA
PCBs (mg/kg) Method EPA-8082														
PCB-1016		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1268		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1221		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1232		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1242		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1248		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1254		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
PCB-1260		NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
Total PCBs	1	NA	0.10 U	0.10 U	NA	0.10 U	NA	0.10 U	NA	0.10 U	NA	NA	NA	NA
CONVENTIONALS														
Total Organic Carbon (%) (EPA-9060)		NA	3.3	NA	NA	NA	NA	NA	NA	0.11	NA	NA	NA	NA
pH (SU) (EPA-9045)		NA	6.39	NA	NA	NA	NA	NA	NA	8.86	NA	NA	NA	NA
Percent Solids (%) (EPA-160.3)		NA	73.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation									Former Plywood Plant Parcels Supplemental Investigation				
Location:		FPP-B17	FPP-B17	FPP-B18	FPP-B19	FPP-B20	FPP-B21	FPP-B22	FPP-B23	FPP-B24	FPP-B25-S	FPP-B26-S	FPP-B27-S	FPP-B28-S	FPP-B29a-S
Depth	MTCA Method A	(0.5-1.5)	(16-17)	(16.5-17.5)	(11-12)	(10-11)	(13-14)	(12.5-13.5)	(11.5-12.5)	(15-16.5)	(15-16)	(15-16)	(5-6)	(15-16)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13060128-46	EV13060128-45	EV13060128-27	EV13060128-28	EV13060128-33	EV13060128-31	EV13060128-30	EV13060128-29	EV13060128-32	EV13080134-26	EV13080134-22	EV13080134-17	EV13080134-52	EV13080134-44
Date Collected:	Unrestricted Land Uses	06/21/2013	06/21/2013	06/19/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/22/2013
TOTAL METALS (mg/kg) EPA Methods 6020/7471/7196															
Arsenic	20	2.5	2.1	1.9	NA	2.4	2.1	2.0	1.9	2.4	2.0	1.9	1.0 U	2.0	3.7
Cadmium	2	0.50 U	0.50 U	0.50 U	NA	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2000	21	19	28	NA	9.3	11	15	12	17	110	25	19	17	20
Chromium (VI)	19	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA
Iron		27,000	23,000	23,000	NA	31,000	22,000	22,000	24,000	24,000	40,000	21,000	20,000	21,000	31,000
Lead	250	10	5.0	6.3	NA	30	3.0	3.3	2.9	6.7	3.8	3.3	11	4.2	5.3
Manganese		320	240	290	NA	560	340	310	370	250	320	250	300	220	570
Mercury	2	0.055	0.047	0.027	NA	0.079	0.025	0.024	0.031	0.028	0.020 U	0.023	0.15	0.021	0.092
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-DX															
TPH-Diesel Range	2000	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	44	50 U	250 U	120 U
TPH-Oil Range	2000	87	88	190	140	130	50 U	50 U	50 U	440	50 U	140	1300	**6100**	2000
NWTPH-GX															
TPH-Gasoline Range	100 (a)	NA	3.0 U	NA	3.0 U	3.0 U	NA	NA	NA	3.0 U	NA	NA	NA	NA	NA
VOLATILES (µg/kg) Method EPA-8260															
Dichlorodifluoromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Chloromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Vinyl Chloride		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bromomethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Chloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Carbon Tetrachloride		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Trichlorofluoromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Carbon Disulfide		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Acetone		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
1,1-Dichloroethene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Methylene Chloride	20	NA	20 U	20 U	20 U	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA
Acrylonitrile		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
Methyl T-Butyl Ether		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Trans-1,2-Dichloroethene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1-Dichloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
2-Butanone		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
2,2-Dichloropropane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bromochloromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Chloroform		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	2000	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1-Dichloropropene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2-Dichloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Benzene	30	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA
Trichloroethene	30	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2-Dichloropropane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Dibromomethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bromodichloromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Trans-1,3-Dichloropropene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
Toluene	7000	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Cis-1,3-Dichloropropene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1,2-Trichloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
2-Hexanone		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
1,3-Dichloropropane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Tetrachloroethylene	50	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Dibromochloromethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2-Dibromoethane	5	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	5.0 U	NA	NA	NA	NA	NA
Chlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Ethylbenzene	6000	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
m,p-Xylene	9000 (c)	NA	20 U	20 U	20 U	20 U	NA	NA	NA	20 U	NA	NA	NA	NA	NA
Styrene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
o-Xylene	9000 (c)	NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bromoform		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Isopropylbenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation									Former Plywood Plant Parcels Supplemental Investigation				
Location:		FPP-B17	FPP-B17	FPP-B18	FPP-B19	FPP-B20	FPP-B21	FPP-B22	FPP-B23	FPP-B24	FPP-B25-S	FPP-B26-S	FPP-B27-S	FPP-B28-S	FPP-B29a-S
Depth	MTCA Method A	(0.5-1.5)	(16-17)	(16.5-17.5)	(11-12)	(10-11)	(13-14)	(12.5-13.5)	(11.5-12.5)	(15-16.5)	(15-16)	(15-16)	(5-6)	(15-16)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13060128-46	EV13060128-45	EV13060128-27	EV13060128-28	EV13060128-33	EV13060128-31	EV13060128-30	EV13060128-29	EV13060128-32	EV13080134-26	EV13080134-22	EV13080134-17	EV13080134-52	EV13080134-44
Date Collected:	Unrestricted Land Uses	06/21/2013	06/21/2013	06/19/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/22/2013
1,2,3-Trichloropropane		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Bromobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
N-Propyl Benzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
2-Chlorotoluene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
4-Chlorotoluene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
T-Butyl Benzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
S-Butyl Benzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
P-Isopropyltoluene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,3 Dichlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
N-Butylbenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2-Dibromo 3-Chloropropane		NA	50 U	50 U	50 U	50 U	NA	NA	NA	50 U	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Hexachlorobutadiene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Naphthalene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene		NA	10 U	10 U	10 U	10 U	NA	NA	NA	10 U	NA	NA	NA	NA	NA
SEMIVOLATILES (µg/kg) Method EPA-8270															
Pyridine		NA	200 U	NA	NA	200 U	NA	NA	NA	200 U	NA	NA	NA	NA	NA
N-Nitrosodimethylamine		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Phenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Aniline		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2-Chlorophenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
1,3-Dichlorobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
1,4-Dichlorobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Benzyl Alcohol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
1,2-Dichlorobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2-Methylphenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
3&4-Methylphenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamine		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Hexachloroethane		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Nitrobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Isophorone		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2-Nitrophenol		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
2,4-Dimethylphenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Benzoic Acid		NA	1000 U	NA	NA	1000 U	NA	NA	NA	1000 U	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2,4-Dichlorophenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
4-Chloroaniline		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2,6-Dichlorophenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Hexachlorobutadiene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene		NA	500 U	NA	NA	500 U	NA	NA	NA	500 U	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2-Chloronaphthalene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2-Nitroaniline		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
Dimethylphthalate		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2,6-Dinitrotoluene		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
3-Nitroaniline		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
2,4-Dinitrophenol		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
4-Nitrophenol		NA	500 U	NA	NA	500 U	NA	NA	NA	500 U	NA	NA	NA	NA	NA
Dibenzofuran		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
2,4-Dinitrotoluene		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
Diethylphthalate		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
4-Chlorophenyl-Phenylether		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
4-Nitroaniline		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Azobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
4-Bromophenyl-Phenylether		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Initial Investigation									Former Plywood Plant Parcels Supplemental Investigation				
Location:		FPP-B17	FPP-B17	FPP-B18	FPP-B19	FPP-B20	FPP-B21	FPP-B22	FPP-B23	FPP-B24	FPP-B25-S	FPP-B26-S	FPP-B27-S	FPP-B28-S	FPP-B29a-S
Depth	MTCA Method A	(0.5-1.5)	(16-17)	(16.5-17.5)	(11-12)	(10-11)	(13-14)	(12.5-13.5)	(11.5-12.5)	(15-16.5)	(15-16)	(15-16)	(5-6)	(15-16)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13060128-46	EV13060128-45	EV13060128-27	EV13060128-28	EV13060128-33	EV13060128-31	EV13060128-30	EV13060128-29	EV13060128-32	EV13080134-26	EV13080134-22	EV13080134-17	EV13080134-52	EV13080134-44
Date Collected:	Unrestricted Land Uses	06/21/2013	06/21/2013	06/19/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/22/2013
Hexachlorobenzene		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Pentachlorophenol		NA	500 U	NA	NA	500 U	NA	NA	NA	500 U	NA	NA	NA	NA	NA
Carbazole		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
Di-N-Butylphthalate		NA	130 U	NA	NA	130 U	NA	NA	NA	130 U	NA	NA	NA	NA	NA
Butylbenzylphthalate		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine		NA	250 U	NA	NA	250 U	NA	NA	NA	250 U	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)Phthalate		NA	130 U	NA	NA	150	NA	NA	NA	130 U	NA	NA	NA	NA	NA
Di-N-Octylphthalate		NA	100 U	NA	NA	100 U	NA	NA	NA	100 U	NA	NA	NA	NA	NA
PAHs (mg/kg) Method EPA-8270 SIM															
Naphthalene		NA	0.030	NA	NA	0.010 U	NA	NA	NA	0.014	NA	NA	NA	NA	NA
2-Methylnaphthalene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
1-Methylnaphthalene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Total Naphthalenes	5 (b)	NA	0.030	NA	NA	0.010 U	NA	NA	NA	0.014	NA	NA	NA	NA	NA
Acenaphthylene		NA	0.011	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Acenaphthene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Fluorene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Phenanthrene		NA	0.018	NA	NA	0.012	NA	NA	NA	0.015	NA	NA	NA	NA	NA
Anthracene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Fluoranthene		NA	0.016	NA	NA	0.011	NA	NA	NA	0.012	NA	NA	NA	NA	NA
Pyrene		NA	0.020	NA	NA	0.013	NA	NA	NA	0.015	NA	NA	NA	NA	NA
Benzo[A]Anthracene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Chrysene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Benzo[B]Fluoranthene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Benzo[K]Fluoranthene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Benzo[A]Pyrene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Dibenz[A,H]Anthracene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
Benzo[G,H,I]Perylene		NA	0.010 U	NA	NA	0.010 U	NA	NA	NA	0.010 U	NA	NA	NA	NA	NA
cPAH TEQ	0.1	NA	ND	NA	NA	ND	NA	NA	NA	ND	NA	NA	NA	NA	NA
PCBs (mg/kg) Method EPA-8082															
PCB-1016		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1268		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1221		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1232		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1242		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1248		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1254		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
PCB-1260		NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
Total PCBs	1	NA	NA	NA	NA	0.10 U	NA	NA	NA	0.10 U	NA	NA	NA	NA	0.10 U
CONVENTIONALS															
Total Organic Carbon (%) (EPA-9060)		NA	NA	NA	NA	NA	NA	0.10 U	NA	2.2	NA	0.14	NA	NA	NA
pH (SU) (EPA-9045)		NA	NA	NA	NA	7.89	NA	8.33	NA	8.10	NA	NA	NA	NA	NA
Percent Solids (%) (EPA-160.3)		NA	NA	NA	NA	NA	NA	93.2	NA	78.1	NA	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Supplemental Investigation										Triangular Parcel Initial Investigation			
Location:		FPP-B29b-S	FPP-B29c-S	FPP-B30-S	FPP-B31-S	FPP-B32-S	FPP-B33-S	FPP-B34-S	FPP-MW-1-S	FPP-MW-2-S	FPP-MW-3-S	TP-B01	TP-B01	TP-B02	TP-B03
Depth	MTCA Method A	(15-16)	(15-16)	(14-15)	(15-16)	(15-16)	(10-11)	(15-16)	(8.5-9)	(8.5-9.5)	(13.5-14.5)	(1-2)	(6.5-7.5)	(13-14)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13080134-56	EV13080134-60	EV13080134-30	EV13080134-39	EV13080134-48	EV13080134-35	EV13080134-33	EV13080134-08	EV13080134-12	EV13080134-15	EV13060128-47	EV13060128-39	EV13060128-38	EV13060128-37
Date Collected:	Unrestricted Land Uses	08/23/2013	08/23/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/20/2013	08/20/2013	08/20/2013	06/21/2013	06/21/2013	06/20/2013	06/20/2013
TOTAL METALS (mg/kg) EPA Methods 6020/7471/7196															
Arsenic	20	4.0	3.0	3.0	2.1	2.6	1.9	2.1	2.3	2.1	2.9	3.7	1.9	1.9	1.9
Cadmium	2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2000	17	20	16	17	18	21	35	50	26	16	17	11	12	9.4
Chromium (VI)	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	NA	5.0 U
Iron		30,000	31,000	29,000	21,000	24,000	21,000	23,000	28,000	25,000	18,000	29,000	21,000	23,000	22,000
Lead	250	5.5	5.7	23	10	5.4	2.5	5.0	6.2	4.1	6.6	20	4.8	5.4	3.3
Manganese		560	410	460	300	370	290	300	330	310	200	530	350	350	330
Mercury	2	0.082	0.12	0.093	0.050	0.15	0.022	0.022	0.024	0.025	0.028	0.12	0.027	0.12	0.027
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-DX															
TPH-Diesel Range	2000	25 U	120 U	130 J	25 UJ	25 U	25 U	25 U	25 U	25 U	46	25 U	25 U	25 U	25 U
TPH-Oil Range	2000	560	**3500**	240	820 J	50 U	50 U	50 U	50 U	67	55	57	50 U	50 U	50 U
NWTPH-GX															
TPH-Gasoline Range	100 (a)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.0 U	3.0 U	NA
VOLATILES (µg/kg) Method EPA-8260															
Dichlorodifluoromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Chloromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Vinyl Chloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Bromomethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Chloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Carbon Tetrachloride		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Trichlorofluoromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Carbon Disulfide		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Acetone		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
1,1-Dichloroethene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Methylene Chloride	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	20 U
Acrylonitrile		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
Methyl T-Butyl Ether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Trans-1,2-Dichloroethene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1-Dichloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
2-Butanone		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
Cis-1,2-Dichloroethene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
2,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Bromochloromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Chloroform		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1,1-Trichloroethane	2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1-Dichloropropene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2-Dichloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Benzene	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U	5.0 U
Trichloroethene	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2-Dichloropropane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Dibromomethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Bromodichloromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Trans-1,3-Dichloropropene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
4-Methyl-2-Pentanone		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
Toluene	7000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Cis-1,3-Dichloropropene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1,2-Trichloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
2-Hexanone		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
1,3-Dichloropropane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Tetrachloroethylene	50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Dibromochloromethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2-Dibromoethane	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0 U	5.0 U	5.0 U
Chlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1,1,2-Tetrachloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Ethylbenzene	6000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
m,p-Xylene	9000 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	20 U	20 U	20 U
Styrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
o-Xylene	9000 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Bromoform		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Isopropylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Supplemental Investigation										Triangular Parcel Initial Investigation			
Location:		FPP-B29b-S	FPP-B29c-S	FPP-B30-S	FPP-B31-S	FPP-B32-S	FPP-B33-S	FPP-B34-S	FPP-MW-1-S	FPP-MW-2-S	FPP-MW-3-S	TP-B01	TP-B01	TP-B02	TP-B03
Depth	MTCA Method A	(15-16)	(15-16)	(14-15)	(15-16)	(15-16)	(10-11)	(15-16)	(8.5-9)	(8.5-9.5)	(13.5-14.5)	(1-2)	(6.5-7.5)	(13-14)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13080134-56	EV13080134-60	EV13080134-30	EV13080134-39	EV13080134-48	EV13080134-35	EV13080134-33	EV13080134-08	EV13080134-12	EV13080134-15	EV13060128-47	EV13060128-39	EV13060128-38	EV13060128-37
Date Collected:	Unrestricted Land Uses	08/23/2013	08/23/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/20/2013	08/20/2013	08/20/2013	06/21/2013	06/21/2013	06/20/2013	06/20/2013
1,2,3-Trichloropropane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Bromobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
N-Propyl Benzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
2-Chlorotoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,3,5-Trimethylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
4-Chlorotoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
T-Butyl Benzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2,4-Trimethylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
S-Butyl Benzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
P-Isopropyltoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,3 Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
N-Butylbenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2-Dibromo 3-Chloropropane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50 U	50 U	50 U
1,2,4-Trichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Hexachlorobutadiene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
1,2,3-Trichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10 U	10 U	10 U
SEMIVOLATILES (µg/kg) Method EPA-8270															
Pyridine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200 U	200 U	200 U	NA
N-Nitrosodimethylamine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Phenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Aniline		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Bis(2-Chloroethyl)Ether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2-Chlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
1,3-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
1,4-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Benzyl Alcohol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
1,2-Dichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2-Methylphenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Bis(2-Chloroisopropyl)Ether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
3&4-Methylphenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
N-Nitroso-Di-N-Propylamine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Hexachloroethane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Nitrobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Isophorone		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2-Nitrophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
2,4-Dimethylphenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Benzoic Acid		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000 U	1000 U	1000 U	NA
Bis(2-Chloroethoxy)Methane		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2,4-Dichlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
1,2,4-Trichlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
4-Chloroaniline		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2,6-Dichlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Hexachlorobutadiene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
4-Chloro-3-Methylphenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Hexachlorocyclopentadiene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 U	500 U	500 U	NA
2,4,6-Trichlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2,4,5-Trichlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2-Chloronaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2-Nitroaniline		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
Dimethylphthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2,6-Dinitrotoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
3-Nitroaniline		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
2,4-Dinitrophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
4-Nitrophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 U	500 U	500 U	NA
Dibenzofuran		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
2,4-Dinitrotoluene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
2,3,4,6-Tetrachlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
Diethylphthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
4-Chlorophenyl-Phenylether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
4-Nitroaniline		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
4,6-Dinitro-2-Methylphenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
N-Nitrosodiphenylamine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Azobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
4-Bromophenyl-Phenylether		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Former Plywood Plant Parcels Supplemental Investigation										Triangular Parcel Initial Investigation			
Location:		FPP-B29b-S	FPP-B29c-S	FPP-B30-S	FPP-B31-S	FPP-B32-S	FPP-B33-S	FPP-B34-S	FPP-MW-1-S	FPP-MW-2-S	FPP-MW-3-S	TP-B01	TP-B01	TP-B02	TP-B03
Depth	MTCA Method A	(15-16)	(15-16)	(14-15)	(15-16)	(15-16)	(10-11)	(15-16)	(8.5-9)	(8.5-9.5)	(13.5-14.5)	(1-2)	(6.5-7.5)	(13-14)	(15-16)
Lab ID:	Soil Cleanup Levels for	EV13080134-56	EV13080134-60	EV13080134-30	EV13080134-39	EV13080134-48	EV13080134-35	EV13080134-33	EV13080134-08	EV13080134-12	EV13080134-15	EV13060128-47	EV13060128-39	EV13060128-38	EV13060128-37
Date Collected:	Unrestricted Land Uses	08/23/2013	08/23/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/22/2013	08/20/2013	08/20/2013	08/20/2013	06/21/2013	06/21/2013	06/20/2013	06/20/2013
Hexachlorobenzene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Pentachlorophenol		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	500 U	500 U	500 U	NA
Carbazole		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
Di-N-Butylphthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	130 U	130 U	130 U	NA
Butylbenzylphthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
3,3-Dichlorobenzidine		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250 U	250 U	250 U	NA
Bis(2-Ethylhexyl)Phthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	130 U	130 U	130 U	NA
Di-N-Octylphthalate		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	100 U	100 U	100 U	NA
PAHs (mg/kg) Method EPA-8270 SIM															
Naphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
2-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
1-Methylnaphthalene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Total Naphthalenes	5 (b)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Acenaphthylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Acenaphthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Fluorene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Phenanthrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011	0.010 U	0.010 U	NA
Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	0.010 U	0.010 U	NA
Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.016	0.010 U	0.010 U	NA
Benzo[A]Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Chrysene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Benzo[B]Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.014	0.010 U	0.010 U	NA
Benzo[K]Fluoranthene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Benzo[A]Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Indeno[1,2,3-Cd]Pyrene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.018	0.010 U	0.010 U	NA
Dibenz[A,H]Anthracene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010 U	0.010 U	0.010 U	NA
Benzo[G,H,I]Perylene		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.028	0.010 U	0.010 U	NA
cPAH TEQ	0.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.003	ND	ND	NA
PCBs (mg/kg) Method EPA-8082															
PCB-1016		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1268		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1221		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1232		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1242		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1248		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1254		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
PCB-1260		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
Total PCBs	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.10 U	NA	NA
CONVENTIONALS															
Total Organic Carbon (%) (EPA-9060)		NA	NA	2.8	NA	NA	0.091	NA	NA	NA	NA	NA	NA	NA	NA
pH (SU) (EPA-9045)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Percent Solids (%) (EPA-160.3)		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Triangular Parcel Initial Investigation								Triangular Parcel Supp. Invest.	
Location:		TP-B04	TP-B04B	TP-B06	TP-B07	TP-B08	TP-B08	TP-B09	TP-B09	TP-MW-1-S	TP-MW-2-S
Depth	MTCA Method A	(2-3)	(11.5-13)	(13.5-14)	(14-15)	(7-8)	(16-17.5)	(6-7)	(13-14)	(13.5-14.5)	(14-15)
Lab ID:	Soil Cleanup Levels for	EV13060128-34	EV13060128-35	EV13060128-36	EV13060128-40	EV13060128-44	EV13060128-43	EV13060128-42	EV13060128-41	EV13080134-03	EV13080134-06
Date Collected:	Unrestricted Land Uses	06/20/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	08/19/2013	08/19/2013
TOTAL METALS (mg/kg) EPA Methods 6020/7471/7196											
Arsenic	20	5.8	1.8	4.4	3.1	2.7	2.5	4.5	2.1	2.1	2.3
Cadmium	2	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Chromium	2000	17	19	22	22	13	16	22	20	12	16
Chromium (VI)	19	NA	NA	NA	NA	NA	NA	NA	5.0 U	NA	NA
Iron		33,000	24,000	29,000	32,000	16,000	24,000	28,000	21,000	22,000	21,000
Lead	250	28	3.4	7.4	8.0	6.9	4.9	32	7.7	3.3	3.4
Manganese		1200	290	300	300	260	250	430	170	300	240
Mercury	2	0.091	0.023	0.094	0.076	0.038	0.085	0.055	0.092	0.025	0.021
TOTAL PETROLEUM HYDROCARBONS (mg/kg) NWTPH-DX											
TPH-Diesel Range	2000	35 U	50 U	30 U	29 U	25 U	360	29 U	27 U	25 U	48
TPH-Oil Range	2000	510	1700	61	76	180	50 U	130	59	50 U	50 U
NWTPH-GX											
TPH-Gasoline Range	100 (a)	NA	3.0 U	NA	NA	17	3.0 U	NA	3.0 U	NA	NA
VOLATILES (µg/kg) Method EPA-8260											
Dichlorodifluoromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Chloromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Vinyl Chloride		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Bromomethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Chloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Carbon Tetrachloride		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Trichlorofluoromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Carbon Disulfide		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Acetone		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
1,1-Dichloroethene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Methylene Chloride	20	NA	20 U	NA	20 U	NA	20 U	20 U	20 U	NA	NA
Acrylonitrile		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
Methyl T-Butyl Ether		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Trans-1,2-Dichloroethene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1-Dichloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
2-Butanone		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
Cis-1,2-Dichloroethene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
2,2-Dichloropropane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Bromochloromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Chloroform		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1,1-Trichloroethane	2000	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1-Dichloropropene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dichloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Benzene	30	NA	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	NA
Trichloroethene	30	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dichloropropane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Dibromomethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Bromodichloromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Trans-1,3-Dichloropropene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
4-Methyl-2-Pentanone		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
Toluene	7000	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Cis-1,3-Dichloropropene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1,2-Trichloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
2-Hexanone		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
1,3-Dichloropropane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Tetrachloroethylene	50	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Dibromochloromethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dibromoethane	5	NA	5.0 U	NA	5.0 U	NA	5.0 U	5.0 U	5.0 U	NA	NA
Chlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1,1,2-Tetrachloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Ethylbenzene	6000	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
m,p-Xylene	9000 (c)	NA	20 U	NA	20 U	NA	20 U	20 U	20 U	NA	NA
Styrene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
o-Xylene	9000 (c)	NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Bromoform		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Isopropylbenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,1,2,2-Tetrachloroethane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Triangular Parcel Initial Investigation								Triangular Parcel Supp. Invest.	
Location:		TP-B04	TP-B04B	TP-B06	TP-B07	TP-B08	TP-B08	TP-B09	TP-B09	TP-MW-1-S	TP-MW-2-S
Depth	MTCA Method A	(2-3)	(11.5-13)	(13.5-14)	(14-15)	(7-8)	(16-17.5)	(6-7)	(13-14)	(13.5-14.5)	(14-15)
Lab ID:	Soil Cleanup Levels for	EV13060128-34	EV13060128-35	EV13060128-36	EV13060128-40	EV13060128-44	EV13060128-43	EV13060128-42	EV13060128-41	EV13080134-03	EV13080134-06
Date Collected:	Unrestricted Land Uses	06/20/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	08/19/2013	08/19/2013
1,2,3-Trichloropropane		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Bromobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
N-Propyl Benzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
2-Chlorotoluene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,3,5-Trimethylbenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
4-Chlorotoluene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
T-Butyl Benzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2,4-Trimethylbenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
S-Butyl Benzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
P-Isopropyltoluene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,3 Dichlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,4-Dichlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
N-Butylbenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dichlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2-Dibromo 3-Chloropropane		NA	50 U	NA	50 U	NA	50 U	50 U	50 U	NA	NA
1,2,4-Trichlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Hexachlorobutadiene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
Naphthalene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
1,2,3-Trichlorobenzene		NA	10 U	NA	10 U	NA	10 U	10 U	10 U	NA	NA
SEMIVOLATILES (µg/kg) Method EPA-8270											
Pyridine		NA	200 U	NA	200 U	NA	200 U	NA	200 U	NA	NA
N-Nitrosodimethylamine		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Phenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Aniline		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Bis(2-Chloroethyl)Ether		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2-Chlorophenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
1,3-Dichlorobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
1,4-Dichlorobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Benzyl Alcohol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
1,2-Dichlorobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2-Methylphenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Bis(2-Chloroisopropyl)Ether		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
3&4-Methylphenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
N-Nitroso-Di-N-Propylamine		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Hexachloroethane		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Nitrobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Isophorone		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2-Nitrophenol		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
2,4-Dimethylphenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Benzoic Acid		NA	1000 U	NA	1000 U	NA	1000 U	NA	1000 U	NA	NA
Bis(2-Chloroethoxy)Methane		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2,4-Dichlorophenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
1,2,4-Trichlorobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
4-Chloroaniline		NA	100 U	NA	110 U	NA	100 U	NA	100 U	NA	NA
2,6-Dichlorophenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Hexachlorobutadiene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
4-Chloro-3-Methylphenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Hexachlorocyclopentadiene		NA	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA
2,4,6-Trichlorophenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2,4,5-Trichlorophenol		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2-Chloronaphthalene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2-Nitroaniline		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
Dimethylphthalate		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2,6-Dinitrotoluene		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
3-Nitroaniline		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
2,4-Dinitrophenol		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
4-Nitrophenol		NA	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA
Dibenzofuran		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
2,4-Dinitrotoluene		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
2,3,4,6-Tetrachlorophenol		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
Diethylphthalate		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
4-Chlorophenyl-Phenylether		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
4-Nitroaniline		NA	250 U	NA	250 U	NA	250 U	NA	250 U	NA	NA
4,6-Dinitro-2-Methylphenol		NA	100 U	NA	120 U	NA	100 U	NA	100 U	NA	NA
N-Nitrosodiphenylamine		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Azobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
4-Bromophenyl-Phenylether		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA

TABLE A-6
SOIL ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

		Triangular Parcel Initial Investigation								Triangular Parcel Supp. Invest.	
Location:		TP-B04	TP-B04B	TP-B06	TP-B07	TP-B08	TP-B08	TP-B09	TP-B09	TP-MW-1-S	TP-MW-2-S
Depth	MTCA Method A	(2-3)	(11.5-13)	(13.5-14)	(14-15)	(7-8)	(16-17.5)	(6-7)	(13-14)	(13.5-14.5)	(14-15)
Lab ID:	Soil Cleanup Levels for	EV13060128-34	EV13060128-35	EV13060128-36	EV13060128-40	EV13060128-44	EV13060128-43	EV13060128-42	EV13060128-41	EV13080134-03	EV13080134-06
Date Collected:	Unrestricted Land Uses	06/20/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	06/21/2013	08/19/2013	08/19/2013
Hexachlorobenzene		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
Pentachlorophenol		NA	500 U	NA	500 U	NA	500 U	NA	500 U	NA	NA
Carbazole		NA	100 U	NA	110 U	NA	100 U	NA	100 U	NA	NA
Di-N-Butylphthalate		NA	130 U	NA	130 U	NA	130 U	NA	130 U	NA	NA
Butylbenzylphthalate		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
3,3-Dichlorobenzidine		NA	250 U	NA	270 U	NA	250 U	NA	250 U	NA	NA
Bis(2-Ethylhexyl)Phthalate		NA	130 U	NA	130 U	NA	130 U	NA	130 U	NA	NA
Di-N-Octylphthalate		NA	100 U	NA	100 U	NA	100 U	NA	100 U	NA	NA
PAHs (mg/kg) Method EPA-8270 SIM											
Naphthalene		NA	0.010 U	NA	0.059	NA	0.021	NA	0.070	NA	NA
2-Methylnaphthalene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.012	NA	NA
1-Methylnaphthalene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.011	NA	NA
Total Naphthalenes	5 (b)	NA	0.010 U	NA	0.059	NA	0.021	NA	0.093	NA	NA
Acenaphthylene		NA	0.010 U	NA	0.025	NA	0.010 U	NA	0.032	NA	NA
Acenaphthene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA
Fluorene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA
Phenanthrene		NA	0.010 U	NA	0.031	NA	0.013	NA	0.040	NA	NA
Anthracene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA
Fluoranthene		NA	0.010 U	NA	0.045	NA	0.010	NA	0.028	NA	NA
Pyrene		NA	0.010 U	NA	0.051	NA	0.012	NA	0.030	NA	NA
Benzo[A]Anthracene		NA	0.010 U	NA	0.020	NA	0.010 U	NA	0.010 U	NA	NA
Chrysene		NA	0.010 U	NA	0.018	NA	0.010 U	NA	0.010 U	NA	NA
Benzo[B]Fluoranthene		NA	0.010 U	NA	0.016	NA	0.010 U	NA	0.010 U	NA	NA
Benzo[K]Fluoranthene		NA	0.010 U	NA	0.015	NA	0.010 U	NA	0.010 U	NA	NA
Benzo[A]Pyrene		NA	0.010 U	NA	0.022	NA	0.010 U	NA	0.010 U	NA	NA
Indeno[1,2,3-Cd]Pyrene		NA	0.010 U	NA	0.016	NA	0.010 U	NA	0.010 U	NA	NA
Dibenz[A,H]Anthracene		NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	0.010 U	NA	NA
Benzo[G,H,I]Perylene		NA	0.010 U	NA	0.018	NA	0.010 U	NA	0.010 U	NA	NA
cPAH TEQ	0.1	NA	ND	NA	0.029	NA	ND	NA	ND	NA	NA
PCBs (mg/kg) Method EPA-8082											
PCB-1016		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1268		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1221		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1232		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1242		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1248		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1254		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
PCB-1260		NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
Total PCBs	1	NA	0.10 U	NA	NA	NA	0.10 U	NA	0.10 U	NA	NA
CONVENTIONALS											
Total Organic Carbon (%) (EPA-9060)		NA	1.9	1.6	NA	NA	NA	NA	4.2	NA	NA
pH (SU) (EPA-9045)		NA	NA	NA	NA	NA	NA	NA	6.29	NA	NA
Percent Solids (%) (EPA-160.3)		NA	92.0	61.4	NA	NA	NA	NA	71.4	NA	NA

(a) = Value is used when benzene is not present.
(b) = Value if for the total of naphthalene, 1-methylnaphthalene, and 2-metthylnaphthalene.
(c) = Value is for total xylenes.
U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
NA = Not analyzed.
ND = Not detected.
Bold = Exceedance of Cleanup/Screening Level.

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation											
Location:		Minimum Screening	FPP-B01	FPP-B02	FPP-B03	FPP-B04	FPP-B05	FPP-B07	FPP-B08	FPP-B09	FPP-B11	FPP-B12	FPP-B13	FPP-B15
Depth	MTCA Method A	Level (Groundwater	17	19	17	15	18	17	17	18	18	18	13	18
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-53	EV13060104-04	EV13060128-60	EV13060128-56	EV13060104-07	EV13060104-06	EV13060128-52	EV13060104-05	EV13060128-55	EV13060104-03	EV13060104-02	EV13060104-01
Date Collected:	Groundwater	Unless Otherwise Indicated	06/18/2013	06/19/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013
DISSOLVED METALS (µg/L) **EPA Methods 200.8/7196/7470**														
Arsenic (a)	5	0.15 (c)	1.0 U	1.0 U	1.0 U	**1.4**	1.0 U	1.0 U	**1.1**	**1.0**	**1.3**	**1.5**	NA	1.0 U
Cadmium	5	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1.0 U
Chromium	50		2.0 U	2.0 U	2.0 U	2.0 U	2.6	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U
Chromium (VI)		48	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Iron		300	50 U	80	50 U	**4900**	**3800**	**5200**	**430**	**4300**	76	**9500**	NA	71
Lead	15	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	NA	1.0 U
Manganese		50	**830**	**1300**	**1900**	**2000**	**2700**	**1800**	**1300**	**3500**	**1600**	**1600**	NA	**420**
Mercury	2		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	NA	0.20 U
Sodium		20,000	13,000	14,000	19,000	**79,000**	**59,000**	**22,000**	**43,000**	**41,000**	**23,000**	**41,000**	NA	18,000
TOTAL METALS (µg/L) **EPA Methods 200.8/7196/7470**														
Arsenic (a)	5	0.15 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**2.5**	NA
Cadmium	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.0 U	NA
Chromium	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10	NA
Chromium (VI)		48	NA	10 U	NA	NA	10 U	NA	NA	10 U	NA	NA	NA	NA
Iron		300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**13,000**	NA
Lead	15	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.8	NA
Manganese		50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**1700**	NA
Mercury	2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.20 U	NA
Sodium		20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**150,000**	NA
TOTAL PETROLEUM HYDROCARBONS (µg/L) **NWTPH-DX**														
TPH-Diesel Range	500		130 U	130 U	130 U	**1700**	620 U	130 U	130 U	130 U	130 U	130 U	130 U	130 U
TPH-Oil Range	500		250 U	250 U	250 U	**5000**	**7500**	250 U	**600**	250 U	250 U	250 U	250 U	250 U
NWTPH-GX														
TPH-Gasoline Range	1000 (b)		50 U	50 U	NA	50 U	51	50 U	50 U	50 U	NA	NA	50 U	NA
VOLATILES (µg/L) **Method EPA-8260**														
Dichlorodifluoromethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Chloromethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bromomethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Chloroethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Carbon Tetrachloride			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Trichlorofluoromethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Carbon Disulfide			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Acetone			25 U	25 U	NA	25 U	25 U	25 U	25 U	25 U	NA	NA	25 U	NA
1,1-Dichloroethene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Methylene Chloride	5		5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	5.0 U	NA
Acrylonitrile			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
Methyl T-Butyl Ether			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Trans-1,2-Dichloroethene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1-Dichloroethane	5		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Butanone			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
Cis-1,2-Dichloroethene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,2-Dichloropropane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bromochloromethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Chloroform		80	3.3	2.8	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1,1-Trichloroethane	200		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1-Dichloropropene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dichloroethane	5		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzene	5		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dichloropropane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Dibromomethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bromodichloromethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Trans-1,3-Dichloropropene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Methyl-2-Pentanone			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation											
Location:		Minimum Screening	FPP-B01	FPP-B02	FPP-B03	FPP-B04	FPP-B05	FPP-B07	FPP-B08	FPP-B09	FPP-B11	FPP-B12	FPP-B13	FPP-B15
Depth	MTCA Method A	Level (Groundwater	17	19	17	15	18	17	17	18	18	18	13	18
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-53	EV13060104-04	EV13060128-60	EV13060128-56	EV13060104-07	EV13060104-06	EV13060128-52	EV13060104-05	EV13060128-55	EV13060104-03	EV13060104-02	EV13060104-01
Date Collected:	Groundwater	Unless Otherwise Indicated	06/18/2013	06/19/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013
Toluene	1000		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Cis-1,3-Dichloropropene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1,2-Trichloroethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Hexanone			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
1,3-Dichloropropane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Tetrachloroethylene	5		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Dibromochloromethane	10		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dibromoethane	0.01		0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	0.010 U	NA
Chlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1,1,2-Tetrachloroethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Ethylbenzene	700		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
m,p-Xylene	1000 (d)		4.0 U	4.0 U	NA	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	NA	NA	4.0 U	NA
Styrene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
o-Xylene	1000 (d)		2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bromoform			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Isopropylbenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,1,2,2-Tetrachloroethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2,3-Trichloropropane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bromobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
N-Propyl Benzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Chlorotoluene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,3,5-Trimethylbenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Chlorotoluene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
T-Butyl Benzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2,4-Trimethylbenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
S-Butyl Benzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
P-Isopropyltoluene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,3 Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,4-Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
N-Butylbenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dibromo 3-Chloropropane			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
1,2,4-Trichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Hexachlorobutadiene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Naphthalene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2,3-Trichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
VOLATILES (µg/L) **Method EPA-8260 SIM**														
Vinyl Chloride	0.2		0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	NA	0.020 U	NA
Trichloroethene	5	0.5	0.020 U	0.020 U	NA	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	NA	0.020 U	NA
SEMIVOLATILES (µg/L) **Method EPA-8270**														
Pyridine			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
N-Nitrosodimethylamine			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Phenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Aniline			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bis(2-Chloroethyl)Ether			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Chlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,3-Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,4-Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzyl Alcohol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2-Dichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Methylphenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bis(2-Chloroisopropyl)Ether			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
3&4-Methylphenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
N-Nitroso-Di-N-Propylamine			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Hexachloroethane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Nitrobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Isophorone			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Nitrophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,4-Dimethylphenol		160	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation											
Location:		Minimum Screening	FPP-B01	FPP-B02	FPP-B03	FPP-B04	FPP-B05	FPP-B07	FPP-B08	FPP-B09	FPP-B11	FPP-B12	FPP-B13	FPP-B15
Depth	MTCA Method A	Level (Groundwater	17	19	17	15	18	17	17	18	18	18	13	18
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-53	EV13060104-04	EV13060128-60	EV13060128-56	EV13060104-07	EV13060104-06	EV13060128-52	EV13060104-05	EV13060128-55	EV13060104-03	EV13060104-02	EV13060104-01
Date Collected:	Groundwater	Unless Otherwise Indicated	06/18/2013	06/19/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013
Benzoic Acid			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
Bis(2-Chloroethoxy)Methane			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,4-Dichlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1,2,4-Trichlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Naphthalene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Chloroaniline			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,6-Dichlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Hexachlorobutadiene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Chloro-3-Methylphenol			2.0 UJ	2.0 UJ	NA	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	NA	NA	2.0 UJ	NA
2-Methylnaphthalene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
1-Methylnaphthalene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Hexachlorocyclopentadiene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,4,6-Trichlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,4,5-Trichlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Chloronaphthalene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2-Nitroaniline			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Acenaphthylene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Dimethylphthalate			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,6-Dinitrotoluene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Acenaphthene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
3-Nitroaniline			5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	5.0 U	NA
2,4-Dinitrophenol			10 U	10 U	NA	10 U	10 U	10 U	10 U	10 U	NA	NA	10 U	NA
4-Nitrophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Dibenzofuran			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,4-Dinitrotoluene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
2,3,4,6-Tetrachlorophenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Diethylphthalate			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Fluorene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Chlorophenyl-Phenylether			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Nitroaniline			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4,6-Dinitro-2-Methylphenol			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
N-Nitrosodiphenylamine			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Azobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
4-Bromophenyl-Phenylether			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Hexachlorobenzene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Pentachlorophenol			5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	5.0 U	NA
Phenanthrene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Anthracene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Carbazole			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Di-N-Butylphthalate			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Fluoranthene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Pyrene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Butylbenzylphthalate			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
3,3-Dichlorobenzidine			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzo[A]Anthracene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Chrysene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Bis(2-Ethylhexyl)Phthalate		6.0	2.0 U	2.0 U	NA	2.0 U	5.5	2.0 U	2.0 U	2.1	NA	NA	2.0 U	NA
Di-N-Octylphthalate			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzo[B]Fluoranthene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzo[K]Fluoranthene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzo[A]Pyrene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Indeno[1,2,3-Cd]Pyrene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Dibenz[A,H]Anthracene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA
Benzo[G,H,I]Perylene			2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	2.0 U	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation											
Location:		Minimum Screening	FPP-B01	FPP-B02	FPP-B03	FPP-B04	FPP-B05	FPP-B07	FPP-B08	FPP-B09	FPP-B11	FPP-B12	FPP-B13	FPP-B15
Depth	MTCA Method A	Level (Groundwater	17	19	17	15	18	17	17	18	18	18	13	18
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-53	EV13060104-04	EV13060128-60	EV13060128-56	EV13060104-07	EV13060104-06	EV13060128-52	EV13060104-05	EV13060128-55	EV13060104-03	EV13060104-02	EV13060104-01
Date Collected:	Groundwater	Unless Otherwise Indicated	06/18/2013	06/19/2013	06/18/2013	06/18/2013	06/19/2013	06/19/2013	06/18/2013	06/19/2013	06/18/2013	06/17/2013	06/17/2013	06/17/2013
PAHs (µg/L)														
Method EPA-8270 SIM														
Naphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Naphthalenes			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[A]Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[B]Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[K]Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[A]Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[A,H]Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[G,H,I]Perylene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs (µg/L)														
Method EPA-8082														
PCB-1016			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1268			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1221			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1232			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1242			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1248			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (SM5310C)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS														
pH		6.5-8.5	**6.49**	**5.73**	6.78	**6.30**	**6.00**	**5.86**	**6.03**	6.71	**6.13**	**5.79**	**6.15**	6.76

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation						Former Plywood Plant Parcels Supplemental Investigation					
Location:		Minimum Screening	FPP-B17	FPP-B19	FPP-B20	FPP-B24	MW-9A-01	MW-12-01	FPP-B25	FPP-B26	FPP-B27	FPP-B28	FPP-B29b	FPP-B31
Depth	MTCA Method A	Level (Groundwater	17	17	11	16			18.5	19.5	16	19	19	19
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-58	EV13060128-49	EV13060128-51	EV13060128-50	EV13060119-02	EV13060119-01	EV13080134-64	EV13080134-63	EV13080134-62	EV13080134-72	EV13080134-73	EV13080134-66
Date Collected:	Groundwater	Unless Otherwise Indicated	06/21/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/23/2013	08/22/2013
DISSOLVED METALS (µg/L) **EPA Methods 200.8/7196/7470**														
Arsenic (a)	5	0.15 (c)	1.0 U	NA	**2.7**	1.0 U	**1.0**	**1.3**	1.0 U	**1.1**	**35**	1.0 U	**3.6**	**1.9**
Cadmium	5	5	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U
Chromium	50		2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	10 U	2.0 U	2.0 U	2.0 U
Chromium (VI)		48	NA	NA	NA	NA	10 U	10 U	NA	NA	NA	NA	NA	NA
Iron		300	**1200**	NA	**21,000**	84	50 U	**16,000**	**9700**	**18,000**	**580**	**24,000**	**23,000**	**14,000**
Lead	15	15	1.0 U	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**9.2**	1.0 U	1.0 U	1.0 U
Manganese		50	**1800**	NA	**4700**	**700**	2.1	**2400**	**1100**	**1600**	**90**	**2300**	**6100**	**1600**
Mercury	2		0.20 U	NA	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium		20,000	**47,000**	NA	**130,000**	**53,000**	11,000	**45,000**	18,000	**23,000**	**1,500,000**	**68,000**	**110,000**	20,000
TOTAL METALS (µg/L) **EPA Methods 200.8/7196/7470**														
Arsenic (a)	5	0.15 (c)	NA	NA	NA	NA	**1.0**	**1.3**	NA	NA	NA	NA	NA	NA
Cadmium	5	5	NA	NA	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA
Chromium	50		NA	NA	NA	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Chromium (VI)		48	NA	NA	NA	NA	10 U	10 U	NA	NA	NA	NA	NA	NA
Iron		300	NA	NA	NA	NA	50 U	**18,000**	NA	NA	NA	NA	NA	NA
Lead	15	15	NA	NA	NA	NA	1.0 U	1.0 U	NA	NA	NA	NA	NA	NA
Manganese		50	NA	NA	NA	NA	2.0 U	**2200**	NA	NA	NA	NA	NA	NA
Mercury	2		NA	NA	NA	NA	0.20 U	0.20 U	NA	NA	NA	NA	NA	NA
Sodium		20,000	NA	NA	NA	NA	11,000	**45,000**	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS (µg/L) **NWTPH-DX**														
TPH-Diesel Range	500		130 U	NA	130 U	130 U	130 U	130 U	130 U	150	1300 U	470	**2000** J	130 U
TPH-Oil Range	500		**650**	NA	250 U	**760**	250 U	250 U	250 U	270	**47,000**	470	**1900**	250 U
NWTPH-GX														
TPH-Gasoline Range	1000 (b)		50 U	50 U	50 U	50 U	50 U	50 U	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L) **Method EPA-8260**														
Dichlorodifluoromethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Chloromethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bromomethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Chloroethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Carbon Tetrachloride			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Carbon Disulfide			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Acetone			25 U	25 U	25 U	25 U	25 U	25 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Methylene Chloride	5		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA
Acrylonitrile			10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
Methyl T-Butyl Ether			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Trans-1,2-Dichloroethene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,1-Dichloroethane	5		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Butanone			10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
Cis-1,2-Dichloroethene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,2-Dichloropropane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bromochloromethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Chloroform		80	2.0 U	2.0 U	2.0 U	2.0 U	3.9	2.0 U	NA	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	200		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,1-Dichloropropene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dichloroethane	5		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Benzene	5		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dichloropropane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Dibromomethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bromodichloromethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Trans-1,3-Dichloropropene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4-Methyl-2-Pentanone			10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation						Former Plywood Plant Parcels Supplemental Investigation					
Location:		Minimum Screening	FPP-B17	FPP-B19	FPP-B20	FPP-B24	MW-9A-01	MW-12-01	FPP-B25	FPP-B26	FPP-B27	FPP-B28	FPP-B29b	FPP-B31
Depth	MTCA Method A	Level (Groundwater	17	17	11	16			18.5	19.5	16	19	19	19
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-58	EV13060128-49	EV13060128-51	EV13060128-50	EV13060119-02	EV13060119-01	EV13080134-64	EV13080134-63	EV13080134-62	EV13080134-72	EV13080134-73	EV13080134-66
Date Collected:	Groundwater	Unless Otherwise Indicated	06/21/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/23/2013	08/22/2013
Toluene	1000		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Cis-1,3-Dichloropropene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,1,2-Trichloroethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Hexanone			10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
1,3-Dichloropropane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Tetrachloroethylene	5		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Dibromochloromethane	10		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.01		0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	NA	NA	NA	NA	NA
Chlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,1,1,2-Tetrachloroethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Ethylbenzene	700		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
m,p-Xylene	1000 (d)		4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	NA	NA	NA	NA	NA	NA
Styrene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
o-Xylene	1000 (d)		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bromoform			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Isopropylbenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,1,2,2-Tetrachloroethane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bromobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
N-Propyl Benzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Chlorotoluene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,3,5-Trimethylbenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4-Chlorotoluene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
T-Butyl Benzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2,4-Trimethylbenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
S-Butyl Benzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
P-Isopropyltoluene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,3 Dichlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
N-Butylbenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dibromo 3-Chloropropane			10 U	10 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Naphthalene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2,3-Trichlorobenzene			2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
VOLATILES (µg/L) **Method EPA-8260 SIM**														
Vinyl Chloride	0.2		0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Trichloroethene	5	0.5	0.020 U	0.020 U	0.020 U	0.020 U	**1.2**	**1.9**	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (µg/L) **Method EPA-8270**														
Pyridine			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Phenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Aniline			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethyl)Ether			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Chlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Benzyl Alcohol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Methylphenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Bis(2-Chloroisopropyl)Ether			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
3&4-Methylphenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
N-Nitroso-Di-N-Propylamine			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Hexachloroethane			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Nitrobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Isophorone			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Nitrophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol		160	2.0 U	NA	2.0 U	8.1	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation						Former Plywood Plant Parcels Supplemental Investigation					
Location:		Minimum Screening	FPP-B17	FPP-B19	FPP-B20	FPP-B24	MW-9A-01	MW-12-01	FPP-B25	FPP-B26	FPP-B27	FPP-B28	FPP-B29b	FPP-B31
Depth	MTCA Method A	Level (Groundwater	17	17	11	16			18.5	19.5	16	19	19	19
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-58	EV13060128-49	EV13060128-51	EV13060128-50	EV13060119-02	EV13060119-01	EV13080134-64	EV13080134-63	EV13080134-62	EV13080134-72	EV13080134-73	EV13080134-66
Date Collected:	Groundwater	Unless Otherwise Indicated	06/21/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/23/2013	08/22/2013
Benzoic Acid			10 U	NA	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
Bis(2-Chloroethoxy)Methane			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Naphthalene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,6-Dichlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4-Chloro-3-Methylphenol			2.0 UJ	NA	2.0 UJ	2.0 UJ	2.0 UJ	2.0 UJ	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2-Nitroaniline			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Acenaphthylene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Dimethylphthalate			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Acenaphthene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline			5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol			10 U	NA	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA
4-Nitrophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Dibenzofuran			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Diethylphthalate			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Fluorene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-Phenylether			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4-Nitroaniline			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4,6-Dinitro-2-Methylphenol			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
N-Nitrosodiphenylamine			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Azobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
4-Bromophenyl-Phenylether			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Hexachlorobenzene			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Pentachlorophenol			5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U	NA	NA	NA	NA	NA	NA
Phenanthrene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Di-N-Butylphthalate			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Fluoranthene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Butylbenzylphthalate			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
3,3-Dichlorobenzidine			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Benzo[A]Anthracene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-Ethylhexyl)Phthalate		6.0	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Di-N-Octylphthalate			2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA
Benzo[B]Fluoranthene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[K]Fluoranthene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[A]Pyrene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[A,H]Anthracene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[G,H,I]Perylene			2.0 U	NA	2.0 U	2.0 U	NA	NA	NA	NA	NA	NA	NA	NA

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Plant Parcels Initial Investigation						Former Plywood Plant Parcels Supplemental Investigation					
Location:		Minimum Screening	FPP-B17	FPP-B19	FPP-B20	FPP-B24	MW-9A-01	MW-12-01	FPP-B25	FPP-B26	FPP-B27	FPP-B28	FPP-B29b	FPP-B31
Depth	MTCA Method A	Level (Groundwater	17	17	11	16			18.5	19.5	16	19	19	19
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13060128-58	EV13060128-49	EV13060128-51	EV13060128-50	EV13060119-02	EV13060119-01	EV13080134-64	EV13080134-63	EV13080134-62	EV13080134-72	EV13080134-73	EV13080134-66
Date Collected:	Groundwater	Unless Otherwise Indicated	06/21/2013	06/19/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	08/21/2013	08/21/2013	08/21/2013	08/23/2013	08/23/2013	08/22/2013
PAHs (µg/L)														
Method EPA-8270 SIM														
Naphthalene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Total Naphthalenes			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Acenaphthylene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Acenaphthene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Fluorene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Phenanthrene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Anthracene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Fluoranthene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Pyrene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Benzo[A]Anthracene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Chrysene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Benzo[B]Fluoranthene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Benzo[K]Fluoranthene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Benzo[A]Pyrene			NA	NA	NA	NA	0.029 U	0.029 U	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Dibenz[A,H]Anthracene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Benzo[G,H,I]Perylene			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
cPAH TEQ			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCBs (µg/L)														
Method EPA-8082														
PCB-1016			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1268			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1221			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1232			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1242			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1248			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1254			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
PCB-1260			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Total PCBs	0.1		NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
CONVENTIONALS (mg/L)														
Total Dissolved Solids (SM2540C)			NA	NA	NA	NA	0.020 U	0.020 U	NA	NA	NA	NA	NA	NA
Total Organic Carbon (SM5310C)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FIELD PARAMETERS														
pH		6.5-8.5	**5.92**	**6.27**	6.79	**6.29**	**6.26**	**6.23**	**6.16**	6.59	**9.65**	**6.36**	6.53	**6.29**

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Parcels Supplemental Investigation				Triangular Parcel Initial Investigation					Triangular Parcel Supp. Invest.	
Location:		Minimum Screening	FPP-B33	FPP-MW-1	FPP-MW-2	FPP-MW-3	TP-B01	TP-B04B	TP-B06	TP-B08	TP-B09	TP-MW-1	TP-MW-2
Depth	MTCA Method A	Level (Groundwater	19				19	18	16	18	18		
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13080134-67	EV13080134-71	EV13080134-69	EV13080134-70	EV13060128-59	EV13060119-03	EV13060128-57	EV13060128-54	EV13060128-61	EV13080134-65	EV13080134-68
Date Collected:	Groundwater	Unless Otherwise Indicated	08/22/2013	08/23/2013	08/23/2013	08/23/2013	06/21/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	08/22/2013	08/22/2013
DISSOLVED METALS (µg/L)													
EPA Methods 200.8/7196/7470													
Arsenic (a)	5	0.15 (c)	**7.8**	**5.3**	**1.6**	**2.0**	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.5**
Cadmium	5	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chromium	50		2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Chromium (VI)		48	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Iron		300	**24,000**	**59,000**	**21,000**	**330**	86	94	**770**	220	96	50 U	**8100**
Lead	15	15	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Manganese		50	**2000**	**9900**	**2300**	**240**	**72**	**85**	**1400**	**1400**	**1300**	**140**	**1400**
Mercury	2		0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Sodium		20,000	**48,000**	**91,000**	**50,000**	**100,000**	7600	12,000	17,000	17,000	18,000	**21,000**	**24,000**
TOTAL METALS (µg/L)													
EPA Methods 200.8/7196/7470													
Arsenic (a)	5	0.15 (c)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	5	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium	50		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chromium (VI)		48	NA	NA	NA	NA	NA	10 U	NA	NA	NA	NA	NA
Iron		300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	15	15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese		50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	2		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium		20,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL PETROLEUM HYDROCARBONS (µg/L)													
NWTPH-DX													
TPH-Diesel Range	500		130 U	480	220	240	130 U	130 U	130 U	130 U	130 U	130 U	130 U
TPH-Oil Range	500		250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U	250 U
NWTPH-GX													
TPH-Gasoline Range	1000 (b)		NA	50 U	50 U	50 U	50 U	50 U	NA	50 U	50 U	50 U	50 U
VOLATILES (µg/L)													
Method EPA-8260													
Dichlorodifluoromethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Chloromethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bromomethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Chloroethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Tetrachloride			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Trichlorofluoromethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Carbon Disulfide			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Acetone			NA	25 U	25 U	25 U	25 U	25 U	NA	25 U	25 U	25 U	25 U
1,1-Dichloroethene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Methylene Chloride	5		NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U
Acrylonitrile			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
Methyl T-Butyl Ether			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,2-Dichloroethene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloroethane	5		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Butanone			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
Cis-1,2-Dichloroethene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,2-Dichloropropane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bromochloromethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Chloroform		80	NA	2.0 U	2.0 U	2.0 U	2.7	4.3	NA	2.0 U	2.0 U	2.9	2.0 U
1,1,1-Trichloroethane	200		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,1-Dichloropropene			NA	2.0 U	2.0 U	2.0 U	U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloroethane	5		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzene	5		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichloropropane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Dibromomethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bromodichloromethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Trans-1,3-Dichloropropene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Methyl-2-Pentanone			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Parcels Supplemental Investigation				Triangular Parcel Initial Investigation					Triangular Parcel Supp. Invest.	
Location:		Minimum Screening	FPP-B33	FPP-MW-1	FPP-MW-2	FPP-MW-3	TP-B01	TP-B04B	TP-B06	TP-B08	TP-B09	TP-MW-1	TP-MW-2
Depth	MTCA Method A	Level (Groundwater	19				19	18	16	18	18		
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13080134-67	EV13080134-71	EV13080134-69	EV13080134-70	EV13060128-59	EV13060119-03	EV13060128-57	EV13060128-54	EV13060128-61	EV13080134-65	EV13080134-68
Date Collected:	Groundwater	Unless Otherwise Indicated	08/22/2013	08/23/2013	08/23/2013	08/23/2013	06/21/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	08/22/2013	08/22/2013
Toluene	1000		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Cis-1,3-Dichloropropene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Hexanone			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
1,3-Dichloropropane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Tetrachloroethylene	5		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Dibromochloromethane	10		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromoethane	0.01		NA	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	NA	0.010 U	0.010 U	0.010 U	0.010 U
Chlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,1,1,2-Tetrachloroethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Ethylbenzene	700		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
m,p-Xylene	1000 (d)		NA	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U	NA	4.0 U	4.0 U	4.0 U	4.0 U
Styrene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
o-Xylene	1000 (d)		NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bromoform			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Isopropylbenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichloropropane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bromobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
N-Propyl Benzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorotoluene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,3,5-Trimethylbenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorotoluene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
T-Butyl Benzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trimethylbenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
S-Butyl Benzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
P-Isopropyltoluene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,3 Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
N-Butylbenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dibromo 3-Chloropropane			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2,3-Trichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
VOLATILES (µg/L) Method EPA-8260 SIM													
Vinyl Chloride	0.2		NA	NA	NA	NA	0.020 U	0.020 U	NA	0.020 U	0.020 U	NA	NA
Trichloroethene	5	0.5	NA	NA	NA	NA	0.020 U	0.020 U	NA	0.020 U	0.020 U	NA	NA
SEMIVOLATILES (µg/L) Method EPA-8270													
Pyridine			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodimethylamine			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Phenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Aniline			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroethyl)Ether			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Chlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzyl Alcohol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Methylphenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Chloroisopropyl)Ether			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
3&4-Methylphenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitroso-Di-N-Propylamine			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Hexachloroethane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Nitrobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Isophorone			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitrophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dimethylphenol		160	NA	2.0 U	2.0 U	2.7	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Parcels Supplemental Investigation				Triangular Parcel Initial Investigation					Triangular Parcel Supp. Invest.	
Location:		Minimum Screening	FPP-B33	FPP-MW-1	FPP-MW-2	FPP-MW-3	TP-B01	TP-B04B	TP-B06	TP-B08	TP-B09	TP-MW-1	TP-MW-2
Depth	MTCA Method A	Level (Groundwater	19				19	18	16	18	18		
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13080134-67	EV13080134-71	EV13080134-69	EV13080134-70	EV13060128-59	EV13060119-03	EV13060128-57	EV13060128-54	EV13060128-61	EV13080134-65	EV13080134-68
Date Collected:	Groundwater	Unless Otherwise Indicated	08/22/2013	08/23/2013	08/23/2013	08/23/2013	06/21/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	08/22/2013	08/22/2013
Benzoic Acid			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
Bis(2-Chloroethoxy)Methane			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dichlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Naphthalene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloroaniline			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dichlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobutadiene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Chloro-3-Methylphenol			NA	2.0 U	2.0 U	2.0 U	2.0 UJ	2.0 UJ	NA	2.0 UJ	2.0 UJ	2.0 U	2.0 U
2-Methylnaphthalene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
1-Methylnaphthalene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorocyclopentadiene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,4,6-Trichlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,4,5-Trichlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Chloronaphthalene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2-Nitroaniline			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Acenaphthylene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Dimethylphthalate			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,6-Dinitrotoluene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Acenaphthene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
3-Nitroaniline			NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U
2,4-Dinitrophenol			NA	10 U	10 U	10 U	10 U	10 U	NA	10 U	10 U	10 U	10 U
4-Nitrophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Dibenzofuran			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,4-Dinitrotoluene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
2,3,4,6-Tetrachlorophenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Diethylphthalate			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Fluorene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Chlorophenyl-Phenylether			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Nitroaniline			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4,6-Dinitro-2-Methylphenol			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
N-Nitrosodiphenylamine			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Azobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
4-Bromophenyl-Phenylether			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Hexachlorobenzene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Pentachlorophenol			NA	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	NA	5.0 U	5.0 U	5.0 U	5.0 U
Phenanthrene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Anthracene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Carbazole			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Butylphthalate			NA	2.0 U	2.0 U	4.7	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Fluoranthene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Pyrene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Butylbenzylphthalate			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
3,3-Dichlorobenzidine			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzo[A]Anthracene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Chrysene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Bis(2-Ethylhexyl)Phthalate		6.0	NA	4.0 U	2.8 U	13 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Di-N-Octylphthalate			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzo[B]Fluoranthene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzo[K]Fluoranthene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzo[A]Pyrene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Indeno[1,2,3-Cd]Pyrene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Dibenz[A,H]Anthracene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U
Benzo[G,H,I]Perylene			NA	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U	NA	2.0 U	2.0 U	2.0 U	2.0 U

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

	Screening Levels		Former Plywood Parcels Supplemental Investigation				Triangular Parcel Initial Investigation					Triangular Parcel Supp. Invest.	
Location:		Minimum Screening	FPP-B33	FPP-MW-1	FPP-MW-2	FPP-MW-3	TP-B01	TP-B04B	TP-B06	TP-B08	TP-B09	TP-MW-1	TP-MW-2
Depth	MTCA Method A	Level (Groundwater	19				19	18	16	18	18		
Lab ID:	Cleanup Levels for	as Drinking Water)	EV13080134-67	EV13080134-71	EV13080134-69	EV13080134-70	EV13060128-59	EV13060119-03	EV13060128-57	EV13060128-54	EV13060128-61	EV13080134-65	EV13080134-68
Date Collected:	Groundwater	Unless Otherwise Indicated	08/22/2013	08/23/2013	08/23/2013	08/23/2013	06/21/2013	06/20/2013	06/20/2013	06/21/2013	06/21/2013	08/22/2013	08/22/2013
PAHs (µg/L)													
Method EPA-8270 SIM													
Naphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Naphthalenes			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[A]Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[B]Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[K]Fluoranthene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[A]Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-Cd]Pyrene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[A,H]Anthracene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[G,H,I]Perylene			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cPAH TEQ			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCBs (µg/L)													
Method EPA-8082													
PCB-1016			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1268			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1221			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1232			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1242			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1248			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1254			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PCB-1260			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total PCBs	0.1		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CONVENTIONALS (mg/L)													
Total Dissolved Solids (SM2540C)			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Organic Carbon (SM5310C)			NA	38	18	17	NA	NA	NA	NA	NA	1.3	3.5
FIELD PARAMETERS													
pH		6.5-8.5	6.97	6.52	**5.90**	6.62	6.75	**5.49**	6.23	**5.67**	**6.22**	6.64	6.56

TABLE A-7
GROUNDWATER ANALYTICAL RESULTS
YAKIMA MILL SITE
YAKIMA, WASHINGTON

(a) = The reporting limit for this analyte is higher than the minimum screening level; non detects at the reporting limit are not identified as an exceedance.
(b) = Value is used when benzene is not present.
(c) = Based on Practical Quantification Limit.
(d) = Value based on total xylenes.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
U = Indicates the compound was not detected at the reported concentration.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
NA = Not analyzed.
ND = Not detected.
Bold = Exceedance of Screening Level.

TABLE A-8
SURFACE WATER ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGUALR PARCELS
YAKIMA, WASHINGTON

Location:	FPP-SW-01	FPP-SW-02	FPP-SW-03
Lab ID:	EV13060128-62	EV13060128-63	EV13060128-64
Date Collected:	06/20/2013	06/20/2013	06/20/2013
TOTAL PETROLEUM HYDROCARBONS (µg/L) NWTPH-HCID			
HCID-Gas Range	130 U	130 U	130 U
HCID-Diesel Range	310 U	310 U	>310
HCID-Oil Range	>310	310 U	>310
FIELD PARAMETERS			
pH	6.32	8.81	7.03

U = Indicates the compound was not detected at the reported concentration.
NA = Not analyzed.

TABLE A-9
LANDFILL GAS MEASUREMENTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGUALAR PARCELS
YAKIMA, WASHINGTON

Location	Date Collected	% Oxygen	Methane		CO (ppm)	CO_2 (2%)	H_2S (ppm)
			%LEL	% Vol.			
G-01	6/17/2013	0.0	>>	31.4	0	26.4	1
G-02	6/17/2013	16.1	0	0	1	3.2	0
G-03	6/17/2013	8.4	0	0	22	8.7	1
G-04	6/17/2013	13.4	0	0	32	5.4	1

TABLE A-10
WOOD WASTE ANALYTICAL RESULTS
YAKIMA MILL SITE
FORMER PLYWOOD PLANT AND TRIANGULAR PARCELS
YAKIMA, WASHINGTON

Location:	Wood-1-(1-6)	Wood-1-(6-11)
Lab ID:	K1308586-001	K1308586-002
Date Collected:	08/21/2013	08/21/2013
TCLP METALS (mg/L)		
Method 6010C/7470A		
Arsenic	0.1 U	0.1 U
Barium	1.0 U	1.0 U
Cadmium	0.05 U	0.05 U
Chromium	0.05 U	0.05 U
Lead	0.05 U	0.05 U
Mercury	0.001 U	0.001 U
Selenium	0.1 U	0.1 U
Silver	0.1 U	0.1 U
HIGH HEAT VALUE (BTU/LB)		
Method ASTM D2015	5360	4340

U = Indicates the compound was not detected at the reported concentration.

APPENDIX B

Groundwater Construction Logs

PROJECT: BCC/YAKIMA	CASCADE EARTH SCIENCES, LTD.	PROJECT NUMBER: 363013	MONITORING WELL NUMBER: MW-1
BORING LOCATION: –		LOGGED BY: LET CHECKED BY: –	
DRILLED BY: PONDEROSA DRILLING CO.		START DATE: 5/27/93	COMPLETION DATE: 5/27/93
DRILLING EQUIPMENT: CP-7000 AIR ROTARY HAMMER (7.5" O.D.)		SAMPLING EQUIPMENT: CUTTINGS (CT)	

WELL CONSTRUCTION DATA

*TOTAL DEPTH: 15.5	*WELL DEPTH: 15.5	WELL DIA.(IN): 2	CASING MATERIAL: SCH 40 PVC	WELLHEAD STICK-UP (FT): 2.54
FILTER PACK INTERVAL(FT): 4.0–15.5	SIZE: 10–20 CSSI		WELL SCREEN INTERVAL(FT):, 5.5–15.5	SIZE (IN): 0.010
SEAL INTERVAL(FT): 3.0–4.0	TYPE: BENTONITE		SURFACE SEAL INTERVAL(FT): 0.0–3.0	TYPE: CONCRETE
GROUND SURFACE ELEV. (FT MSL): 98.32	TOP OF CASING ELEV. (FT MSL): 100.86		*FIRST SATURATED ZONE DEPTH (FT): 2'	STATIC W.L. ELEV. (FROM T/C): 4.20

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT)	DEPTH (FT)	WELL GRAPHIC	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
								Ground surface
ML	0.0–5.0 SILT: Dark brown	0						
		2						
		4						
	5.0–15.5 SILTY/SANDY GRAVEL:	6						
		8						
GM		10						
		12						
		14						
	TOTAL DEPTH = 15.5 FEET	16						Terminate drilling at 15.5.

10–20 CSSI FILTER PACK

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

* DEPTHS IN FEET BELOW GROUND SURFACE

Figure B-1

PROJECT: BCC/YAKIMA	CASCADE EARTH SCIENCES, LTD.	PROJECT NUMBER: 363013	MONITORING WELL NUMBER: MW-2
BORING LOCATION: –		LOGGED BY: LET CHECKED BY: –	
DRILLED BY: PONDEROSA DRILLING CO.		START DATE: 5/26/93	COMPLETION DATE: 5/27/93
DRILLING EQUIPMENT: CP-7000 AIR ROTARY HAMMER (7.5" O.D.)		SAMPLING EQUIPMENT: CUTTINGS (CT)	

WELL CONSTRUCTION DATA

*TOTAL DEPTH: 21.5	*WELL DEPTH: 21.5	WELL DIA.(IN): 2	CASING MATERIAL: SCH 40 PVC	WELLHEAD STICK-UP (FT): 2.42
FILTER PACK INTERVAL(FT): 9.5–21.5	SIZE: 10–20 CSSI		WELL SCREEN INTERVAL(FT): 11.5–21.5	SIZE (IN): 0.010
SEAL INTERVAL(FT): 3.0–9.5	TYPE: BENTONITE		SURFACE SEAL INTERVAL(FT): 0.0–3.0	TYPE: CONCRETE
GROUND SURFACE ELEV. (FT MSL): 103.70	TOP OF CASING ELEV. (FT MSL): 106.12		*FIRST SATURATED ZONE DEPTH (FT): 9.0	STATIC W.L. ELEV. (FROM T/C): 12.12

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT)	DEPTH (FT)	WELL GRAPHIC	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		0						Ground surface
	0.0–5.0 WOOD WASTE	2	CONC.					
		4						
	5.0–12.0 SILT: Dark gray to brown.	6						
ML		8	BENTONITE					
		10						
	12.0–21.2 SILTY/SANDY GRAVEL:	12						
		14						
GM		16	10-20 CSSI FILTER PACK					
		18						
		20						
	TOTAL DEPTH = 21.5 FEET	22						Terminate drilling at 21.5'

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

* DEPTHS IN FEET BELOW GROUND SURFACE

Figure B-2

PROJECT: BCC/YAKIMA	CASCADE EARTH SCIENCES, LTD.	PROJECT NUMBER: 363013	MONITORING WELL NUMBER: MW-3
BORING LOCATION: –		LOGGED BY: SMU CHECKED BY: –	
DRILLED BY: BYRD DRILLING CO.		START DATE: 4/27/93	COMPLETION DATE: 4/28/93
DRILLING EQUIPMENT: WEST[illegible] HOLLOW STEM AUGER (7.5" O.D.)		SAMPLING EQUIPMENT: CUTTINGS	

WELL CONSTRUCTION DATA

*TOTAL DEPTH: 14.5	*WELL DEPTH: 14.5	WELL DIA.(IN): 2	CASING MATERIAL: SCH 40 PVC	WELLHEAD STICK-UP (FT): 2.42
FILTER PACK INTERVAL(FT): 3.0–14.5	SIZE: 20–40 CSSI		WELL SCREEN INTERVAL(FT): 4.5–14.5	SIZE (IN): 0.010
SEAL INTERVAL(FT): 1.5–3.0	TYPE: BENTONITE		SURFACE SEAL INTERVAL(FT): 0.0–1.5	TYPE: CONCRETE
GROUND SURFACE ELEV. (FT MSL): 101.38	TOP OF CASING ELEV. (FT MSL): 103.80		*FIRST SATURATED ZONE DEPTH (FT): ~8.0	STATIC W.L. ELEV. (FROM T/C): 10.44

GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT)	DEPTH (FT)	WELL GRAPHIC	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
		0						Ground surface
	0.0–6.0 WOOD WASTE MATERIAL	2						
		4						
ML	6.0–13.0 SILT: V. dark gray (10 YR 3/1); saturated; v. soft; ~80% silt, to % v. fine sand.	6						
		8						
		10						
GP	13.0–14.5 GRAVEL: Dark gray; saturated; ~20% fines, 20% sand, 60% fine to coarse gravel.	12						
		14						
	TOTAL DEPTH = 14.5 FEET	16						Terminate drilling at 14.5'.
		18						
		20						
		22						

FILTER PACK 20–40 CSSI

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

* DEPTHS IN FEET BELOW GROUND SURFACE

Figure B-3

PROJECT: BCC/YAKIMA	CASCADE EARTH SCIENCES, LTD.	PROJECT NUMBER: 363013	MONITORING WELL NUMBER: MW-4
BORING LOCATION: –		LOGGED BY: LET CHECKED BY: –	
DRILLED BY: PONDEROSA DRILLING CO.		START DATE: 5/26/93	COMPLETION DATE: 5/27/93
DRILLING EQUIPMENT: CP-7000 AIR ROTARY HAMMER (7.5" O.D.)		SAMPLING EQUIPMENT: CUTTINGS (CT)	

WELL CONSTRUCTION DATA

*TOTAL DEPTH: 18.0	*WELL DEPTH: 18.0	WELL DIA.(IN): 2	CASING MATERIAL: SCH 40 PVC	WELLHEAD STICK-UP (FT): 2.38
FILTER PACK INTERVAL(FT): 6.0–18.0	SIZE: 10–20 CSSI		WELL SCREEN INTERVAL(FT): 8.0–18.0	SIZE (IN): 0.010
SEAL INTERVAL(FT): 30.–6.0	TYPE: BENTONITE		SURFACE SEAL INTERVAL(FT): 0.0–3.0	TYPE: CONCRETE
GROUND SURFACE ELEV. (FT MSL): 102.48	TOP OF CASING ELEV. (FT MSL): 104.86		*FIRST SATURATED ZONE DEPTH (FT): 8.5	STATIC W.L. ELEV. (FROM T/C): 10.89

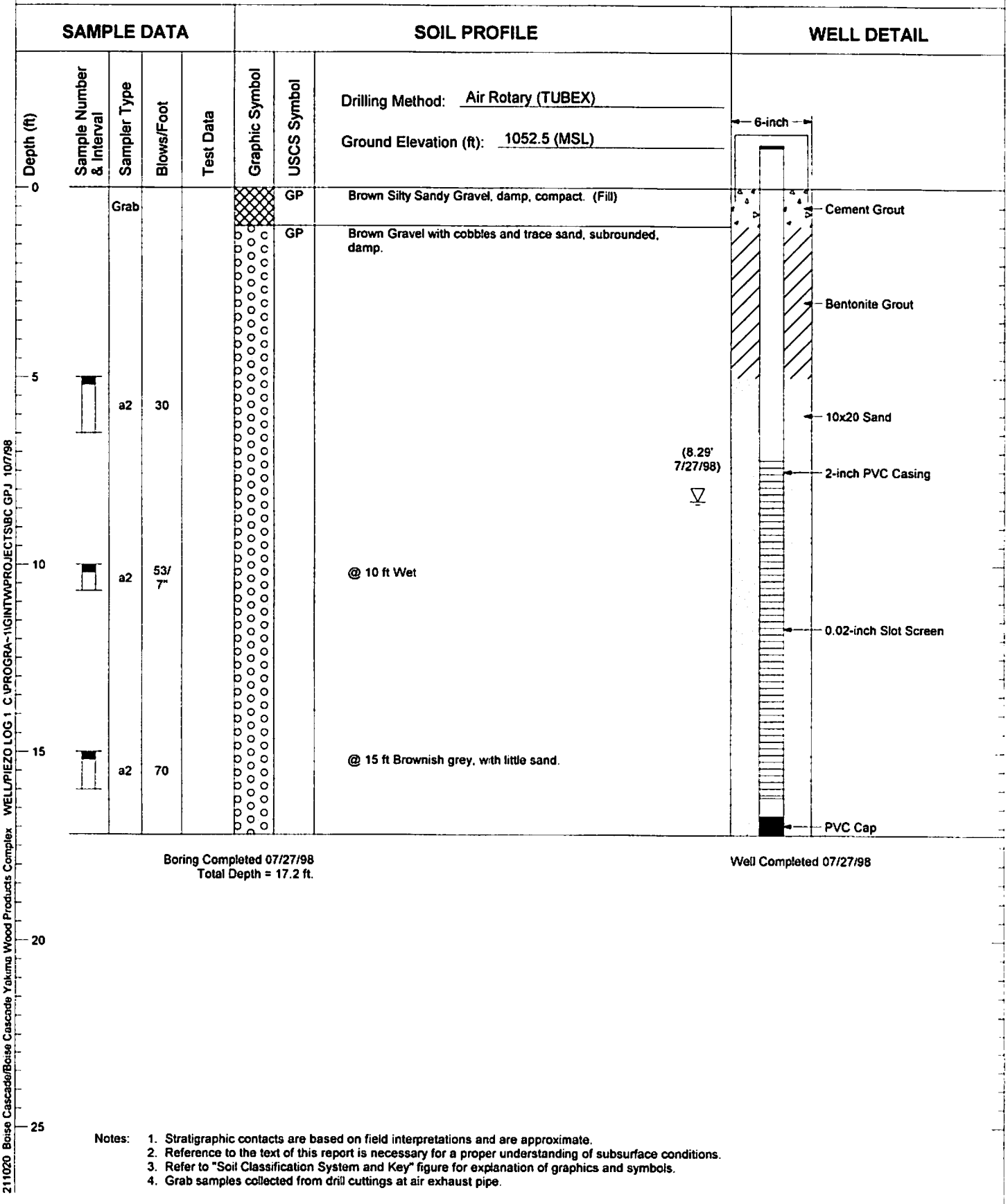
GROUP SYMBOL	DESCRIPTION OF LITHOLOGY INTERVAL (FT)	DEPTH (FT)	WELL GRAPHIC	SAMPLE BLOW COUNT	SAMPLE RECOVERY	SAMPLE TYPE	SAMPLE NUMBER	REMARKS (DRILLING CONDITIONS, PID READINGS, ETC.)
	0.0–2.5 SILT (possible fill material)	0						Ground surface
	2.5–9.0 WOOD WASTE	2	CONC.					
		4	BENT.					
		6						
	9.0–18.0 SILTY/SANDY GRAVEL	8						
		10	10–20 CSSI FILTER PACK					
		12						
		14						
GM		16						
		18						
	TOTAL DEPTH = 18.0 FEET	20						Terminate drilling at 18.0'
		22						

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF ACTUAL CONDITIONS ENCOUNTERED.

* DEPTHS IN FEET BELOW GROUND SURFACE

Figure B-4

MW-5



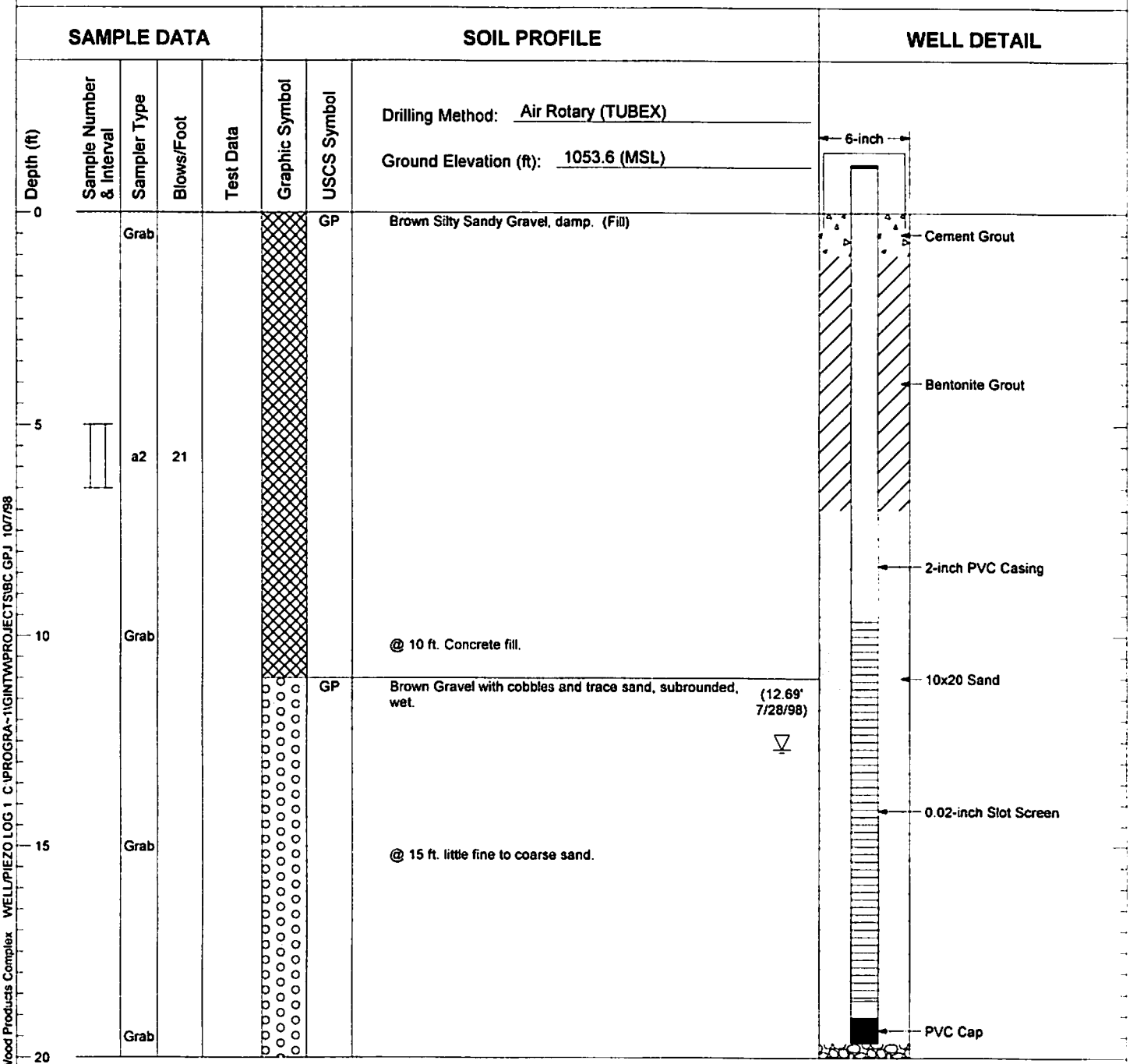
Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTW\PROJECTS\BC GPJ 10/7/98

Log of Boring MW-5

Figure B-5

MW-6



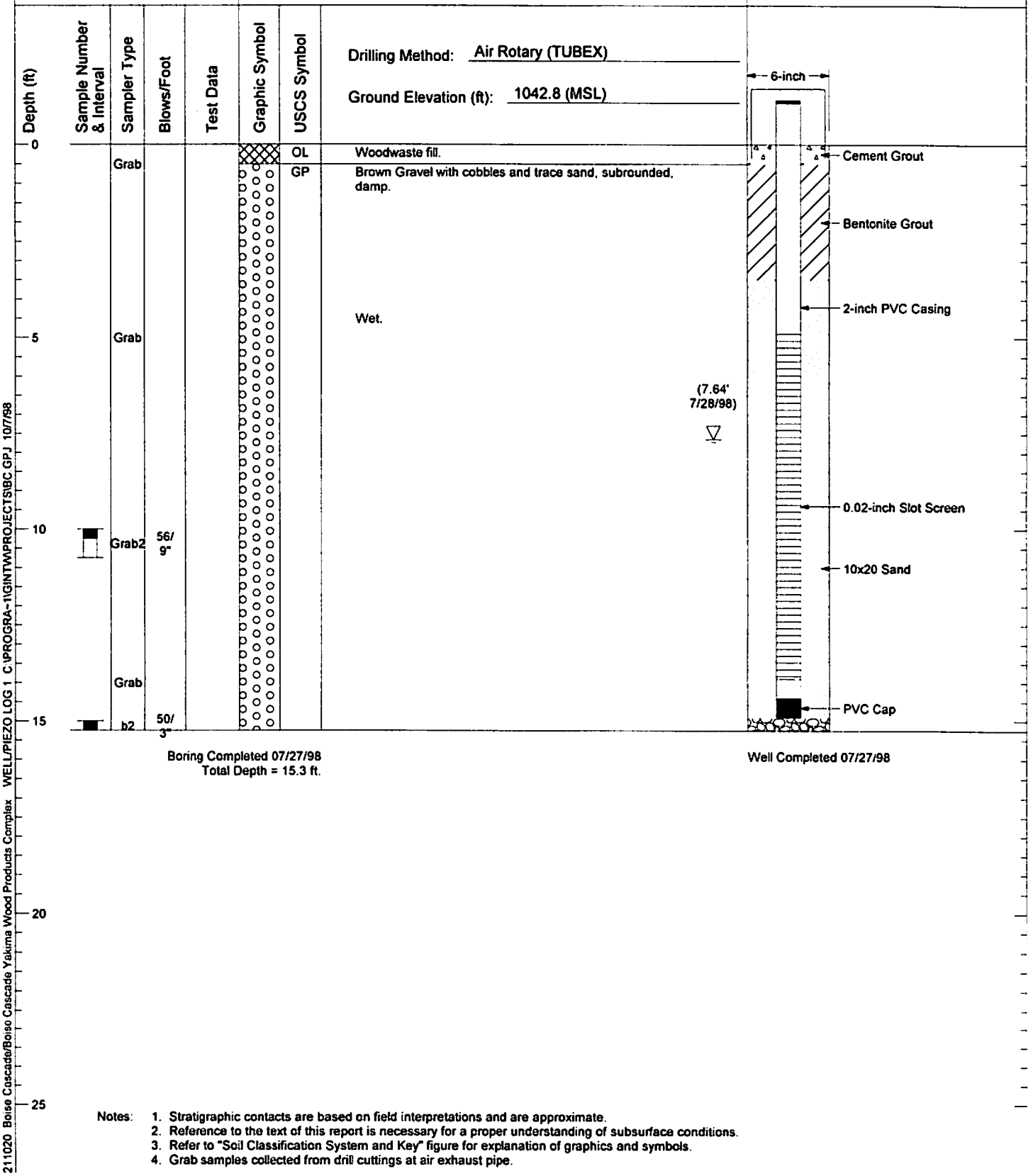
Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTWP\PROJECTS\BC GPJ 10/7/98

Log of Boring MW-6

Figure B-6

MW-7



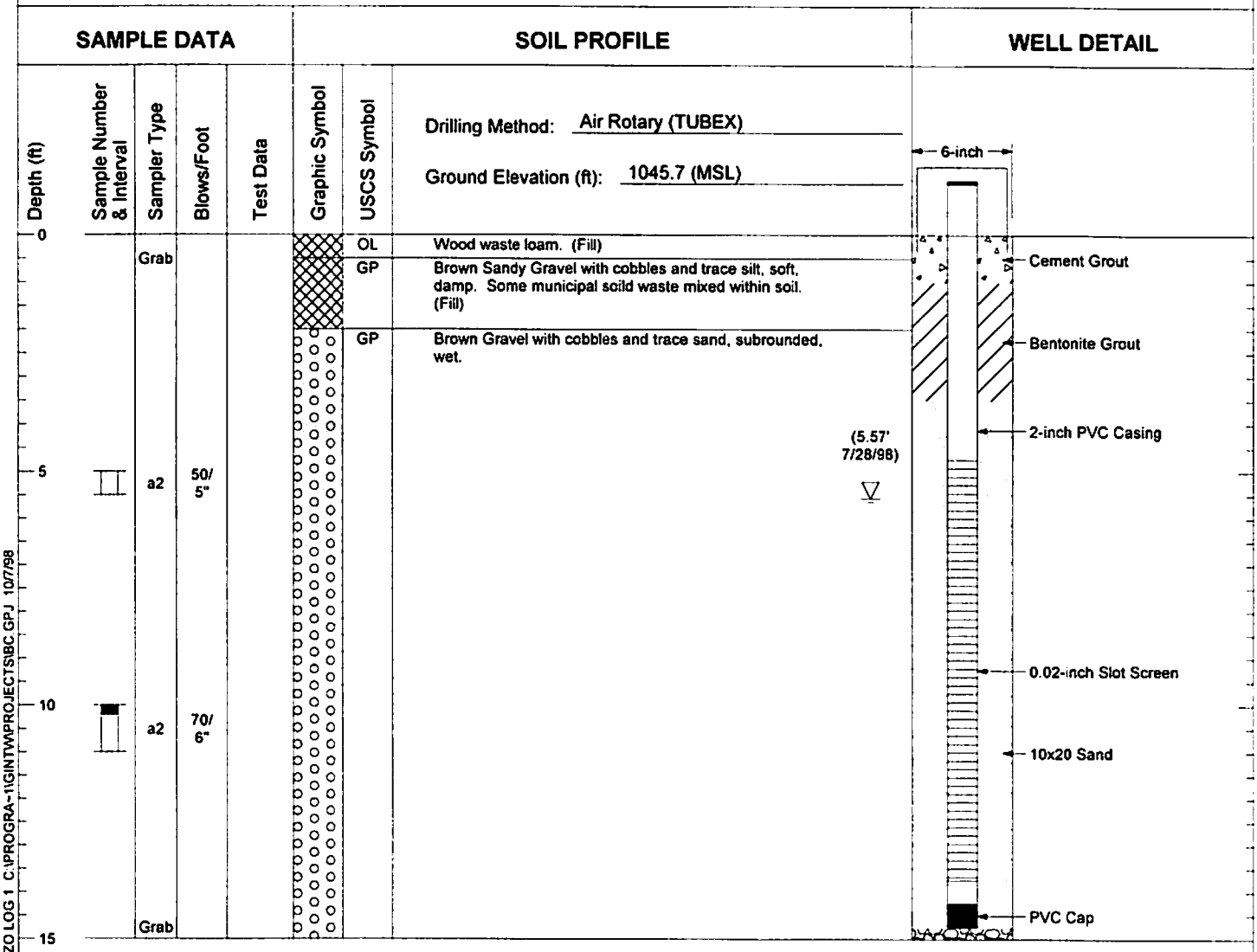
211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTW\PROJECTS\BC.GPJ 10/7/98

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

Log of Boring MW-7

Figure B-7

MW-8



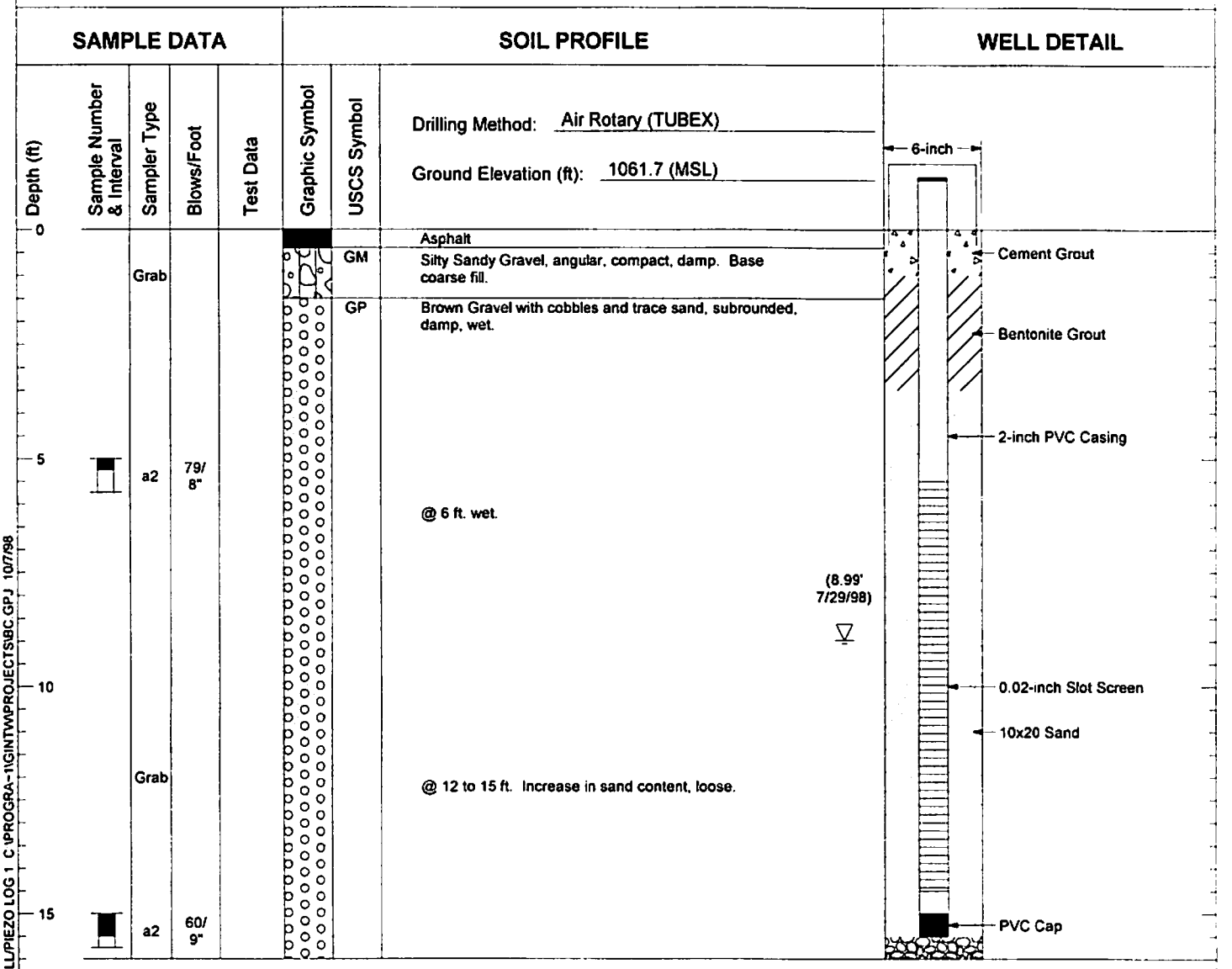
211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTW\PROJECTS\BC.GPJ 10/7/98

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

Log of Boring MW-8

Figure B-8

MW-9



Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTW\PROJECTS\BC.GPJ 10/7/98

Log of Boring MW-9

Figure B-9

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** MW-9A

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** March 4, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 30.0

COORDINATES **INITIAL WATER LEVEL** ▽ 18.0

DRILLING METHOD Sonic **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

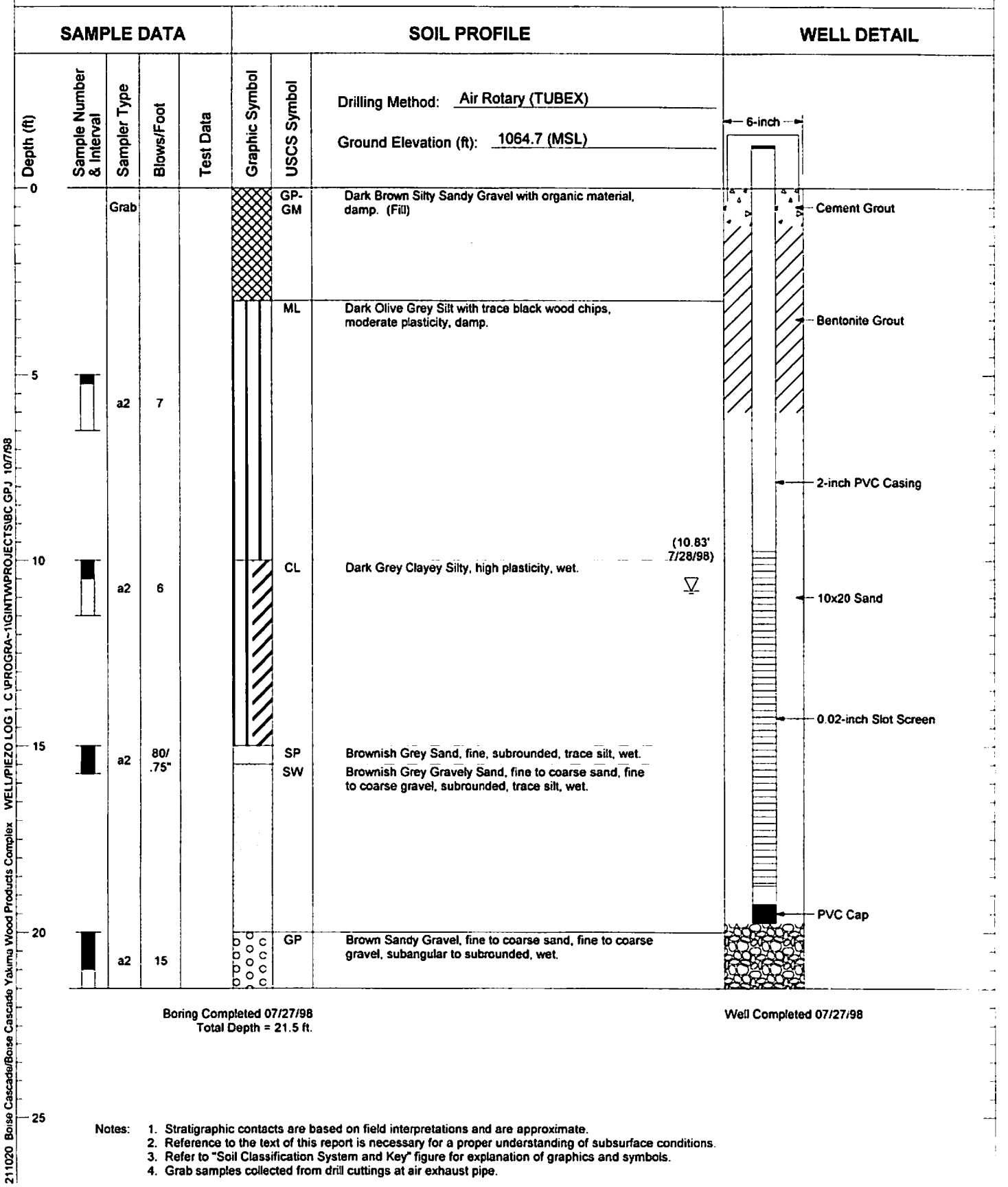
GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0	GP		ASPHALT SILTY SANDY GRAVEL (GP), grayish brown, , subrounded fine to coarse gravelsfine- to coarse-grained sand, damp, medium dense	0	
					5				5	
					10			@ 13 feet: Becomes moist	10	
					15			@ 17 feet: Becomes saturated ▽	15	
					20				20	
					25			@28 feet: Becomes wet	25	
					30			Bottom of Boring @ 30 feet Converted into 1" monitoring well	30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure B-10

MW-10



211020 Boise Cascade/Boise Cascade Yakima Wood Products Complex WELL/PIEZO LOG 1 C:\PROGRA~1\GINTW\PROJECTS\BC.GPJ 10/7/98

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.
4. Grab samples collected from drill cuttings at air exhaust pipe.

Log of Boring MW-10

Figure B-11

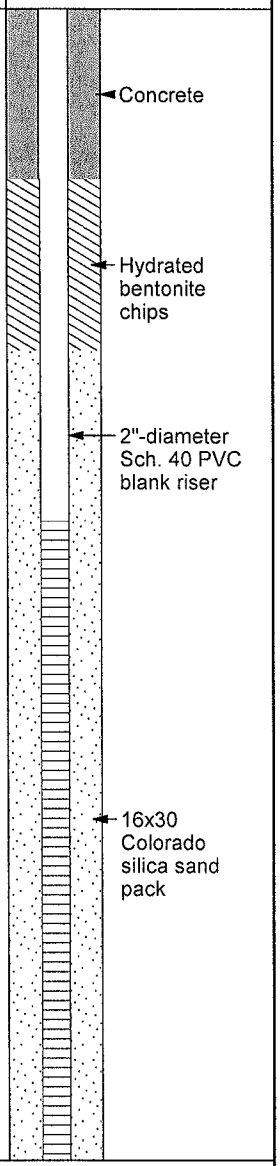
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-11

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/16/09 **COMPLETED** 2/16/09
GROUND ELEVATION 1063.19 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 15.5 ft / Elev 1047.7 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE** medium dense.
2.5	X	D&M	MW11-S1	100	29			
5.0	X	D&M	MW11-S2	100	50/4"			@ 4.5 feet: Some gray silt, few fine gravel.
7.5	X	D&M		0	24			
10.0	X	D&M		0	43			
12.5	X	D&M	MW11-S3	30	25			@ 12.0 feet: Driller comment - drilled through a log. @ 12.5 feet: Some gray fine-grained sand.

WELL DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

(Continued Next Page)

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure B-12 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-11

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
								WOOD WASTE medium dense. *(continued)*	
								14.5 1048.7	
15.0								**GRAVELLY SAND**, gray, fine- to medium-grained, some fine to medium gravel, some fractured cobbles up to 3"-diameter, very dense, moist to wet. ▽	
		D&M	MW11-S4	100	50/4"				
17.5									2"-diameter Sch. 40 PVC 0.020"-slotted screen
		D&M	MW11-S5	100	50/5"				
						SP			
20.0								@ 19.0 feet: Sand becomes fine-grained.	
		D&M			66				End cap
								22.0 1041.2	

Boring completed at 22.0 feet.

WELL COMPLETION DETAILS:

+2.8 to 0 feet: 2"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 6 feet: 2"-diameter Sch. 40 PVC blank riser.
6 to 20.8 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
20.8 to 21.1 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 4 feet: Hydrated bentonite chips.
4 to 22 feet: 16x30 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

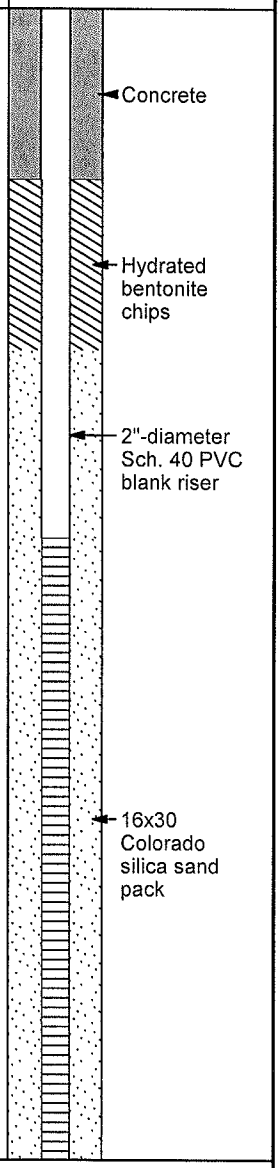
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-12

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/16/09 **COMPLETED** 2/16/09
GROUND ELEVATION 1065.73 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 12.5 ft / Elev 1053.2 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						SP		**SAND**, brownish gray, fine-grained, loose to very dense, moist to wet.
2.5	X	D&M	MW12-S1	60	13			
5.0	X	D&M	MW12-S2	100	50/6"			@ 4.5 feet: Becomes gravelly, medium to coarse, few cobbles, little silt, very dense.
7.5	X	D&M	MW12-S3	100	50/5"			
10.0	X	D&M	MW12-S4	66	57			
12.5	X	D&M		0	26			▽ @ 12.5 feet: Becomes wet.

WELL DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-12

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
15.0						SP		**SAND**, brownish gray, fine-grained, loose to very dense, moist to wet. *(continued)* @ 14.0 feet: Becomes gray, fine-grained with no gravel, medium dense wet.	
		D&M	MW12-S5*	80	16			16.0 1049.7	
17.5						GP		**SANDY GRAVEL** brown, fine to coarse, rounded, some fine- to medium-grained sand, some cobbles, few fines, medium dense, wet. @ 17.0 feet: Gravel becomes fine.	2"-diameter Sch. 40 PVC 0.020"-slotted screen
		D&M	MW12-S6	50	38				
20.0								@ 19.5 feet: Gravel becomes fine to medium.	
		D&M	MW12-S7	66	35				End cap
								22.0 1043.7	

Boring completed at 22.0 feet.

WELL COMPLETION DETAILS:

+2.8 to 0 feet: 2"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 6.2 feet: 2"-diameter Sch. 40 PVC blank riser.
6.2 to 21 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
21 to 21.2 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 4 feet: Hydrated bentonite chips.
4 to 22 feet: 16x30 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure B-13 (Page 2 of 2)

SLR
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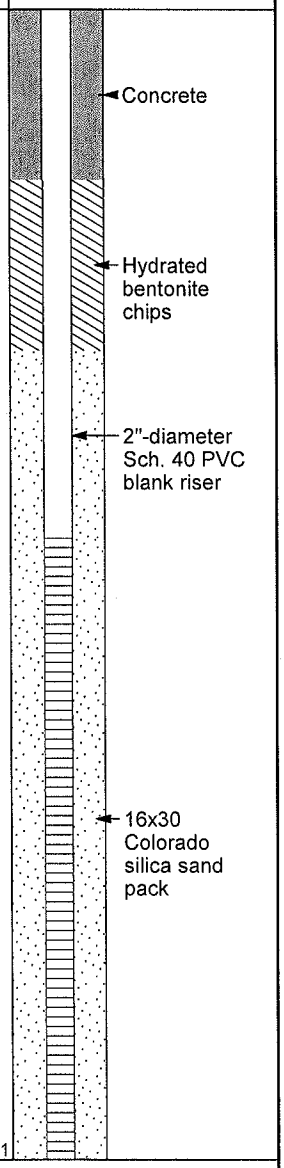
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-13

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/17/09 **COMPLETED** 2/17/09
GROUND ELEVATION 1063.56 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.5 ft / Elev 1056.1 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SAND**, brown, fine-grained, little fine to coarse gravel, medium dense, damp to wet.
2.5								
	X	D&M	MW13-S1	33	26			
5.0								@ 4.0 feet: Gravel becomes predominantly fine, few cobbles up to 3"-diameter, becomes moist.
	X	D&M	MW13-S2		18			
7.5						SP		@ 7.0 feet: Cobbles increase to some, becomes wet. ▽
	X	D&M	MW13-S3	30	14			
10.0								@ 9.5 feet: Gravel increases to some and becomes medium to coarse, trace silt, wet.
	X	D&M	MW13-S4	50	13			
12.5								
	X	D&M	MW13-S5	80	14			
13.5								1050.1



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

(Continued Next Page)

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure B-14 (Page 1 of 2)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-13

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
						CL		**ORGANIC SOIL**, dark brown, high-plasticity, stiff, wet, little wood bark.	
								14.5 — 1049.1	
15.0						SP-SM		**SILTY SAND**, brownish gray, fine-grained, little silt, loose to medium dense, wet, little to some wood bark.	
		D&M	MW13-S6*	100	8				2"-diameter Sch. 40 PVC 0.020"-slotted screen
17.5								@ 17.0 feet: Becomes dark brown, some silt, little fine to coarse gravel, medium dense, wet, trace wood bark.	
		D&M	MW13-S7*	80	35				
								19.5 — 1044.1	
20.0						SP		**SAND**, brown, fine- to medium-grained, some gravel, some cobbles, dense, wet.	
		D&M	MW13-S8	66	51				End cap
								21.5 — 1042.1	
								Boring complete at 21.5 feet.	

WELL COMPLETION DETAILS:

+2.6 to 0 feet: 2"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 6.2 feet: 2"-diameter Sch. 40 PVC blank riser.
6.2 to 21 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
21 to 21.3 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 4 feet: Hydrated bentonite chips.
4 to 21.5 feet: 16x30 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.
* = Soil sample submitted for chemical or geotechnical analysis.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure B-14 (Page 2 of 2)

SLR
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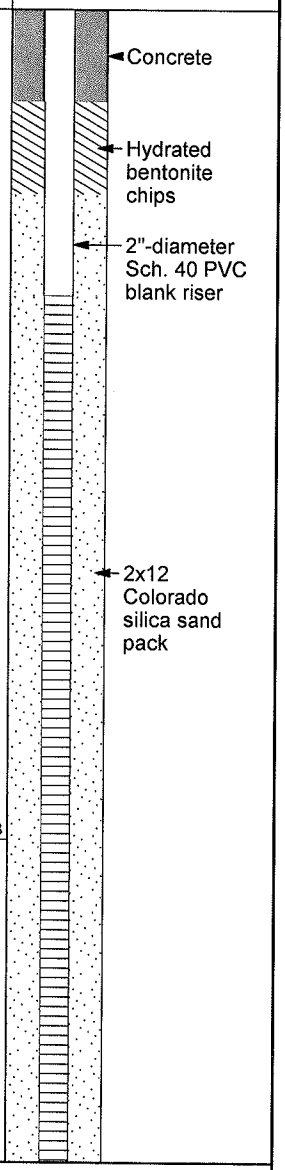
Fax: 425.402.8488

WELL NUMBER MW-14

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/4/09 **COMPLETED** 11/4/09
GROUND ELEVATION 1041.25 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 10.0 ft / Elev 1031.3 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**GRAVEL**, gray, medium- to coarse-grained, some cobbles, trace fine-grained sand, very dense, dry to damp.
2.5		D&M		100	50/2"	GP		
5.0		D&M		0	50/4"			@ 5.0 feet: No recovery.
7.5		D&M		100	50/1"			
9.0								1032.3
10.0		D&M		100	50/3"	GP		**SANDY GRAVEL**, grayish brown, fine- to coarse-grained, some cobbles, little fine- to coarse-grained sand, trace fines, very dense, damp to ▽ wet.
12.5								

WELL DIAGRAM



REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 12/9/09

(Continued Next Page)

Figure B-15 (Page 1 of 2)

SLR
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SLR International Corp Fax: 425.402.8488

WELL NUMBER MW-14

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
12.5									
	X	D&M		100	50/6"			**SANDY GRAVEL**, grayish brown, fine- to coarse-grained, some cobbles, little fine- to coarse-grained sand, trace fines, very dense, damp to wet. *(continued)*	
15.0									
	X	D&M		100	50/6"	GP			2"-diameter Sch. 40 PVC 0.020"-slotted screen
17.5									
	X	D&M		100	50/6"			18.0	1023.3 End cap

Boring completed at 18.0 feet.

WELL COMPLETION DETAILS:

0 to 3.1 feet: 2"-diameter Sch. 40 PVC blank riser.
3.1 to 17.7 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
17.7 to 18 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 1 feet: Concrete.
1 to 2 feet: Hydrated bentonite chips.
2 to 18 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 12/9/09

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WELL NUMBER MW-15

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/4/09 **COMPLETED** 11/4/09
GROUND ELEVATION 1050.78 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 14.0 ft / Elev 1036.8 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0								**BARK CHIPS.**	Concrete
								1.0 — 1049.8	
								SAND, light brown, fine-grained, few fine gravel, loose to medium dense, dry.	
2.5									
		D&M		20	13	SP			Hydrated bentonite chips
5.0									2"-diameter Sch. 40 PVC blank riser
		D&M		5	17				
7.5								7.0 — 1043.8	
		D&M		70	27	SM		**SILTY SAND**, reddish brown, fine-grained, little gray silt, medium dense, damp, mottled.	
								9.5 — 1041.3	2x12 Colorado silica sand pack
10.0								**GRAVELLY SAND**, reddish brown, fine-grained, some fine to coarse gravel, medium dense to very dense, damp.	
		D&M		10	41	SP			
12.5									

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

Figure B-16 (Page 1 of 2)

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 12/9/09

SLR
22122 20th Avenue SE
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Telephone: 425.402.8800
SLR International Corp Fax: 425.402.8488

WELL NUMBER MW-15

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
12.5									
	X	D&M		90	50/5"	SP		**GRAVELLY SAND**, reddish brown, fine-grained, some fine to coarse gravel, medium dense to very dense, damp. *(continued)*	
								14.0 ▽ 1036.8	
								GRAVEL, gray, fine- to coarse-grained, few coarse-grained sand, trace fines, wet, landfill odor.	
15.0									
	X	D&M		50	50/4"	GW			2"-diameter Sch. 40 PVC 0.020"-slotted screen
								16.5 1034.3	
								GRAVELLY SAND, gray, fine- to coarse-grained, some fine to coarse gravel, trace fines, very dense, wet, landfill odor.	
17.5									
	X	D&M		100	50/5"	SW			
20.0									End cap
	X	D&M		100	50/4"			20.4 1030.4	

Boring completed at 20.4 feet.

WELL COMPLETION DETAILS:

0 to 5.1 feet: 2"-diameter Sch. 40 PVC blank riser.
5.1 to 19.7 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
19.7 to 20 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 1.5 feet: Concrete.
1.5 to 3.5 feet: Hydrated bentonite chips.
3.5 to 20.4 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 12/9/09

Figure B-16 (Page 2 of 2)

SLR
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Fax: 425.402.8488

WELL NUMBER MW-16

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/3/09 **COMPLETED** 11/3/09
GROUND ELEVATION 1047.17 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.0 ft / Elev 1040.2 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0								0.5 **ASPHALT.** 1046.7	Concrete
						GP		**SANDY GRAVEL**, brown, medium- to coarse-grained, some fine- to coarse-grained sand, damp.	
								1.5 1045.7	
2.5								**GRAVEL**, brown, medium- to coarse-grained, some cobbles, few fine- to coarse-grained sand, very dense, damp.	Hydrated bentonite chips
	X	D&M		100	50/6"	GP			2"-diameter Sch. 40 PVC blank riser
								4.0 1043.2	
5.0								**SANDY GRAVEL**, brown, fine- to medium-grained, little fine- to medium-grained sand, very dense, damp.	
	X	D&M		100	50/5"	GP			
								6.5 1040.7	
7.5								**GRAVEL**, gray, coarse-grained, some cobbles, very ▽ dense, damp to wet. @ 7.0 feet: Becomes wet.	2x12 Colorado silica sand pack
	X	D&M		0	50/6"	GP		@ 7.5 feet: No recovery.	
								9.0 1038.2	
10.0								**SAND**, brown, fine- to medium-grained, few medium gravel, very dense, wet.	2"-diameter Sch. 40 PVC 0.020"-slotted screen
	X	D&M		100	50/6"	SP			
								11.5 1035.7	
12.5						SP		**GRAVELLY SAND**, brown, medium- to coarse-grained, some fine to medium gravel, trace fines, very dense, wet.	

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

Figure B-17 (Page 1 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-16

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
12.5									
	X	D&M		100	50/6"	SP		**GRAVELLY SAND**, brown, medium- to coarse-grained, some fine to medium gravel, trace fines, very dense, wet. *(continued)*	
								14.0	1033.2 End cap

Boring completed at 14.0 feet.

WELL COMPLETION DETAILS:

0 to 3.9 feet: 2"-diameter Sch. 40 PVC blank riser.
3.9 to 13.7 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
13.7 to 14 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 1.5 feet: Concrete.
1.5 to 3 feet: Hydrated bentonite chips.
3 to 14 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure B-17 (Page 2 of 2)

SLR
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Fax: 425.402.8488

WELL NUMBER MW-17

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/3/09 **COMPLETED** 11/3/09
GROUND ELEVATION 1044.36 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.0 ft / Elev 1037.4 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0						GP		**SANDY GRAVEL**, brown, medium- to coarse-grained, little fine- to medium-grained sand, damp.	Concrete
1.0								1043.4	
								GRAVELLY SAND, brown, fine- to medium-grained, little fine to medium gravel, few fines, dense, damp to moist.	
2.5						SP			Hydrated bentonite chips
		D&M		30	32				2"-diameter Sch. 40 PVC blank riser
4.5								1039.9	
5.0								**SANDY GRAVEL**, brown, fine- to coarse-grained, some fine-grained sand, dense, moist.	
		D&M		30	38	GP			
7.0 ▽								1037.4	2x12 Colorado silica sand pack
7.5								**GRAVEL**, gray, medium- to coarse-grained, some cobbles, trace fines, very dense, wet.	
		D&M		50	50/5"	GP			
9.5								@ 9.0 feet: Auger refusal. Moved boring three feet west and resumed drilling. 1034.9	2"-diameter Sch. 40 PVC 0.020"-slotted screen
10.0								**SAND**, gray, medium- to coarse-grained, few fine gravel, very dense, wet.	
		D&M		50	50/6"	SP			
11.5								1032.9	
12.5						GP		**SANDY GRAVEL**, gray, fine- to medium-grained, little fine- to coarse-grained sand, trace fines, wet.	

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

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Fax: 425.402.8488

WELL NUMBER MW-17

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
12.5									
	X	D&M		50	50/5"	GP		**SANDY GRAVEL**, gray, fine- to medium-grained, little fine- to coarse-grained sand, trace fines, wet. *(continued)*	
								14.0 1030.4	End cap

Boring completed @ 14.0 feet.

WELL COMPLETION DETAILS:

0 to 3.9 feet: 2"-diameter Sch. 40 PVC blank riser.
3.9 to 13.7 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
13.7 to 14 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 1.5 feet: Concrete.
1.5 to 3 feet: Hydrated bentonite chips.
3 to 14 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure B-18 (Page 2 of 2)

SLR
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Fax: 425.402.8488

WELL NUMBER MW-18

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/2/09 **COMPLETED** 11/2/09
GROUND ELEVATION 1060.94 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 12.0 ft / Elev 1048.9 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0.0						WW		**WOOD WASTE**, large bark chips, sawdust, damp.	Concrete
								1.5 — 1059.4	
								SAND, dark brown, fine-grained, trace fine to medium gravel, medium dense, damp.	
2.5						SP			
	X	D&M		30	29				Hydrated bentonite chips
								4.5 — 1056.4	
5.0								**WOOD WASTE**, small bark chips, sawdust, dense, damp.	
	X	D&M		100	31				2"-diameter Sch. 40 PVC blank riser
						WW			
7.5								@ 7.0 feet: Becomes moist.	
	X	D&M		30	35				
								@ 8.5 feet: Some gray silt.	
								9.5 — 1051.4	
10.0								**SAND**, gray, very fine-grained, medium dense, few silt, moist.	2x12 Colorado silica sand pack
	X	D&M		100	38	SP			
								12.0 ▽ — 1048.9	
12.5						ML		**SILT**, gray, little very fine-grained sand, medium stiff, wet, rotten egg odor.	

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

Figure B-19 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

WELL NUMBER MW-18

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
12.5								**SILT**, gray, little very fine-grained sand, medium stiff, wet, rotten egg odor. *(continued)*	
		D&M		100	5	ML			
								14.5 1046.4	
15.0								**SILTY SAND**, gray, fine-grained, some fines, very loose, wet, rotten egg odor.	
		D&M		100	3				
						SM			
17.5									2"-diameter Sch. 40 PVC 0.020"-slotted screen
		D&M		0	4			@ 17.5 feet: No recovery.	
								19.5 1041.4	
20.0								**GRAVEL**, gray, medium-grained, trace fines, loose, wet.	
		D&M		70	7	GP			
								21.5 1039.4	End cap

Boring completed at 21.5 feet.

WELL COMPLETION DETAILS:

+2.9 to 6.6 feet: 2"-diameter Sch. 40 PVC blank riser.
6.6 to 21.2 feet: 2"-diameter Sch. 40 PVC 0.020"-slotted screen.
21.2 to 21.5 feet: 2"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 4 feet: Hydrated bentonite chips.
4 to 21.5 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR MW LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure B-19 (Page 2 of 2)

TP-MW-1

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE** | **WELL DETAIL** (DOE#: BIC 713)

Drilling Method: Hollow Stem Auger
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/19/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						SM	Brown, silty, fine to coarse SAND with gravel (no odor, no sheen) (loose, damp) **(FILL)**
5							
10						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry)
15	TP-MW-2 -S(13.5-14.5)	h2				GM	Brown, very silty GRAVEL with sand (no odor, no sheen) (loose, wet)
20						GM	Brown, silty GRAVEL with sand (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
25							

Well detail: Protective Casing with Locking Cover; Slip Cap; 14.0 ft ATDing Groundwater Sample Collection

Moisture Content (%): Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 08/19/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466940.90
East: 1640847.49

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-MW-1

Figure
B-20

TP-MW-2

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE** | **WELL DETAIL** (DOE#: BIC 714)

Drilling Method: Hollow Stem Auger
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/19/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						ML	Dark gray, sandy SILT (no odor, no sheen) (medium stiff, dry) **(FILL)**
10						WD	Dark brown WOODWASTE material (no odor, no sheen) (loose, dry)
15	TP-MW-1 -S(13.5-14.5)	h2				GP-GM	Dark gray, sandy GRAVEL with silt with cobbles (no odor, no sheen) (loose, wet)
20						GP-GM	Dark gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Protective Casing with Locking Cover
Slip Cap
15.6 ft During Groundwater Sample Collection

Boring Completed 08/19/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467023.93
East: 1641162.31

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-MW-2

Figure
B-21

FPP-MW-1

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow Stem Auger
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	
0						SP	Light gray, gravelly SAND (no odor, no sheen) (loose, dry) **(FILL)**
5				0.0			
	FPP-MW-1 -S(8.5-9)	h2				SP	Gray, very gravelly SAND (no odor, no sheen) (loose, dry)
10							
15				0.0		GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
20				0.0		SP-SM	Gray, fine SAND with gravel with silt (no odor, no sheen) (loose, wet)
25							

WELL DETAIL (DOE#: BIC 715)

Protective Casing with Locking Cover
Slip Cap
18.4 ft During Groundwater Sample Collection

Moisture Content (%)
Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466850.92
East: 1641121.25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-MW-1

Figure
B-22

FPP-MW-2

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow Stem Auger
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP	Gray, sandy GRAVEL with brick fragments (no odor, no sheen) (dense, moist) **(FILL)**
5				1.4			
10	FPP-MW-2 -S(8.5-9.5)	h2		0.9		SP-SM	Gray, gravelly, fine to medium SAND with silt (slight petroleum-like odor, no sheen) (medium dense, damp)
15						GP	Gray, sandy GRAVEL (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
20						SP-SM	Gray, fine to medium SAND with silt (no odor, no sheen) (loose, wet)
25							

WELL DETAIL (DOE#: BIC 716)

Protective Casing with Locking Cover
Slip Cap
17.0 ft During Groundwater Sample Collection

Moisture Content (%)
Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466687.30
East: 1641250.11

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-MW-2

Figure
B-23

FPP-MW-3

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: Hollow Stem Auger
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	
0							No Recovery
5							
10						GP	Gray, coarse GRAVEL (no odor, no sheen) (loose, wet) **(FILL)**
15	FPP-MW-3 -S(13.5-14.5)	h2		0.4		SP-SM	Gray, gravelly, fine to medium SAND with silt (petroleum-like odor, no sheen) (loose, wet) **(ALLUVIUM)**
20				0.3		SP	Gray, fine to coarse SAND with gravel (no odor, no sheen) (loose, wet)
25							

WELL DETAIL (DOE#: BIC 717)

Protective Casing with Locking Cover
Slip Cap
15.0 ft During Groundwater Sample Collection

Moisture Content (%)
Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North:
East:

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-MW-3

Figure
B-24

MW-100

SAMPLE DATA

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data
0		a1	50/6	
		a1	12	
5		a1	18	
		a1	50/3	PID=0.0
10		a1		
	MW-100 (13.5-14)	a1	9	PID=0.0
15		a1	10	PID=0.0
		a1	50/4	
20		a1	20	
25				
30				

SOIL PROFILE

Drilling Method: Hollow-Stem Auger

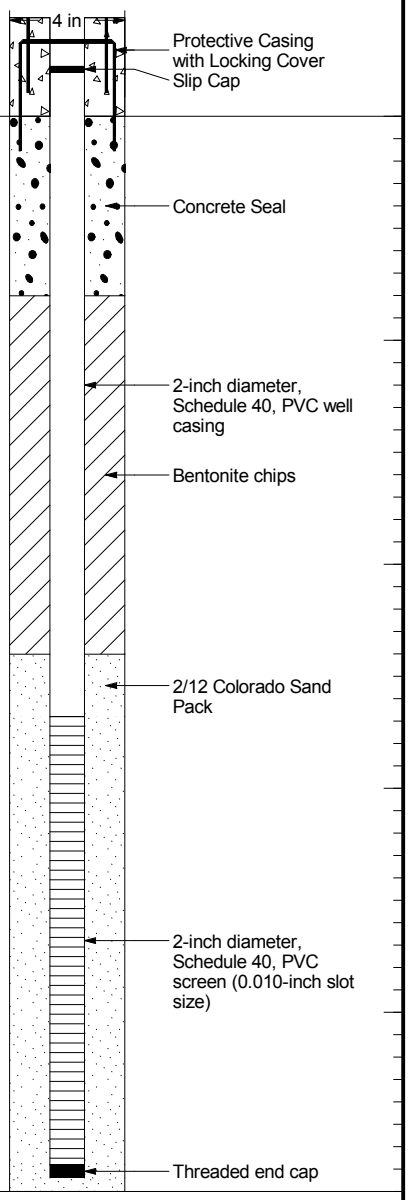
Ground Elevation (ft): 1064.91

Graphic Symbol	USCS Symbol	
	GP	Brown, coarse GRAVEL with cobbles (no odor, no sheen) (loose to dense, dry) **(FILL)**
	SM	Gray, silty, fine SAND (no odor, no sheen) (loose, wet) **(NATIVE?)**
	SP	Gray, fine to coarse SAND (no odor, no sheen) (medium dense to dense, wet)

GROUNDWATER

Water Level: ATD

Monitoring Well Detail
(DOE#: BID 669)



Boring Completed 09/10/14
Total Depth of Boring = 24.0 ft.

Monitoring Well Completed 09/11/14
Elevation at Top of Protective Casing = 1066.46 ft.
Elevation at Top of Monitoring Well Casing = 1065.72 ft.
Total Depth of Monitoring Well = 23.7 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

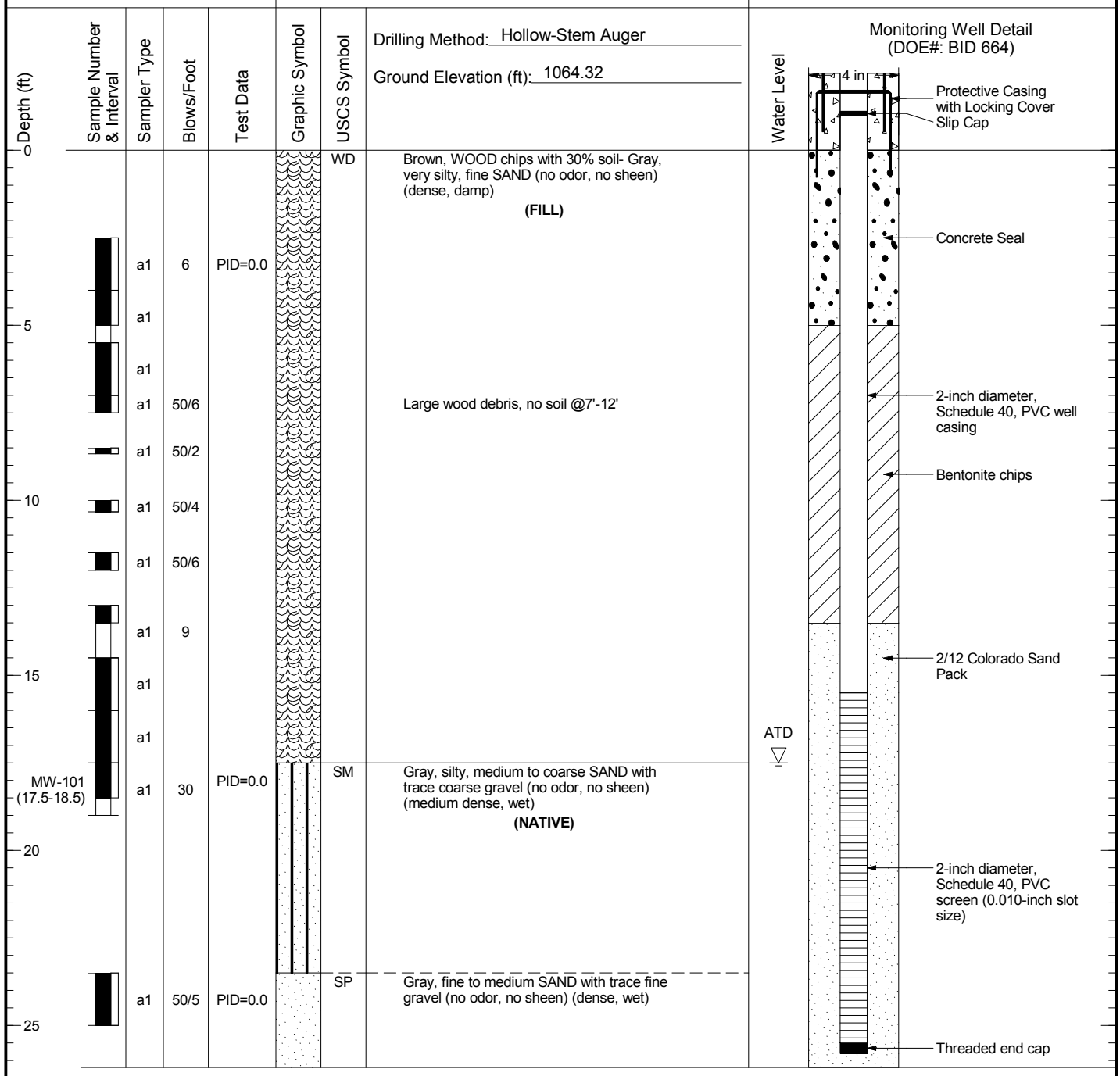
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-100

Figure
B-25

MW-101



Boring Completed 09/05/14
Total Depth of Boring = 26.2 ft.

Monitoring Well Completed 09/05/14
Elevation at Top of Protective Casing = 1067.02 ft.
Elevation at Top of Monitoring Well Casing = 1066.75 ft.
Total Depth of Monitoring Well = 25.8 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

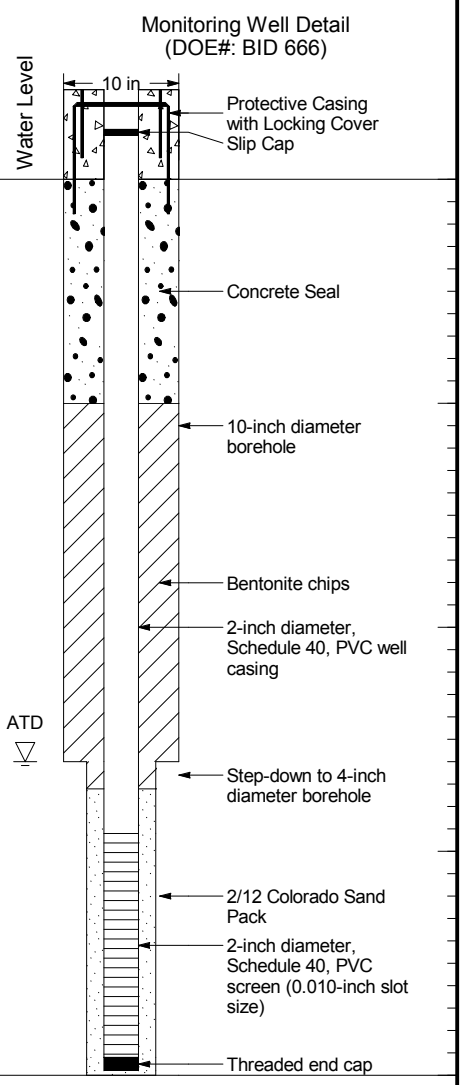
Log of Monitoring Well MW-101

Figure
B-26

MW-102

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft): 1062.21
0		a1	11			WD	Brown, WOOD chips with <5% soil- silty, fine SAND (no odor, no sheen) (loose, damp) **(FILL)**
		a1	14				
	MW-102 (4-5)	a1	33	PID=1.3		SM	Gray, silty, fine to coase SAND with wood chips (decomposed) and trace gravel (no odor, no sheen) (loose to medium dense, damp)
5		a1	25				
		a1	8				
		a1	13				
10		a1	10			DB	DEBRIS with metal, plastic, wood chips and < 5% soil- Gray, silty, sandy, GRAVEL (rotten odor, no sheen) (dense, damp) **(MUNICIPAL SOILD WASTE)**
		a1	7				
		a1	42			GP	Gray, sandy, fine GRAVEL with decomposed wood chips (no odor, no sheen) (loose, damp) **(FILL)**
15	MW-102 (15-15.5)	a1	34	PID=0.0			
		a1	40				
		a1	60				
20							
25							
30							

Boring Completed 09/08/14
Total Depth of Boring = 20.0 ft.



Monitoring Well Completed 09/08/14
Elevation at Top of Protective Casing = 1064.86 ft.
Elevation at Top of Monitoring Well Casing = 1064.37 ft.
Total Depth of Monitoring Well = 19.9 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

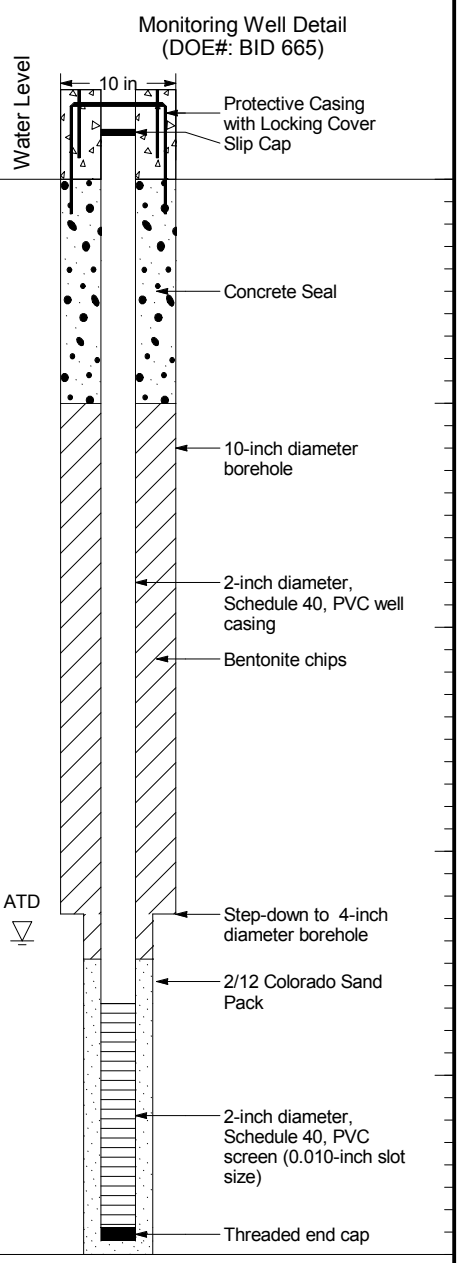
Log of Monitoring Well MW-102

Figure
B-27

MW-103

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile
							Drilling Method: Hollow-Stem Auger
							Ground Elevation (ft): 1063.35
0		a1	14			WD	Brown, decomposed WOOD chips with 25% soil- Brown, sandy, SILT (no odor, no sheen) (loose to medium dense, damp) **(FILL)**
		a1	12				
5		a1	29				
		a1	20				
		a1	11			DB	DEBRIS with glass, plastic and 50% soil- Gray, sandy, SILT (rotten odor, no sheen) (loose, damp) **(MUNICIPAL SOILD WASTE)**
10		a1	4				
		a1	7				wire and glass with 70% soil- Gray, sandy, SILT @14.5'-15.5' (loose, damp)
15		a1	6				
		a1	55			SM	Gray, silty, fine to medium SAND with gravel (no odor, no sheen) (dense, wet) **(FILL)**
		a1	50/1			GP	Gray, sandy, fine GRAVEL with trace silt (no odor, no sheen) (dense, wet)
20		a1	50/6			SP	Gray, gravelly, medium to coarse SAND with silt (no odor, no sheen) (dense, wet)
	MW-103 (20.5-21.5)	a1	50/6	PID=0.0			
25							
30							

Boring Completed 09/04/14
Total Depth of Boring = 24.0 ft.



Monitoring Well Completed 09/05/14
Elevation at Top of Protective Casing = 1065.60 ft.
Elevation at Top of Monitoring Well Casing = 1065.11 ft.
Total Depth of Monitoring Well = 23.7 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

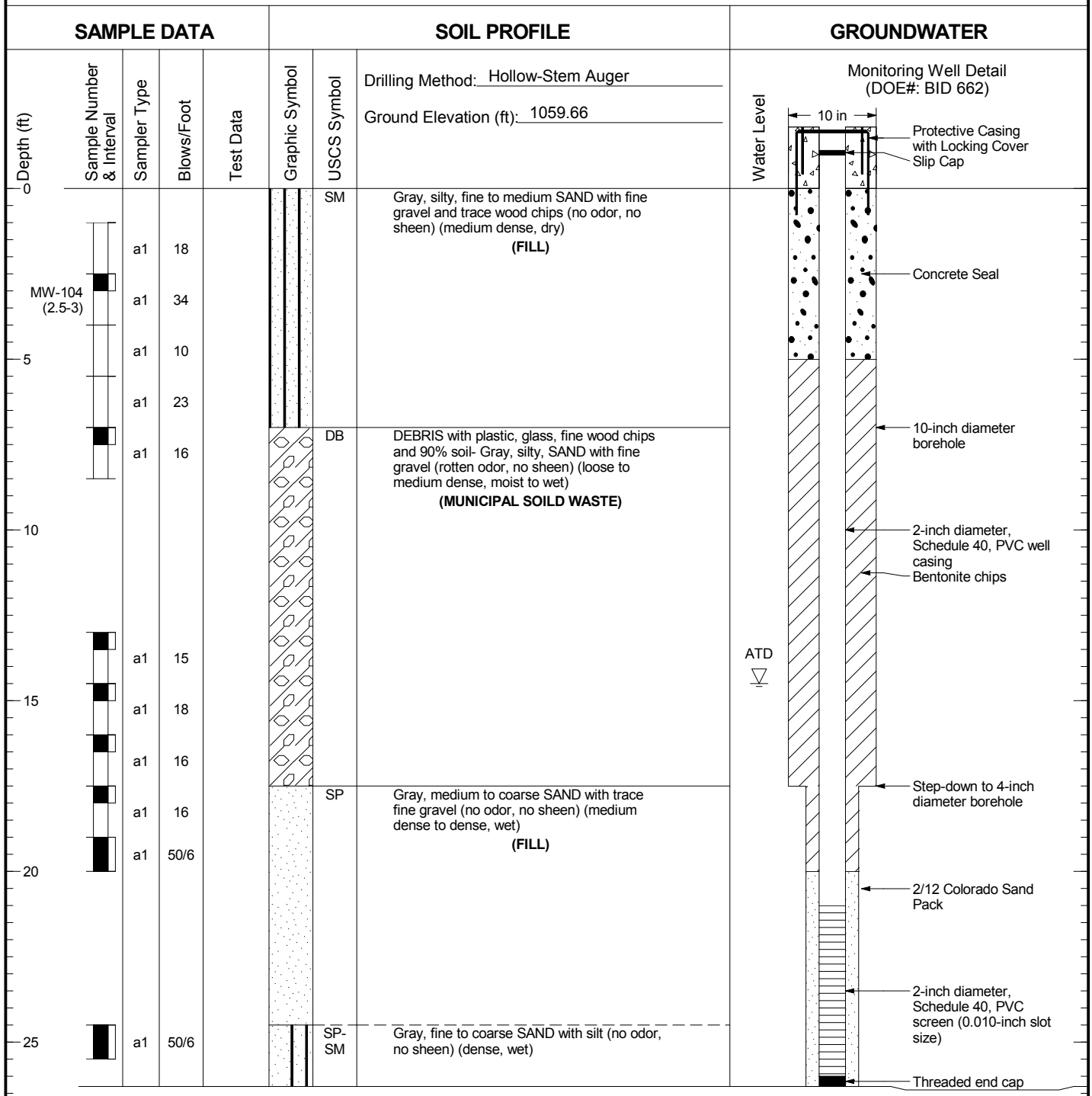
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-103

Figure
B-28

MW-104



Boring Completed 09/03/14
Total Depth of Boring = 26.3 ft.

Monitoring Well Completed 09/03/14
Elevation at Top of Protective Casing = 1061.66 ft.
Elevation at Top of Monitoring Well Casing = 1061.51 ft.
Total Depth of Monitoring Well = 26.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

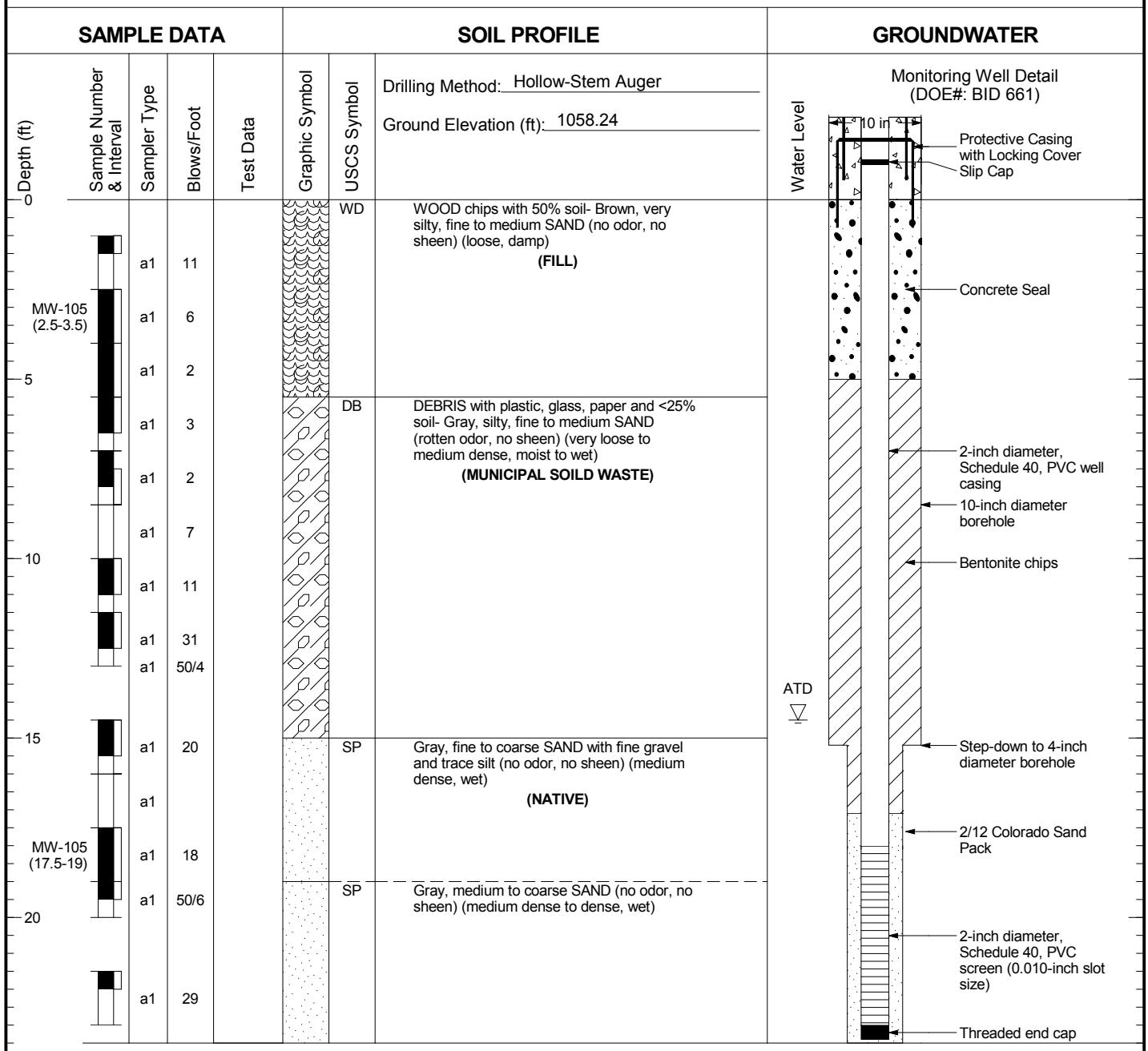
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-104

Figure
B-29

MW-105



Boring Completed 09/02/14
Total Depth of Boring = 23.5 ft.

Monitoring Well Completed 09/02/14
Elevation at Top of Protective Casing = 1060.41 ft.
Elevation at Top of Monitoring Well Casing = 1059.60 ft.
Total Depth of Monitoring Well = 23.4 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

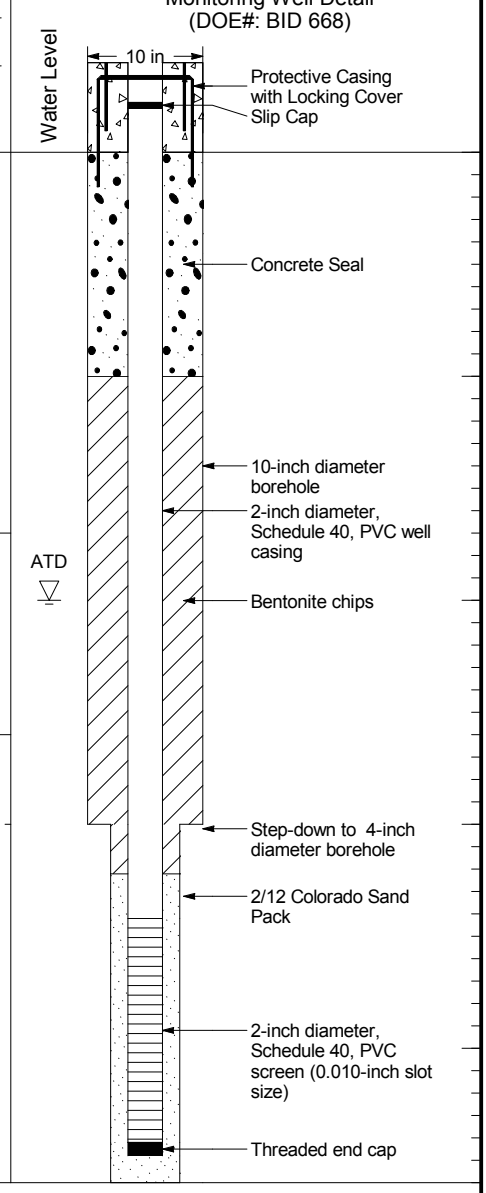
Log of Monitoring Well MW-105

Figure
B-30

MW-106

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile
0		a1	6	PID=0.5		SM	Brown, silty, fine SAND with trace gravel (no odor, no sheen) (very loose to medium dense, dry) **(FILL)**
	MW-106 (2.5-3.5)	a1	20				
5		a1	7				
		a1	4				
		a1	4			DB	DEBRIS with plastic, metal, paper and no soil (rotten odor, no sheen) (loose to medium dense, wet) **(MUNICIPAL SOILD WASTE)**
		a1	20				
10		a1	29				wire and plastic with 25% soil- Brown, silty, fine to medium SAND with coarse gravel at 11.5'-12.0'
	MW-106 (13.5-14.5)	a1	12				
		a1	11			SM	Gray, very silty, SAND (rotten odor, no sheen) (loose, wet) **(FILL)**
15						SM	Gray, silty, fine to coarse SAND with gravel (no odor, no sheen) (loose to dense, wet)
		a1	50/6				
20		a1	10				
25							
30							

Boring Completed 09/09/14
Total Depth of Boring = 23.0 ft.



Monitoring Well Completed 09/10/14
Elevation at Top of Protective Casing = 1060.26 ft.
Elevation at Top of Monitoring Well Casing = 1059.86 ft.
Total Depth of Monitoring Well = 22.4 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

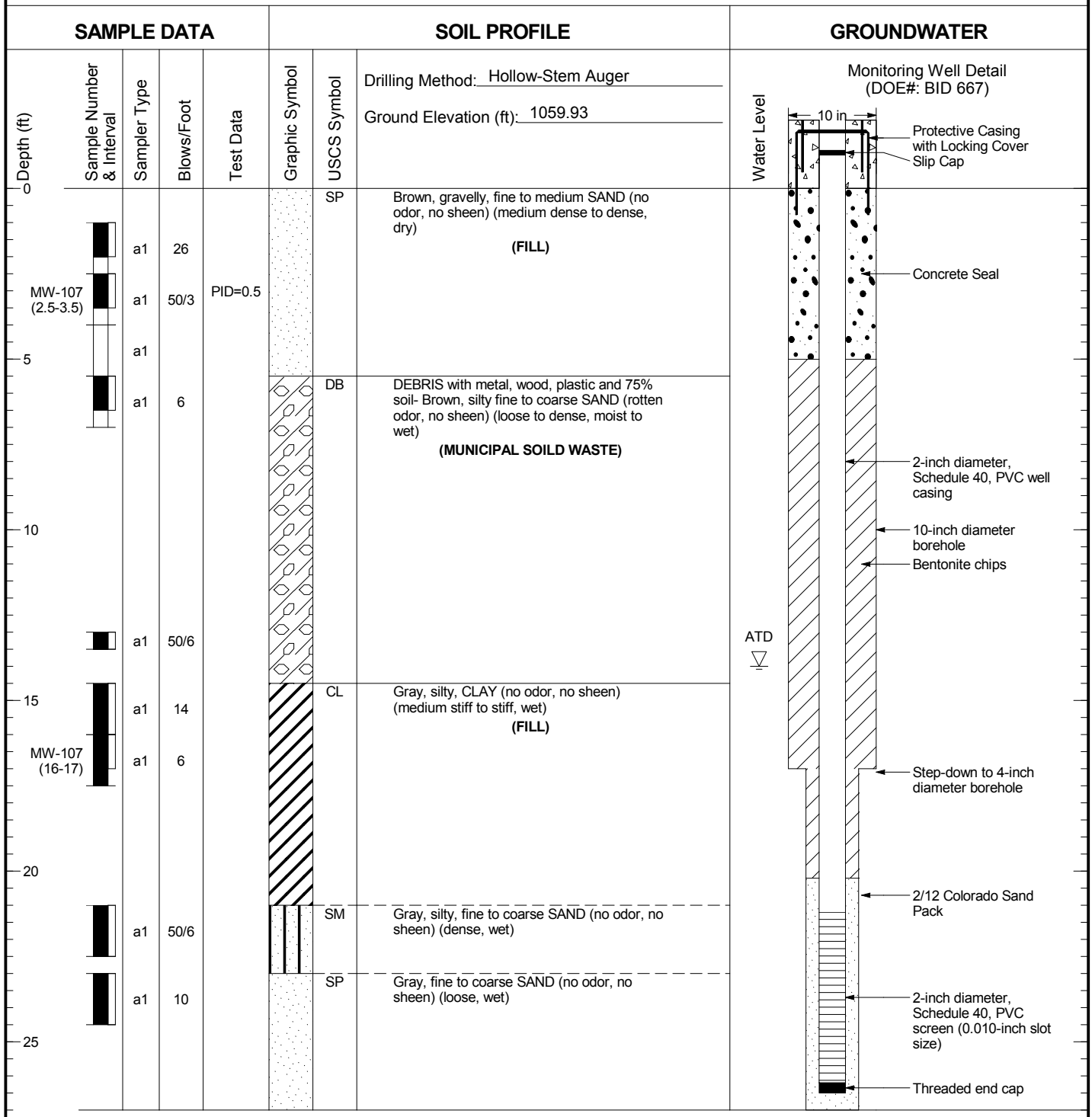
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-106

Figure B-31

MW-107



Boring Completed 09/09/14
Total Depth of Boring = 27.0 ft.

Monitoring Well Completed 09/09/14
Elevation at Top of Protective Casing = 1061.68 ft.
Elevation at Top of Monitoring Well Casing = 1061.38 ft.
Total Depth of Monitoring Well = 26.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

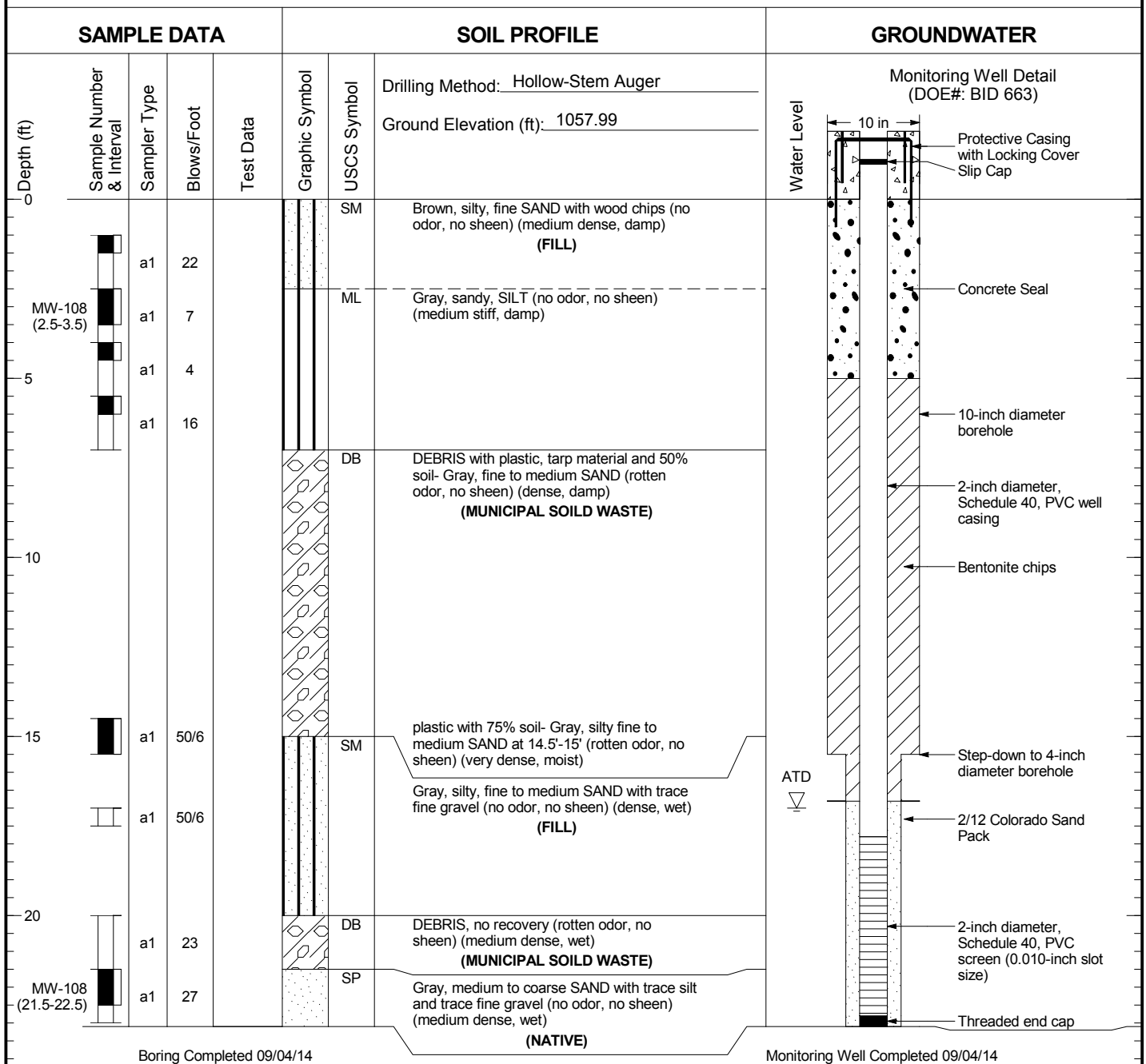
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-107

Figure
B-32

MW-108



Boring Completed 09/04/14
Total Depth of Boring = 23.1 ft.

Monitoring Well Completed 09/04/14
Elevation at Top of Protective Casing = 1059.99 ft.
Elevation at Top of Monitoring Well Casing = 1059.58 ft.
Total Depth of Monitoring Well = 23.1 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-108

Figure
B-33

MW-109

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Water Level

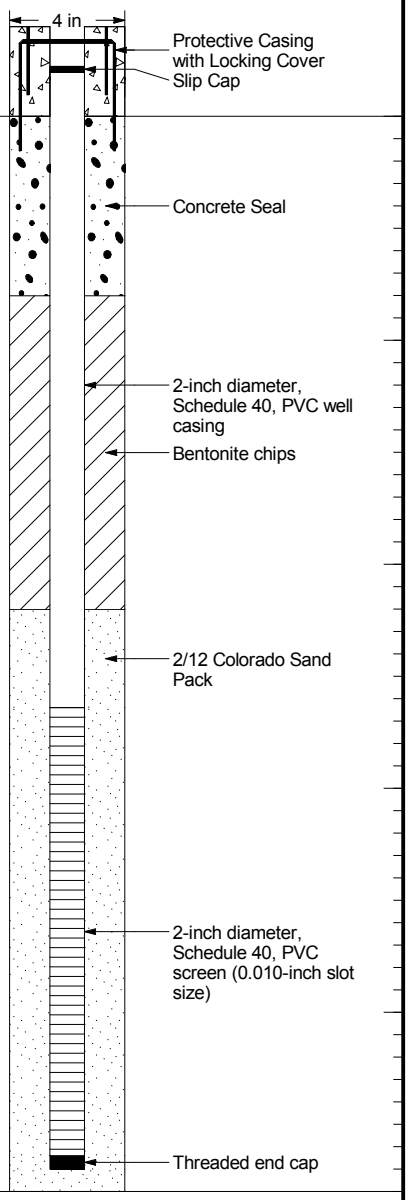
Drilling Method: Hollow-Stem Auger

Ground Elevation (ft): 1059.30

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	USCS Symbol	Description
0				SM	Brown, silty, fine SAND (no odor, no sheen) (dense, damp to wet) **(FILL)**
5		a1	50/3		
		a1	50/2		
10		a1	50/2		
		a1	50/6		
15		a1	50/6	SP-SM	Brown, fine to coase SAND with silt and fine gravel (no odor, no sheen) (dense, wet) **(NATIVE?)**
20		a1	50/6		
		a1	18		
25					
30					

ATD

Monitoring Well Detail
(DOE#: BID 670)



Boring Completed 09/11/14
Total Depth of Boring = 24.0 ft.

Monitoring Well Completed 09/11/14
Elevation at Top of Protective Casing = 1062.15 ft.
Elevation at Top of Monitoring Well Casing = 1061.50 ft.
Total Depth of Monitoring Well = 23.5 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.010.011 3/10/15 N:\PROJECTS\1148008.010.011.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Monitoring Well MW-109

Figure
B-34

APPENDIX C

Exploratory Test Pit Logs

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-1A

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 3.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose		
								@ 1 foot: Fabric		
								LANDFILL COVER fill, gravelly silt, black, fine to coarse gravel, moist, frozen		
								LANDFILL DEBRIS fill, glass, cardboard, plastic with coarse black gravel		
					5			Bottom of Test Pit @ 3.5 feet	5	
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-1

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-1B

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 3.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose		
								LANDFILL COVER fill, gravelly silt, black, fine to coarse gravel, moist, frozen		
								LANDFILL DEBRIS fill, glass, cardboard, plastic with coarse black gravel		
					5			Bottom of Test Pit @ 3.5 feet	5	
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-2

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-1C

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 8.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose		
								LANDFILL COVER fill, gravels to cobbles with silty sandy matrix, black, fine to coarse gravel, moist, frozen		
					5			LANDFILL MIXED WITH COVER MATERIAL fill, gravelly silt, black, fine to coarse gravel to cobbles, moist, frozen	5	
					10			LANDFILL DEBRIS fill, glass, cardboard, metals cans with coarse black gravel, decomposition odor Bottom of Test Pit @ 8.5 feet	10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-3

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-1D

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 6.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose		
								LANDFILL COVER fill, silty sandy gravel, black, fine to coarse gravel, moist, frozen		
								LANDFILL DEBRIS fill, glass, cardboard, metals cans		
						ML		SANDY SILT (ML), dark gray, fine-grained sand, trace coarse gravel, damp, very stiff		
					5				5	
								Bottom of Test Pit @ 6 feet		
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-4

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-1E

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 12.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose		
								SILTY SAND (ML) fill, dark gray, 80% fine- to medium-grained sand, trace fine gravel, damp, medium stiff, trace of organics, slight odor @ 3.5 feet: 2" of Landfill Debris, plastic bags		
					5				5	
								STEEL RAILROAD TIES AND LUMBER fill		
					10				10	
								SANDY SILT (ML), dark gray, 40 % fine-grained sand, wet to saturated, medium stiff, trace of organics @ 12 feet: Capillary fringe, trace of water and buried log Bottom of Test Pit @ 12 feet		
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-5

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-2

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 13.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			LOG DECK fill, wood debris with gravel, black, fine gravel, wet to saturated, loose	0	
								SILTY GRAVEL (GM) fill, dark gray, 20% fine gravel, moist, stiff		
								COBBLES WITH SILTY SAND (GP) fill, dark gray, 80% fine- to medium-grained sand, damp, loose, trace of red bricks		
					5				5	
						GP		@ 7 feet: Lumber Debris, plywood 2x4s GRAVEL TO COBBLES WITH SILTY SAND (GP), dark gray, 40% coarse gravel to 40% cobbles, 20% silty medium-grained sand		
					10				10	
								Bottom of Test Pit @ 13 feet		
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-6

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-3A

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 11.0

COORDINATES **INITIAL WATER LEVEL** ▽ 11.0

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								WOOD DEBRIS fill, dark reddish brown, dry, loose GRAVELLY SAND (SP) fill, gray, fine- to medium-grained sand, dry, loose, t-shirt		
					5	ML		SANDY SILT (ML), very dark gray, 40% fine-grained sand, moist, loose, medium stiff, some gravel	5	
					10			SANDY COBBLES, dark gray, fine- to coarse-grained sand, moist to wet, loose ▽ Bottom of Test Pit @ 11 feet	10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-7

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-3B

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 10.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								WOOD DEBRIS fill, dark reddish brown, dry, loose		
								SANDY SILT (ML) fill, very dark gray, 40% fine-grained sand, moist, loose, medium stiff, some gravel		
								LOG DECK DEBRIS WITH GRAVEL fill, dark grown, 35% coarse gravel, dry, loose to medium dense		
					5			SILTY SANDY GRAVEL (GP) fill, very dark gray, 60% coarse gravel, 40% fine- to coarse-grained sand, moist, dense, trace of cobbles, lots of concrete debris with log debris	5	
					10			LANDFILL DEBRIS fill, glass, cardboard, plastic with coarse black gravel	10	
								Bottom of Test Pit @ 10.5 feet		
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-8

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-4A

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 10.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS fill, dark reddish brown, dry, loose SILTY SAND (SM) with wood debris fill, dark brown, fine- to medium-grained sand, damp, medium dense	0	
					5			SILTY SAND (SM) with landfill debris fill, dark gray, moist, medium dense, slight burnt look, landfill debris not continuous	5	
					10			Bottom of Test Pit @ 10.5 feet	10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-9

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-4B

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 7.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS fill, dark reddish brown, dry, loose SILTY SAND (SM) with wood debris fill, dark brown, fine- to medium-grained sand, damp, medium dense	0	
					5			SILTY SAND (SM) with landfill debris fill, dark gray, moist, medium dense, slight burnt look, landfill debris not continuous	5	
								Bottom of Test Pit @ 7.5 feet		
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-10

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-5A

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 13.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS fill, dark reddish brown, dry, loose	0	
					5			WOOD DEBRIS fill, 12" logs with bark and pieces of wood	5	
					10				10	
					13	GP		@ 13 feet: Log pond bottom SILTY SANDY COBBLES (GP), very dark gray, 40% fine- to coarse-grained sand, moist, dense	13	
					15			Bottom of Test Pit @ 13.5 feet	15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-11

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-5B

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 26, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 16.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS WITH GRAVEL fill, dark reddish brown, dry, loose	0	
					5			SILTY SANDY COBBLES (GP) fill, very dark gray, 40% fine- to coarse-grained sand, angular cobbles, moist, dense	5	
					10			WOOD DEBRIS fill, 12" logs with bark and pieces of wood	10	
					15			Bottom of Test Pit @ 16.5 feet	15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-12

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-5C

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 26, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 9.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS WITH GRAVEL fill, dark reddish brown, dry, loose	0	
					5			SANDY GRAVELLY SILT (ML) fill, blue-gray, fine- to coarse-grained sand, with cobbles, moist, dense	5	
								LANDFILL DEBRIS fill, glass bottles, paper		
								Bottom of Test Pit @ 8 feet		
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-13

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-6

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 26, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 8.5

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								GRAVELLY SANDY SILT (ML) fill, dark gray, fine- to coarse-grained sand, moist, medium stiff		
								Rubber tubing and cobbles WOOD DEBRIS WITH SANDY SILT fill, reddish brown, fine- to medium-grained sand		
					5			CONCRETE WASTE fill	5	
								LANDFILL DEBRIS fill, tire, paper, bottles, plastic, bicycle tires		
								Bottom of Test Pit @ 8.5 feet		
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-14

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** TP-7

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 26, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 4.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								WOOD DEBRIS AND SILTY SAND fill, dark reddish brown, fine- to medium-coarse sand, dry, loose		
								SILTY GRAVELLY SAND (SW) fill, very dark gray, fine to coarse sub-rounded gravel, fine- to coarse-grained sand, moist, dense		
								@ 3 feet: Hit a 2" water line, no sheen on water		
								Bottom of Test Pit @ 4 feet		
					5				5	
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure C-15

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-8

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1062.46 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0						**WOOD WASTE**, brown, organic, intermixed with gravel, moist.	0.6
5						5.0 — 1057.5	
				GM		**SILTY GRAVEL**, yellow brown, fine to coarse gravel, rounded cobbles, some fines.	
						7.0 — 1055.5	
				ML		@ 7.0 Feet: Geotextile fabric. **SANDY SILT**, dark brown, some fine- to coarse-grained sand, trace gravel, moist.	
						9.0 — 1053.5	
10						**MUNICIPAL SOLID WASTE**, plastic bags, wire, trash.	0.6
						14.0 — 1048.5	
						Test pit completed at 14.0 feet.	

REMARKS
Pit 20' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-16

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-9

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1064.84 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, dark brown, organics, intermixed medium gravel, wood mulch.	
6.0							1058.8
				GW		**SANDY GRAVEL**, gray, fine to coarse gravel, cobbles (up to 6"), some fine- to coarse-grained sand, dense, moist.	
9.0							1055.8
						MUNICIPAL SOLID WASTE, gray, intermixed trash, plastic, glass.	
11.0							1053.8
						Test pit completed at 11.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-17

SLR
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Bothell, Washington 98021
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Fax: 425.402.8488

TEST PIT NUMBER TP-10

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1069.30 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0						**WOOD WASTE**, brown, organic, intermixed gravel and wood debris, bark, moist.	0.6
5							
				GW		8.0 (1061.3) **SANDY GRAVEL**, gray, fine to coarse gravel, some fine- to coarse-grained sand, cobbles, moist. (8.5, 1060.8) **MUNICIPAL SOLID WASTE**, gray, intermixed plastic, trash, gravel, moist, strong metal odor.	
10						10.5 (1058.8)	0.6

Test pit completed at 10.5 feet.

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-18

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-11

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 **COMPLETED** 1/26/09
GROUND ELEVATION 1057.05 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				SW-SM		**GRAVELLY SAND**, dark brown, fine- to coarse-grained sand, some fine to coarse rounded gravel, little fines, dry to moist	
5						@ 3.5 feet: Becomes brown, intermixed trash, plastic, metal.	
							1051.6
				ML		**SILT**, dark blue-gray, moist to wet, some waste.	
							1050.1
						MUNICIPAL SOLID WASTE, gray, some sand, plastic, metal, foam, construction debris.	
							1048.1
						Test pit completed at 9.0 feet.	

REMARKS
Pit 10' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-19

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Fax: 425.402.8488

TEST PIT NUMBER TP-12

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 **COMPLETED** 1/26/09
GROUND ELEVATION 1051.47 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, light brown, fine to coarse gravel, some cobbles, rounded, some fines, little fine- to coarse-grained sand, dry to damp. Waste and construction debris below 1'	
2.0				ML		**SILT**, dark gray, some fine to medium gravel, moist.	1049.5
3.0						**MUNICIPAL SOLID WASTE**, plastic bags, metal, moist.	1048.5
5							
7.0						Test pit completed at 7.0 feet.	1044.5

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-20

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Fax: 425.402.8488

TEST PIT NUMBER TP-13

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1060.09 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, dark brown, fine to coarse gravel, some fines, some organics.	
						@ 1.5 feet: Becomes olive gray with little fine- to coarse-grained sand.	
						3.0	1057.1
						WOOD WASTE, red, fine fragments, damp.	
5							
						7.5	1052.6
				SP		**SAND**, olive gray, fine- to medium-grained sand, trace silt, trace gravel.	
10							
						12.5	1047.6
						Test pit completed at 12.5 feet.	

REMARKS
Pit 20' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-21

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-14

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 **COMPLETED** 1/26/09
GROUND ELEVATION 1059.88 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, dark brown, some fines, little sand and organics, moist.	
						1.0	1058.9
						WOOD WASTE, bark fragments.	
						3.0	1056.9
				SM		**SILTY SAND**, olive gray, fine- to medium-grained sand, some fines, little medium to coarse gravel, moist.	
5						5.0	1054.9
						WOOD WASTE.	
						5.5	1054.4
				SP		**SAND**, gray, fine- to medium-grained, trace gravel and silt, moist.	
						7.5	1052.4
						WOOD WASTE.	
						8.0	1051.9
				SP		**SAND**, gray, fine- to medium-grained, some laminar staining, moist.	
10						10.0	1049.9
						Test pit completed at 10.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-22

SLR
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TEST PIT NUMBER TP-15

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1045.95 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
▽ AT TIME OF EXCAVATION 7.5 ft / Elev 1038.5 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse, some cobbles, some fines, little fine- to coarse-grained sand.	
1.0							1045.0
				GW		**SANDY GRAVEL**, yellow brown, fine to coarse gravel, some fine- to coarse-grained sand, cobbles up to 12", well-rounded, flattened horizontal alignment, moist to wet.	
5							
7.5 ▽							1038.5

Test pit completed at 7.5 feet.

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-23

SLR
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TEST PIT NUMBER TP-16

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 **COMPLETED** 1/26/09
GROUND ELEVATION 1048.37 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry to damp.	
2.0							1046.4
				SM		**SILTY SAND**, light brown, some fines, trace gravel, moist.	
5							
7.0							1041.4
				GW		**SANDY GRAVEL**, fine to coarse gravel, cobbles (12"), some fine- to coarse-grained sand, wet.	
9.0							1039.4
						Test pit completed at 9.0 feet.	

REMARKS

Pit 15' x 5'
Municipal solid waste from 4.0 to 7.0 feet in north end of test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-24

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-17

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 COMPLETED 1/26/09
GROUND ELEVATION 1049.89 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, dark brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry.	1048.4
					1.5		
				GW		**SANDY GRAVEL**, brown, fine to coarse gravel, some fine- to coarse-grained sand.	1045.9
					4.0		
5				SM		**SILTY SAND**, light brown, fine- to medium-grained sand, some fines, moist.	1040.9
					9.0		
10				GW		**SANDY GRAVEL**, yellow brown, fine to coarse gravel, some fine- to coarse-grained sand.	1039.9
					10.0	Test pit completed at 10.0 feet.	

REMARKS

Municipal solid waste from 4.0 to 7.0 feet in north end of test pit.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 4/13/09

Figure C-25

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-18

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/26/09 **COMPLETED** 1/26/09
GROUND ELEVATION 1053.42 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE** (Up to 8" pieces).	
						@ 1.5 feet: Wood waste intermixed with gravel, some organics, and sand.	
4.0							1049.4
5				SM		**SILTY SAND**, olive gray, fine- to medium-grained, some fines, moist.	
7.0							1046.4
						Test pit completed at 7.0 feet.	

REMARKS

Pit 20' x 5'
Municipal waste below 3.0 feet in north end of test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-26

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-19

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1054.45 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						WOOD WASTE, some logs.	
5						5.0	1049.5
				GP-GM		**SILTY GRAVEL**, brown, fine to coarse gravel, rounded, some fines, little fine- to coarse-grained sand, moist.	
						8.0	1046.5
				SM		SILTY SAND: Olive grey, fine grained, moist	
10						10.0	1044.5
						Test pit completed at 10.0 feet.	

REMARKS

Pit 25' x 5'
Municipal solid waste at 6.0 feet in north end of test pit.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 4/13/09

Figure C-27

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Fax: 425.402.8488

TEST PIT NUMBER TP-20

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1055.31 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE.**	
							1052.8
				GP-GM		**SILTY GRAVEL**, yellow brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry to moist.	
5							1050.3
				SM		**SILTY SAND**, light brown, fine sand, some fines, trace gravel.	
						@ 8.0 feet: Becomes olive gray.	
							1046.3
						Test pit completed at 9.0 feet.	

REMARKS

Pit 45' x 10'
Municipal solid waste below 5.0 feet in north end of test pit.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 4/13/09

Figure C-28

TEST PIT NUMBER TP-21

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

CLIENT City of Yakima
PROJECT NUMBER 001.0221.00004
PROJECT NAME City of Yakima Landfill
PROJECT LOCATION Yakima, Washington

DATE STARTED 1/27/09 COMPLETED 1/27/09
EXCAVATION DRILLING CONTRACTOR Wyser Construction
EXCAVATION DRILLING METHOD Excavator
LOGGED BY B. Robinson CHECKED BY
NOTES

GROUND ELEVATION 1058.27 ft HOLE SIZE
GROUND WATER LEVELS:
AT TIME OF EXCAVATION Dry
AT END OF ---
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, pieces up to 24". 1056.3
2.0						**SANDY GRAVEL**, white and gray, fine to coarse gravel, some fine- to coarse-grained sand, large pieces of concrete (5" up to 2'), some asphalt, metal pipes, rotting odor.
5				GW		1050.3
8.0						Test pit completed at 8.0 feet.

REMARKS
Municipal solid waste below 4.0 feet in north end of test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-29

SLR
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Bothell, Washington 98021
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Fax: 425.402.8488

TEST PIT NUMBER TP-22

CLIENT City of Yakima
PROJECT NUMBER 001.0221.00004
DATE STARTED 1/27/09 COMPLETED 1/27/09
EXCAVATION DRILLING CONTRACTOR Wyser Construction
EXCAVATION DRILLING METHOD Excavator
LOGGED BY B. Robinson CHECKED BY
NOTES

PROJECT NAME City of Yakima Landfill
PROJECT LOCATION Yakima, Washington
GROUND ELEVATION 1058.06 ft HOLE SIZE
GROUND WATER LEVELS:
AT TIME OF EXCAVATION Dry
AT END OF ---
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, dark reddish brown, some intermixed gravel, moist.	
6.0							1052.1
				SM		**SILTY SAND**, olive gray, fine- to medium-grained sand, some fines, moist, strong odor.	
7.5			TP-22 Waste				1050.6
						MUNICIPAL SOLID WASTE, plastic bags, metal, foam.	
8.5							1049.6
						Test pit completed at 8.5 feet.	

REMARKS
Pit 20' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-30

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-23

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1054.00 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, some fine to coarse gravel, little fine- to coarse-grained sand.	1052.5
1.5				GW		**SANDY GRAVEL**, brown, fine to coarse gravel, some cobbles, some fine- to coarse-grained sand, dry to damp.	1050.5
3.5						**MUNICIPAL SOLID WASTE**, metal, plastics, concrete.	1049.0
5.0				SM		**SILTY SAND**, olive gray, fine- to medium-grained sand, some fines, moist.	1046.5
7.5						Test pit completed at 7.5 feet.	

REMARKS

Pit 20' x 5'
Municipal solid waste pinches out in the south end of the test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-31

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-24

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1050.72 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some cobbles, some fines, little fine- to coarse-grained sand. @ 1.0 feet: Becomes intermixed with municipal solid waste (plastic bags, wire).	1048.2
2.5				SM		**SILTY SAND**, light olive brown grading to olive gray, fine- to medium-grained sand, some fines, moist.	1045.2
5				GW		**SANDY GRAVEL**, olive brown, fine to coarse gravel, some cobbles, well-rounded to flattened, some fine- to coarse-grained sand, moist.	1043.2
5.5							
7.5						Test pit completed at 7.5 feet.	

REMARKS
Pit 14' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-32

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-25

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/27/09
GROUND ELEVATION 1051.48 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, little wood waste, dry. @ 1.0 foot: Becomes intermixed with wood waste and municipal solid waste (plastic bags, wire, concrete).	
4.0							1047.5
						MUNICIPAL SOLID WASTE, gray, tires, glass, plastic bags, plastic.	
5							
5.5							1046.0
				SM		**SILTY SAND**, light olive brown to olive gray, fine-grained sand, moist.	
6.5							1045.0
				GW		**SANDY GRAVEL**, olive gray, fine to coarse gravel, cobbles up to 18", well rounded to flattened, some fine- to coarse-grained sand, moist.	1044.5
7.0						Test pit completed at 7.0 feet.	

REMARKS

Pit 25' x 7'
Municipal solid waste pinches out in the south end of the test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-33

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-26

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/27/09
GROUND ELEVATION 1051.18 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry to moist, intermixed wood, bark, logs (18" diameter), concrete.	
4.0							1047.2
						MUNICIPAL SOLID WASTE, plastic bags, bottles, foam, metal, sand, and gravel.	
5							
5.0							1046.2
				SM		**SILTY SAND**, light olive brown, fine- to medium-grained, some fines.	
6.5							1044.7
						Test pit completed at 6.5 feet.	

REMARKS

Pit 30' x 7'
Municipal solid waste ends in the south end of the test pit and becomes thicker in the north end.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-34

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TEST PIT NUMBER TP-27

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1056.69 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, intermixed fine- to coarse-grained sand, wood waste, moist.	
5							
6.5							1050.2
						MUNICIPAL SOLID WASTE, metal cans, bottles, plastic, wood.	
9.0							1047.7
9.5				GW		**SANDY GRAVEL**, olive gray, fine to coarse gravel, rounded to well rounded, some fine- to coarse-grained sand, moist.	1047.2
						Test pit completed at 9.5 feet.	

REMARKS

Pit 30' x 7'
Municipal solid waste pinches out in the south end of the test pit and becomes thicker in the north end.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-35

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TEST PIT NUMBER TP-28

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 COMPLETED 1/27/09
GROUND ELEVATION 1057.58 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry to damp.	
1.0						1056.6	
						WOOD WASTE, logs (up to 18" in diameter) 3'-10' long, intermixed silty sand.	
5							0.2
7.5						1050.1	
						MUNICIPAL SOLID WASTE, plastic, metal, bags, piping, wire, concrete, moist.	
9.5						1048.1	
10				GW		**SANDY GRAVEL**, olive gray, fine to coarse gravel, cobbles, some fine- to coarse-grained sand, moist to wet.	
12.5						1045.1	
						Test pit completed at 12.5 feet.	

REMARKS

Pit 50' x 5'
Municipal solid waste near the south end of the test pit.

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-36

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TEST PIT NUMBER TP-29

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/27/09
GROUND ELEVATION 1061.49 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0						**WOOD WASTE**, with fine to coarse gravel, some fines, little fine- to coarse-grained sand, dry to moist.	
						2.0 / 1059.5	
				GM		**SILTY GRAVEL**, dark grayish brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, moist.	
						4.5 / 1057.0	
5						**MUNICIPAL SOLID WASTE** dark gray, plastic bags, paper, wood, and wire.	1
						5.5 / 1056.0	
						Test pit completed at 5.5 feet.	

REMARKS
Pit 10' x 5'

▽ Water level at time of excavation.

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Figure C-37

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TEST PIT NUMBER TP-30

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/27/09
GROUND ELEVATION 1062.24 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						WOOD WASTE.	1061.7
0.5							
				GM		**SILTY GRAVEL**, fine to coarse gravel, some fines, little fine- to coarse-grained sand, intermixed with wood waste.	
						@ 3.0 feet: Becomes brown.	
4.0							1058.2
5						**MUNICIPAL SOLID WASTE**, wire, plastic bags, concrete, and wood.	
7.0							1055.2
						Boring completed at 7.0 feet.	

REMARKS
Pit 35' x 5'

▽ Water level at time of excavation.

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Figure C-38

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TEST PIT NUMBER TP-31

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/27/09
GROUND ELEVATION 1063.25 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						SILTY GRAVEL, fine to coarse gravel, some fines, some wood waste.	
1.0							1062.3
				GM		**SILTY GRAVEL**, olive gray, fine to coarse gravel, some fines, little fine- to coarse-grained sand.	
3.5							1059.8
						MUNICIPAL SOLID WASTE, plastic, metal, wire, glass, bottles, and paper.	
5							
10							
13.0							1050.3
				SM		**SILTY SAND**, olive gray, fine- to medium-grained sand, some fines, loose, wet.	
14.5							1048.8
						Test pit completed at 14.5 feet.	

REMARKS
Pit 30' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-39

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TEST PIT NUMBER TP-32

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 **COMPLETED** 1/28/09
GROUND ELEVATION 1063.34 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				SP-SM		**GRAVELLY SAND**, fine- to medium-grained sand, some fine to coarse gravel, little fines, little wood waste, dry to damp.	
1.0							1062.3
				GW		**SANDY GRAVEL**, olive gray, fine to coarse gravel, well rounded, some cobbles, some fine- to coarse-grained sand.	
2.0							1061.3
				SM		**SILTY SAND**, light olive brown, fine sand, some fines, moist.	
5						5.0 to 6.5 feet: Grades to light olive gray.	
6.5							1056.8
						Test pit completed at 6.5 feet.	

REMARKS
Pit 30' x 5'

▽ Water level at time of excavation.

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Figure C-40

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TEST PIT NUMBER TP-33

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 **COMPLETED** 1/28/09
GROUND ELEVATION 1064.15 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
				GP-GM		**SILTY GRAVEL**, dark brown, fine to coarse gravel, some fines, little sand and cobbles, some wood waste. @ 0.5 foot: Becomes olive gray with some fine- to coarse-grained sand, little fines, little construction debris, moist.	
5						@ 4.5 feet: Becomes brown with some wood waste.	
						5.5	1058.7
		TCLP	TP-33			**MUNICIPAL SOLID WASTE**, plastic, paper, metal, cans, and bottles. (Bulk sample weighed in excavator bucket).	
						9.5	1054.7

Test pit completed at 9.5 feet.

REMARKS
Pit 45' x 5'

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/25/09

Figure C-41

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TEST PIT NUMBER TP-34

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1063.54 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
▽ AT TIME OF EXCAVATION 11.0 ft / Elev 1052.5 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, light brown, fine to coarse gravel, some fines, dense, dry to damp.	
						@ 0.5 foot: Becomes light olive gray, with little fine- to coarse-grained sand, medium-dense.	
2.5							1061.0
						MUNICIPAL SOLID WASTE, construction debris, concrete, and plastic, some gray silty sand.	
5							
10							
10.5							1053.0
				ML		**SANDY SILT**, dark olive gray, fine sand, wet. ▽	
11.5							1052.0
						Test pit completed at 11.5 feet.	

REMARKS
Pit 20' x 5'

▽ Water level at time of excavation.

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Figure C-42

SLR
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TEST PIT NUMBER TP-35

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1063.46 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
▽ AT TIME OF EXCAVATION 9.0 ft / Elev 1054.5 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, little wood waste. @ 0.5 foot: Becomes olive gray, with some cobbles, little wood and concrete, damp to moist.	
5					5.0		1058.5
						MUNICIPAL SOLID WASTE, construction debris, large rubble, asphalt, wire, plastic, 30% soil, moist.	
					8.5		1055.0
				SM	9.0 ▽	**SILTY SAND**, olive gray, fine-grained sand, wet, strong rotting odor.	1054.5
						Test pit completed at 9.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-43

SLR
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TEST PIT NUMBER TP-36

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1063.74 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, some fines, little fine- to coarse-grained sand, damp. @ 0.5 foot: Becomes olive gray, with some well-rounded cobbles and concrete, moist.	
3.0							1060.7
						WOOD WASTE, some gravel, moist.	
4.5							1059.2
5						**MUNICIPAL SOLID WASTE**, construction debris, large concrete rubble, ~30-40% soil by volume, moist. @ 7.5 feet: Waste becomes bottles, paper, plastic bags, concrete, rubble, ~30% soil. (Bulk sample weighed on scales)	
10							
11.0							1052.7
						Test pit completed at 11.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-44

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TEST PIT NUMBER TP-37

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 **COMPLETED** 1/28/09
GROUND ELEVATION 1064.40 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GP-GM		**SANDY GRAVEL**, dark gray, fine to coarse gravel, some fine- to coarse-grained sand, little fines, very dense, damp.	
						@ 1.5 feet: Geotextile fabric. Becomes dark olive gray, with well-rounded gravel and cobbles.	
						4.5	1059.9
5						**MUNICIPAL SOLID WASTE**, paper, plastic bags, wood, grass clippings, glass, and some silt.	
						(Bulk Sample 3,660 lbs gross)	
						7.0	1057.4
						Test pit completed at 7.0 feet.	

REMARKS

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 4/13/09

Figure C-45

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Fax: 425.402.8488

TEST PIT NUMBER TP-38

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 **COMPLETED** 1/28/09
GROUND ELEVATION 1063.92 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, dark grayish-brown, fine to coarse gravel, few cobbles, some fines, little sand, moist. @ 1.0 foot: Geotextile fabric.	
2.5							1061.4
						MUNICIPAL SOLID WASTE, paper, cardboard, plastic bags, plastic sheeting, tires, cans, glass, wood, and some soil.	
5							
6.5							1057.4
						Test pit completed at 6.5 feet.	

REMARKS
Pit 15' x 3'

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/25/09

Figure C-46

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TEST PIT NUMBER TP-39

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1064.62 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, dark brownish gray, fine to coarse gravel with cobbles, some fines, little sand, moist, little wood waste.	
						@ 1.0 foot: Geotextile fabric.	
2.5							1062.1
						WOOD WASTE, brown, fine bark.	1061.6
3.0				GM		**SILTY GRAVEL**, dark brownish gray, fine to coarse gravel with cobbles, some fines, little sand, moist, little wood waste.	
4.0							1060.6
5						**MUNICIPAL SOLID WASTE**, wood, plastic, metal cans, wire, and paper.	
8.0							1056.6

Test pit completed at 8.0 feet.

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-47

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TEST PIT NUMBER TP-40

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 **COMPLETED** 1/28/09
GROUND ELEVATION 1064.41 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, bark and chips, shredded wood pieces, pole wood on surface, burried logs to 2.5'.	
						1.5	1062.9
				GM		**SILTY GRAVEL**, gray, fine to coarse gravel, few cobbles, some fines, little sand, moist.	
						2.0	1062.4
						MUNICIPAL SOLID WASTE.	
						2.5	1061.9
				GM		**SILTY GRAVEL**, dark gray, fine to coarse gravel, some fines, little sand.	
						3.5	1060.9
5						**MUNICIPAL SOLID WASTE**, plastic, paper, metal, wood.	
						6.0	1058.4

Test pit completed at 6.0 feet.

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-48

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-41

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1065.59 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0				GM		**SILTY GRAVEL**, light gray to gray, fine to coarse gravel, some fines, little sand, moist.	
						2.0	1063.6
						WOOD WASTE, reddish brown, shredded bark, soil layers (3" to 6" thick), pungent odor, some small logs.	
5							
						8.0	1057.6
				GM		**SILTY GRAVEL**, dark gray, fine to coarse gravel, some fines, little sand, moist.	
10						10.0	1055.6
						WOOD WASTE, logs, some chips and silty sand.	
15							

REMARKS

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-49 (Page 1 of 2)

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-41

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
15							
						WOOD WASTE, logs, some chips and silty sand. *(continued)*	
						16.0	1049.6
						Test pit completed at 16 feet.	

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-49 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-42

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION 1062.27 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, brown, silt, sand, gravel, fine bark and wood chips.	
2.0							1060.3
				GM		**SILTY GRAVEL**, gray, fine to coarse gravel, some cobbles, some fines, little sand, moist.	
3.0							1059.3
						WOOD WASTE, brown, compact, silty sand, gravel, moist, ~20% soil by volume.	
5						@ 6.0 feet: Becomes reddish brown to yellowish brown, bark chips, trunk wood, scattered buried logs.	
10							
15							
15.0							1047.3
						Test pit completed at 15.0 feet.	

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-50

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-43

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/28/09 COMPLETED 1/28/09
GROUND ELEVATION ___ HOLE SIZE ___
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Thurber CHECKED BY ___
AT END OF ---
NOTES ___
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, dark brown, fine to coarse gravel, fines, sand, moist, (~20% soil by volume).
9.5				GM		**SILTY GRAVEL**, gray, fine to coarse gravel, abundant cobbles, some fines, little sand, moist.
11.0						**WOOD WASTE**, brown, silt, sand, gravell, chips, shredded wood, logs.

REMARKS

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-51 (Page 1 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-43

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
15						**WOOD WASTE**, brown, silt, sand, gravell, chips, shredded wood, logs. *(continued)*
						19.0
						Test pit completed at 19.0 feet.

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-51 (Page 2 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-44

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/29/09 COMPLETED 1/29/09
GROUND ELEVATION 1063.75 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
▽ AT TIME OF EXCAVATION 7.0 ft / Elev 1056.8 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						0.2 **ASPHALT.**	1063.6
				GM		**SILTY GRAVEL**, brown, fine to coarse gravel, well-rounded, some fines, little fine- to coarse-grained sand.	
						2.5	1061.3
				GW		**SANDY GRAVEL**, olive gray, fine to coarse gravel, some fine to coarse sand, little fines, moist.	
						4.5	1059.3
5						**WOOD WASTE**, bark chips, moist to wet. ▽	
						7.5	1056.3
						Test pit completed at 7.5 feet.	

REMARKS

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-52

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-45

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 1/27/09 **COMPLETED** 1/29/09
GROUND ELEVATION 1066.08 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						0.3 **ASPHALT.**	1065.8
				GP		**ROAD BASE**, 3/4" crushed rock	
						1.0	1065.1
				GM		**SILTY GRAVEL**, olive gray, fine to coarse gravel, rounded to well-rounded, few cobbles, some fines, little fine- to coarse-grained sand, few metal pieces, moist.	
5							
						6.0	1060.1

Test pit completed at 6.0 feet.

REMARKS
Pit 20' x 10'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-53

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-46

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.76 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						WOOD WASTE.
5						
10						
15						

REMARKS
Pit 30' x 5'

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-54 (Page 1 of 2)

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

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Fax: 425.402.8488

TEST PIT NUMBER TP-46

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
15						**WOOD WASTE.** *(continued)*	
						18.0	1051.8
				GW		**SANDY GRAVEL**, gray, fine to coarse, some fine- to coarse-grained sand, moist.	
						19.5	1050.3
						Test pit completed at 19.5 feet.	

REMARKS

Pit 30' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-54 (Page 2 of 2)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-47

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 **COMPLETED** 2/11/09
GROUND ELEVATION 1069.84 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, fine, bark mulch, damp.
5						
10						@ 9.0 feet: Becomes coarse, logs, branches, and bark, damp.
15						

REMARKS
Pit 27' x 5'

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-55 (Page 1 of 2)

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-47

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
20						**WOOD WASTE**, fine, bark mulch, damp. *(continued)*	
23.0							1046.8
				GW		**SANDY GRAVEL**, brown, fine to coarse gravel, some fine- to coarse-grained sand, moist.	
24.0							1045.8
						Test pit completed at 24.0 feet.	

REMARKS

Pit 27' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-55 (Page 2 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-48

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.66 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, wood chips, some bark, damp.
5						
10						
15						

REMARKS
Pit 27' x 5'

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-56 (Page 1 of 2)

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-48

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
15						**WOOD WASTE**, wood chips, some bark, damp. *(continued)*	
20							
							1048.7
				GW		**SANDY GRAVEL**, gray, fine to coarse gravel, some fine- to coarse-grained sand, moist.	1048.2
					21.5	Test pit completed at 21.5 feet.	

REMARKS

Pit 27' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-56 (Page 2 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-49

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.44 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, fine, bark and sawdust, damp.
5						@ 6.0 feet: Becomes coarse, logs, branches, bark, damp.
10						
15						

REMARKS
Pit 26' x 5'

▽ Water level at time of excavation.

(Continued Next Page)

Figure C-57 (Page 1 of 2)

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-49

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
20						**WOOD WASTE**, fine, bark and sawdust, damp. *(continued)*	
							1044.9
25				SP		24.5 **GRAVELLY SAND**, gray, fine- to coarse-grained sand, fine to coarse gravel, moist. 25.0	1044.4
						Test pit completed at 25.0 feet.	

REMARKS

Pit 26' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-57 (Page 2 of 2)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-50

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.10 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, bark and sawdust, damp.	
7.0							1062.1
				GP		**CRUSHED ROCK.**	
8.0							1061.1
						WOOD WASTE, coarse, logs, branches, and bark, damp.	
14.0							1055.1
						Test pit completed at 14.0 feet.	

REMARKS
Pit 18' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-58

SLR
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22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-51

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1062.58 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, bark and sawdust, damp.	
5							
				GM		5.0 **SILTY GRAVEL**, gray, coarse gravel, moist.	1057.6
						6.0 **MUNICIPAL SOLID WASTE**, plastic, metal, glass, paper, yard waste, moist.	1056.6
10							
						12.5	1050.1
						Test pit completed at 12.5 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-59

SLR
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22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-52

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1064.43 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0							
						WOOD WASTE, fine, bark, damp.	
						4.0	1060.4
				GM		**SILTY GRAVEL**, gray, medium to coarse, moist.	
5						5.0	1059.4
						MUNICIPAL SOLID WASTE, silty gravel, metal, glass, paper, 50% solid waste by volume.	
10						10.0	1054.4
						Test pit completed at 10.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/25/09

Figure C-60

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-53

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1066.08 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	GRAPHIC LOG	MATERIAL DESCRIPTION
0					**WOOD WASTE**, fine, bark and sawdust, moist.
5					
6.0					1060.1
					Test pit completed at 6.0 feet.

REMARKS

Pit 75' x 5'
Municipal solid waste was present from 4.0 to 6.0 feet in the southern 60' of the test pit, but not present in the northern end.

▽ Water level at time of excavation.

Figure C-61

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-54

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1070.81 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, bark and sawdust, damp.	
7.0							1063.8
				GP		**CRUSHED ROCK.**	
8.0							1062.8
						WOOD WASTE, coarse, logs and branches, damp.	
12.0							1058.8
						Test pit completed at 12.0 feet.	

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-62

SLR
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Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-55

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.59 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, bark and sawdust, damp.	
6.0							1063.6
				SM		**SILTY SAND**, some crushed rock, moist.	
7.0							1062.6
						WOOD WASTE, coarse, logs, branches and bark, damp.	
13.0							1056.6
						Test pit completed at 13.0 feet.	

REMARKS
Pit 16' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-63

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-56

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1069.22 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						**WOOD WASTE**, fine, bark and sawdust, damp.
5						
6.0						@ 6.0 feet: Geotextile fabric. 1063.2
				GP		**SANDY GRAVEL**, gray, some crushed rock and cobbles, little municipal solid waste (edge of waste), moist.
10						
11.0						1058.2
						Test pit completed at 11.0 feet.

REMARKS
Pit 13' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-64

SLR
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Fax: 425.402.8488

TEST PIT NUMBER TP-57

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1062.81 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	GRAPHIC LOG	MATERIAL DESCRIPTION
0					**WOOD WASTE**, fine, bark and sawdust, damp.
5					
					@ 8.0 feet: Becomes coarse, logs, branches and stumps, damp.
10					
13.0					1049.8
					Test pit completed at 13.0 feet.

REMARKS
Pit 16' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-65

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-58

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 COMPLETED 2/12/09
GROUND ELEVATION 1060.54 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	GRAPHIC LOG	MATERIAL DESCRIPTION
0					**WOOD WASTE**, fine, bark mulch, damp.
10					@ 10.0 feet: Becomes coarse, logs, branches, little scrap metal, damp.

REMARKS
Pit 22' x 5'

▽ Water level at time of excavation.

(Continued Next Page)

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-66 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-58

CLIENT City of Yakima **PROJECT NAME** City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	GRAPHIC LOG	MATERIAL DESCRIPTION	
15					**WOOD WASTE**, fine, bark mulch, damp. *(continued)*	
					17.0	1043.5
					Test pit completed at 17.0 feet.	

REMARKS

Pit 22' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-66 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-59

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 COMPLETED 2/12/09
GROUND ELEVATION 1065.63 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, wood chips and bark, damp.	
						4.0	1061.6
5				GM		**SILTY GRAVEL**, gray, coarse, some fines, moist.	
						6.0	1059.6

Test pit completed at 6.0 feet.

REMARKS

Pit 30' x 5'
Municipal solid waste present from 4.0 to 6.0 feet in the western half of the test pit, but not present in the eastern half.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/25/09

Figure C-67

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-60

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 COMPLETED 2/12/09
GROUND ELEVATION 1071.78 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, damp.	
9.0							1062.8
				GP		**SANDY GRAVEL**, gray, coarse, some fine- to coarse-grained sand, little municipal solid waste, moist.	
10.0							1061.8
						WOOD WASTE, coarse, bark, some cobbles and sand, moist.	
12.0							1059.8
						Test pit completed at 12.0 feet.	

REMARKS
Pit 18' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-68

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-61

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 COMPLETED 2/12/09
GROUND ELEVATION 1067.55 ft HOLE SIZE
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
0						**WOOD WASTE**, fine, bark and sawdust, damp.	
6.0							1061.6
				GM		**SILTY GRAVEL**, gray, medium to coarse, some fines, moist.	
8.0							1059.6
						MUNICIPAL SOLID WASTE, plastic, paper, glass, soil, moist, strong odor.	
12.5							1055.1
						Test pit completed at 12.5 feet.	

REMARKS
Pit 16' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-69

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-62

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/19 **COMPLETED** 2/12/09
GROUND ELEVATION 1065.44 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	GRAPHIC LOG	MATERIAL DESCRIPTION
0					**WOOD WASTE**, fine, bark, sawdust and mulch, damp.
5					@ 7.0 feet: Becomes coarse, logs, branches and bark, damp.
10					
12.0					1053.4
					Test pit completed at 12.0 feet.

REMARKS
Pit 13' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-70

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

TEST PIT NUMBER TP-63

CLIENT City of Yakima
PROJECT NAME City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 **COMPLETED** 2/12/09
GROUND ELEVATION 1065.00 ft **HOLE SIZE**
EXCAVATION DRILLING CONTRACTOR Wyser Construction
GROUND WATER LEVELS:
EXCAVATION DRILLING METHOD Excavator
AT TIME OF EXCAVATION Dry
LOGGED BY M. Staton **CHECKED BY**
AT END OF ---
NOTES
AFTER EXCAVATION ---

DEPTH (ft)	INTERVAL	TYPE	NAME	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0						
						ASPHALT. 1064.5
0.5						**GRAVELLY SAND**, dark brown to gray, fine- to coarse-grained, some fine to coarse gravel, few cobbles, moist, few wood debris and metal debris.
5				SP		
10						
11.0						@ 11.0 feet: Becomes moist. 1054.0 Test pit completed at 11.0 feet.

REMARKS
Pit 15' x 5'

▽ Water level at time of excavation.

SLR GENERAL YAKIMA.GPJ GINT US.GDT 3/18/09

Figure C-71

MSW-TP-1

Exploration No. 1

Date 10/27/17 Hour 0930

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 1148008.010

Client/owner City of Yakima Exploration Operator _____

Logged by SDJ Exploration Completed 10/27/17

Ground Surface Conditions flat, wood chips

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

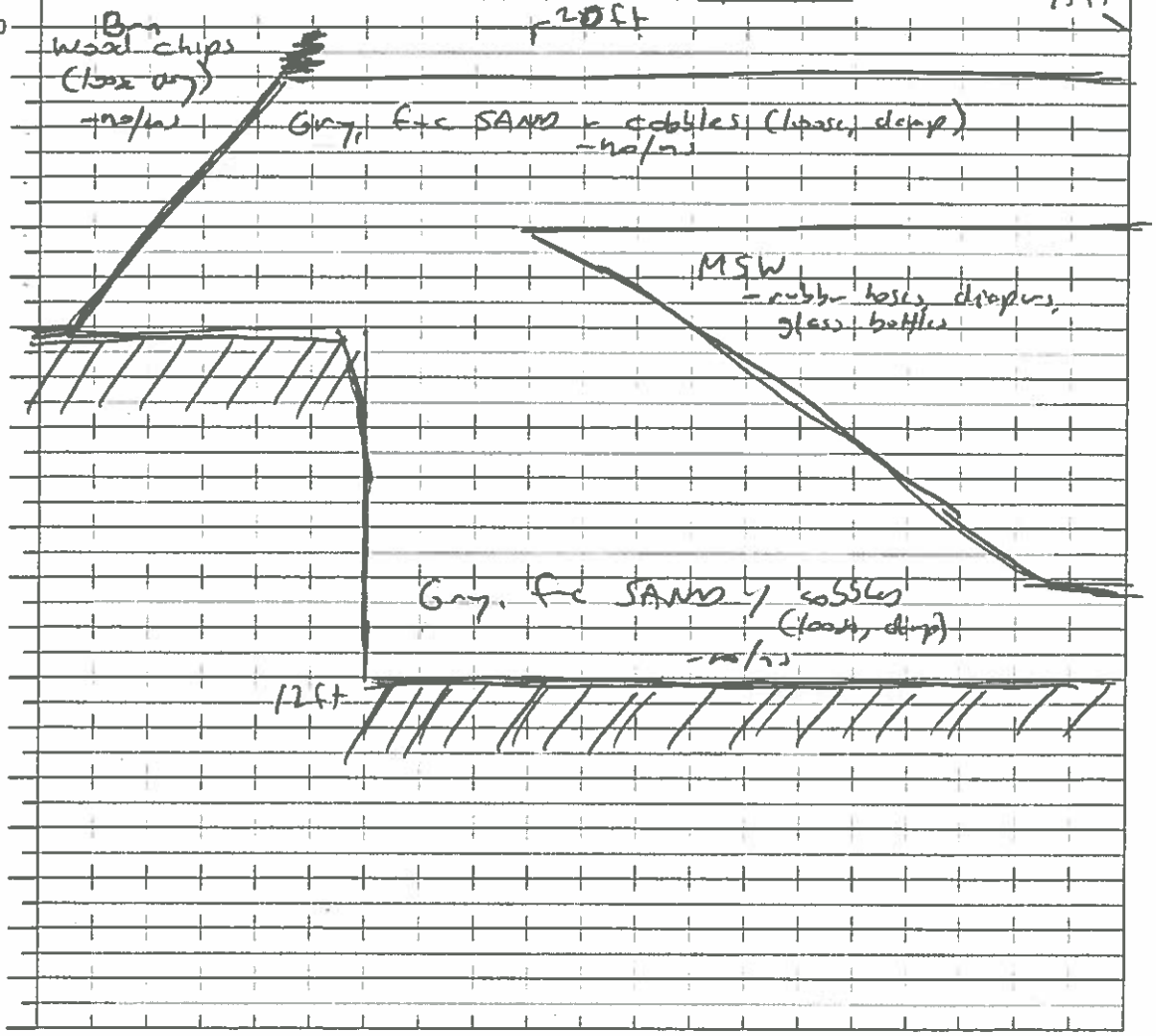
Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)
			0.0		0
				WP	
			0.1		
					6

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)

N S

Length of Test Pit (ft.) (View Direction) 45 ft E



Total Depth 12 ft Finish Date 10/27/17 Hour 1000

Comments/Field Notes: _____

Figure C-72

MSW-TP-2

Exploration No. 2

Date 10/27/17 Hour 1030

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yelk Landfill Project No. 1148008.070

Client/owner City of Yelk Exploration Operator _____

Logged by SNS Exploration Completed 10/27/17

Ground Surface Conditions flat, wood chips

Weather Conditions cloudy, ~45°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: (none) slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)
			0.0	WD	0
				SP	
			0.0		

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

N — 100 ft Length of Test Pit (ft.) (View Direction) E — 80 ft — 100 — S

Brn wood chips (loose, damp) ~20%

Gry, f-c SAND w/ cobbles (loose, damp) ~20%

MSW - construction debris, treated lumber

8.5 ft

Total Depth 8.5 ft Finish Date 10/27/17 Hour 1100

Comments/Field Notes: _____

Figure C-73

MSW-TP-3

Exploration No. 3

Date 10/27/17 Hour 1315

LANDAU ASSOCIATES

Log of Test Pit

Project Name York Landfill Project No. 1148008.010

Client/owner C. of York Exploration Operator

Logged by SDJ Exploration Completed 10/27/17

Ground Surface Conditions flat, wood chips

Weather Conditions

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ feet

Coordinates: (East) "x" (North) "y" Method

Elevations Datum

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)	Sample Description Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
					0	45 ft Length of Test Pit (ft.) (View Direction) East 35 ft 45 Base wood chips (loose, dry) -00/15
			0.0	WD		
						GRAVEL f-c SAND w/ cobbles (loose, dry) -00/15
				SP		MSW - Construction debris, rebar, plastic
			0.0			
						8 ft

Total Depth 8 ft Finish Date 10/27/17 Hour 1315

Comments/Field Notes:

Figure C-74

MSW-TP-4

Exploration No. 4

Date 10/27/14 Hour 1415

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yak. Landfill Project No. 114808.010

Client/owner C. of Yak Exploration Operator

Logged by SDS Exploration Completed 10/27/14

Ground Surface Conditions flat, wood chips

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ feet

Coordinates: (East) "x" (North) "y" Method

Elevations Datum

Length of Test Pit (ft.) (View Direction) EAST

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data)	USCS Symbol	Depth Scale (ft)	Sample Description: Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
			0.0	WP	0	Wood chips (loose, dry) ~10/12
				SP		Gry f-C SAND w/ cobbles (loose, dry) ~10/12
			0.0			

N

S

55 ft

85 ft

MSW - construction debris, concrete, rebar, shrimps, plastic

8 ft

Total Depth 8 ft Finish Date 10/27/14 Hour 1500

Comments/Field Notes:

Figure C-75

MSW-TP-5

Exploration No. 5

Date 10/28/17 Hour 730

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yelm Landfill Project No. 1148028.30

Client/owner City of Yelm Exploration Operator _____

Logged by SDJ Exploration Completed 10/28/17

Ground Surface Conditions flat, wood chips

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data)	USCS Symbol	Depth Scale (ft)
				WD	0
				SP	

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

N

1

70 ft Length of Test Pit (ft.) (View Direction) EAST

50 ft

70 ft

Wood chips (loose, dry)

Gry f-c SAND & cobbles (loose, dry) to 7ft

MSW - plastic bottles, Ropes, rubber gloves

7ft

5

Total Depth 7 ft Finish Date 10/28/17 Hour 0800

Comments/Field Notes: _____

Figure C-76

MSW - TP-6

Exploration No. 6

Date 10/28/17 Hour 0830

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 148008.010

Client/owner City of Yakima Exploration Operator _____

Logged by SDS Exploration Completed 10/28/17

Ground Surface Conditions flat, wood chips

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data)	USCS Symbol	Depth Scale (ft)
				WD	0
				SP	

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

W E

Length of Test Pit (ft.) 20 ft (View Direction) NORTH

12 ft

Wood chips (loose, dry)

Gry, f-c SAND & cobbles (loose, damp) — no/22

MSW — plastic, paper, metal, strapping, rubble

6 ft

8 ft

Total Depth 8 ft Finish Date 10/28/17 Hour 0900

Comments/Field Notes: _____

Figure C-77

MSL - TP-8

Exploration No. 8

Date 10/28/17 Hour 1030

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 1178 028.01

Client/owner City of Yakima Exploration Operator

Logged by SDJ Exploration Completed 10/28/17

Ground Surface Conditions flat, gravel

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ feet

Coordinates (East) "x" (North) "y" Method

Elevations Datum

Length of Test Pit (ft.) (View Direction) South

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)	Sample Description: Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
			0.0	SM	0	E — Brn, silty f-m SAND w/ cobbles (loose, d-) — W; 20ft
						MSW — plastic, paper, rubber, clothing
			6.0			
						6ft

Total Depth 6ft Finish Date 10/28/17 Hour ~~1100~~ 1030

Comments/Field Notes:

Figure C-78

MSW-TP-9

Exploration No. 9

Date 10/28/17 Hour 1030

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 148008.010

Client/owner City of Yakima Exploration Operator

Logged by SDS Exploration Completed 10/28/17

Ground Surface Conditions flat, gravel

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ feet

Coordinates: (East) "x" (North) "y" Method

Elevations Datum

Length of Test Pit (ft.) (View Direction) SOUTH

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)	Sample Description: Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
			0.0		0	Brn, f-c SAND, ~1 cobbles (loose, dry) ~10/12
			0.0			Gry COBBLES w/ sand (loose, dry) ~10/12
						MSW plastic, bottles, paper
						8.5 ft

15 ft

35

Total Depth 8.5 ft Finish Date 10/28/17 Hour ~~1120~~ 1100

Comments/Field Notes:

Figure C-79

MSW-TP-10

Exploration No. ~~TP-10~~

Date 10/18/17 Hour 1100

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 117808.010

Client/owner City of Yakima Exploration Operator _____

Logged by SDS Exploration Completed 10/18/17

Ground Surface Conditions flat, gravel

Weather Conditions cloudy, ~40°s

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: (none) slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol
			0.2	
			0.0	

Depth Scale (ft)

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)

Length of Test Pit (ft.) (View Direction) N

0

~18 ft

25

Dry, f-m SAND w/ cobbles (loamy dry) - wood

MSW - rubber, plastic, glass

@ 10 ft

Total Depth 10 Finish Date 10/18/17 Hour 1130

Comments/Field Notes: _____

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Figure C-80

MSL-TP-11

Exploration No. 11

Date 10/28/17 Hour 1130

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 1148005.010

Client/owner City of Yakima Exploration Operator _____

Logged by SMJ Exploration Completed 10/28/17

Ground Surface Conditions flat, gravel

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)
			0.0		0
			0.0		

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

Length of Test Pit (ft.) 10 ft (View Direction) N

25

Brn, f-c SAND w/ cobbles (loose, dry)

MSW

slight plastic pop

@ 10 ft

Total Depth 10 Finish Date 10/28/17 Hour 1200

Comments/Field Notes: _____

Figure C-81

MSW-TP-12

Exploration No. 12

Date 10/28/14 Hour 1200

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 114800.030

Client/owner City of Yakima Exploration Operator _____

Logged by SDJ Exploration Completed 10/28/14

Ground Surface Conditions flat, grass

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Length of Test Pit (ft.) _____ (View Direction) N

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)	Sample Description Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
			0.0		0	MSW plastic, glass, paper
			0.0			Dark, f-m SAND, some gravel, (loose/dry) ~60 ft/s
						@ 10 ft

Total Depth 10 Finish Date 10/28/14 Hour 1300

Comments/Field Notes: _____

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Figure C-82

MSW-TP-13

Exploration No. 13

Date 12/4/14 Hour 1300

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Mill Project No. 1148008.010

Client/owner City of Yakima Exploration Operator _____

Logged by SDS Exploration Completed 10/28/14

Ground Surface Conditions sloped, gravel

Weather Conditions clear, ~40°

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)
			0.0		0
			0.0		

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

Length of Test Pit (ft.) 20 (View Direction) N 22

Brn, f-m SAND w/ odds (100s, dry) -10/14

Gry, f-m SAND (loose, dry) -10/14

MSW paper, plastic,

@ 12 ft

Total Depth 17 Finish Date 10/28/14 Hour 1330

Comments/Field Notes: _____

Figure C-83

MSW-TP-17

Exploration No. 17

Date 10/28/17 Hour 1332

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Mill Project No. 1178008.012

Client/owner City of Yakima Exploration Operator _____

Logged by SDS Exploration Completed 10/28/17

Ground Surface Conditions sloped, grass

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data) PID	USCS Symbol	Depth Scale (ft)	Sample Description: Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components (density/consistency, moisture)(geologic unit)
					0	Length of Test Pit (ft.) (View Direction) N — 20 ft — 30
			0.0			Brn, f-m SAND w/ cobbles (loose, dry) — no/no
			0.0			Gry, f-m SAND w/ gravel — loose, dry — no/no
						MSW slight petr odor
						Gry GRAVEL w/ f-m SAND — loose, dry — no/no
						@ 13 ft

Total Depth 13 Finish Date 10/28/17 Hour 1350

Comments/Field Notes: _____

Figure C-84

MSL-TP-15

Exploration No. 15

Date 10/12/17 Hour 1350

LANDAU ASSOCIATES

Log of Test Pit

Project Name Yakima Landfill Project No. 114500.010

Client/owner City of Yakima Exploration Operator _____

Logged by SDJ Exploration Completed 10/12/17

Ground Surface Conditions sloped, grass

Weather Conditions cloudy, ~40°F

Location Sketch (show dimensions to mapped features) — North Arrow

Groundwater seepage: none slow moderate rapid @ _____ feet

Coordinates: (East) "x" _____ (North) "y" _____ Method _____

Elevations _____ Datum _____

Sample Depth (top) (ft.)	Sample Length (ft.)	Sample Number	(Other Test Data)	USCS Symbol	Depth Scale (ft)
			0.0		0
			0.0		

Sample Description
Color, secondary soil type, PRIMARY SOIL TYPE with modifiers and minor components
(density/consistency, moisture)(geologic unit)

Length of Test Pit (ft.) (View Direction) N

30

Brn, fine SAND w/ some silt (loose, dry)

~0/12

MSW plastic, paper, brush, sticks

Gry, fine SAND (loose, dry)

~0/12

1 1 1 1 1 1 1 1 1 1 1 1 1 @ 10ft

Total Depth 10 Finish Date 10/12/17 Hour 1440

Comments/Field Notes: _____

Figure C-85

APPENDIX D

Landfill Gas/Soil Vapor Probe Logs

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** GP-1

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 25, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 15.0

COORDINATES **INITIAL WATER LEVEL** ▽

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			WOOD DEBRIS fill, grayish brown, bark with silt, dry, loose	0	
					5			SILTY SAND (SM) with cobbles and wood debris fill, dark gray, fine- to medium-grained sand, moist (capillary saturation), medium dense	5	
								SANDY SILT (ML) fill, dark gray, medium plasticity, fine-grained micaceous sand, wet, medium stiff		
								WOOD DEBRIS fill, red, possible pond settle out, pinches out to the north		
			GP		10			SILTY SAND COBBLES (GP), dark gray, fine- to medium-grained sand, trace fine subrounded gravel, moist, dense	10	
					15			Bottom of boring @ 15 feet Boring converted to 3/4" gas probe	15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure D-1

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** GP-2

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** February 26, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 9.0

COORDINATES **INITIAL WATER LEVEL** ▽ 9.0

DRILLING METHOD Backhoe **STATIC WATER LEVEL** ▼ 8.5

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
								SILTY GRAVELLY SAND (SW) fill, very dark gray, fine- to coarse-grained sand, damp, medium dense		
								GRAVELLY SAND (SW) fill, very dark gray, fine- to coarse-grained sand, fine to coarse subrounded gravel to subrounded cobbles, moist, medium dense @ 3 feet: Hit Cable Line @ 4.5 feet: Concrete debris and brick		
					5				5	
								@ 8.5 feet: Wet ▼ Bottom of boring @ 9 feet Boring converted to 3/4" gas probe		
					10				10	
					15				15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure D-2

Parametrix, Inc.

BORING/WELL CONSTRUCTION LOG

PROJECT NUMBER 555-5753-001 **BORING/WELL NUMBER** GP-3

PROJECT NAME Former Boise Cascade Mill Site **DATE COMPLETED** March 3, 2008

LOCATION Yakima, WA **TOTAL DEPTH OF BORING** 15.0

COORDINATES **INITIAL WATER LEVEL** ▽ 12.0

DRILLING METHOD Sonic **STATIC WATER LEVEL** ▼

SAMPLING METHOD **LOGGED BY** Deutsch/Saul

GROUND ELEVATION **TOP OF CASING ELEVATION**

PID (ppm)	BLOW COUNTS	RECOVERY (inches)	SAMPLE ID.	EXTENT	DEPTH (ft.)	U.S.C.S.	GRAPHIC LOG	GEOLOGIC DESCRIPTION	DEPTH (ft.)	WELL DIAGRAM
					0			ASPHALT	0	
						GW		SILTY SANDY GRAVEL (GW), dark gray, 40% fine to coarse gravel, 35% fine- to coarse-grained sand, 25% silt, damp, dense		
					5	SM		SILTY SAND (SM), dark gray, fine- to coarse-grained sand, moist, dense	5	
			GRAB GP-3-12	G	10				10 ▽	
					15			Bottom of boring @ 15 feet Boring converted to 3/4" gas probe	15	
					20				20	
					25				25	
					30				30	
					35				35	

BWC YAKIMA RESOURCES LOGS.GPJ 6/5/08

Figure D-3

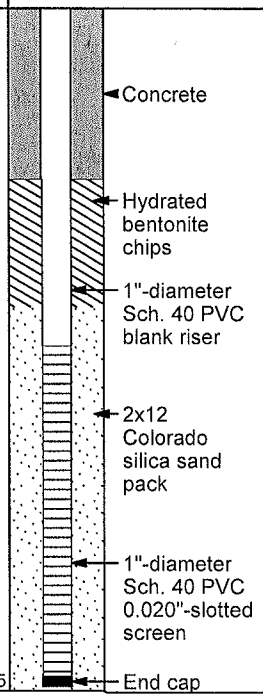
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-4

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/17/09 **COMPLETED** 2/17/09
GROUND ELEVATION 1063.52 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.5 ft / Elev 1056.0 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY GRAVEL**, dark gray, fine to coarse, some fines, little sand, rounded, moist, some wood waste.
2.5								2.0 to 8.0 feet: No wood waste.
5.0						GM		
	X	D&M		15	21			5.0 to 8.0 feet: Little fine- to coarse-grained medium-dense sand.
7.5	X	D&M		0	13			▽ @ 7.5 feet: Becomes wet.
							8.0	Boring completed at 8.0 feet.

PROBE DIAGRAM



SOIL VAPOR PROBE COMPLETION DETAILS:

+3.3 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 4 feet: 1"-diameter Sch. 40 PVC blank riser.
4 to 7.8 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
7.8 to 7.9 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 3.5 feet: Hydrated bentonite chips.
3.5 to 8 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-4

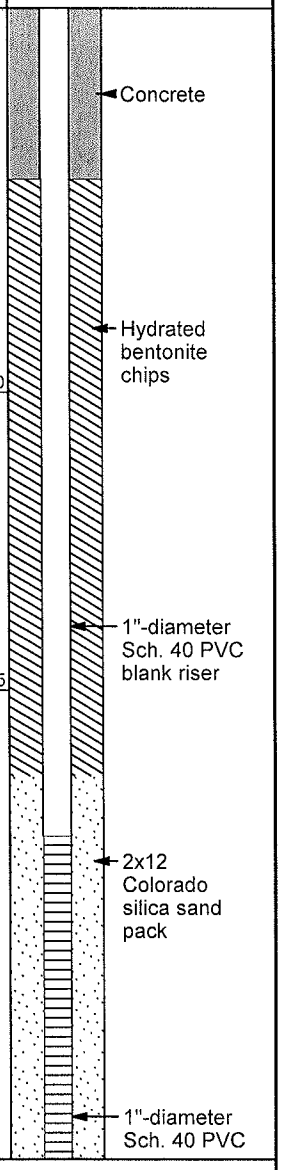
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-5

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/17/09 COMPLETED 2/17/09
GROUND ELEVATION 1063.51 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 17.0 ft / Elev 1046.5 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY SAND**, dark brown, some silt, little fine to medium well-rounded gravel, moist, organic, wood waste.
2.5						SM		
	X	D&M		60	21			@ 3.0 feet: Becomes light olive brown, fine-grained, medium-dense sand, no gravel.
								4.5 1059.0
5.0								**SANDY SILT**, olive gray, some fine-grained sand, trace organics, 1/2" lenses of brown organics, stiff.
	X	D&M	GP5-S1	100	11	ML		
7.5								@ 7.0 feet: Becomes moist to wet and grades to SILTY SAND.
	X	D&M	GP5-S2	80	39			8.0 1055.5 **SANDY GRAVEL**, olive gray, fine to coarse, rounded to well-rounded, some medium- to coarse-grained sand, dense, damp.
10.0								
	X	D&M	GP5-S3	45	53	GW		
12.5								@ 12.5 feet: Broken cobble in sampler, no recovery.
	X	D&M		20	50/6"			

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

(Continued Next Page)

Figure D-5 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-5

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
						GW		**SANDY GRAVEL**, olive gray, fine to coarse, rounded to well-rounded, some medium- to coarse-grained sand, dense, damp. *(continued)*	0.020"-slotted screen
								14.5 1049.0	End cap
15.0						SP		**SAND**, olive gray, medium-grained, trace coarse-grained sand, trace fine gravel, loose, moist.	
		D&M	GP5-S4	90	11			16.0 1047.5	
						GW		**SANDY GRAVEL**, light olive brown, fine to coarse, well-rounded, some fine- to coarse-grained sand, very dense, moist.	
17.5								▽ @ 17.0 feet: Becomes wet.	
		D&M		90	50/6"			@ 17.5 feet: Broken cobble in sampler, no recovery.	
								18.0 1045.5	

Boring completed at 18.0 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+3.1 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 9.7 feet: 1"-diameter Sch. 40 PVC blank riser.
9.7 to 14.2 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
14.2 to 14.5 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 9 feet: Hydrated bentonite chips.
9 to 18 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-5 (Page 2 of 2)

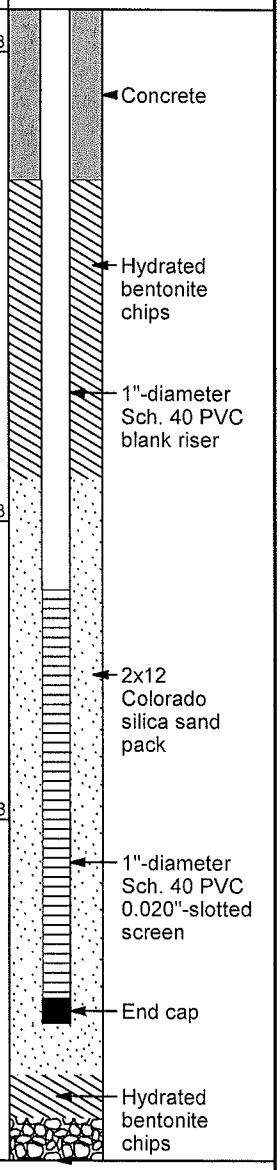
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-6

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 COMPLETED 2/18/09
GROUND ELEVATION 1058.30 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 13.0 ft / Elev 1045.3 ft
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE.** 0.5 / 1057.8
		D&M	GP6-S1	33	6			**SAND**, brown, fine-grained, little fine gravel, loose, damp.
2.5		D&M	GP6-S2	33	9			
		D&M	GP6-S3	25	6	SP		
5.0		D&M	GP6-S4	33	11			@ 4.5 feet: Gravel becomes fine to medium, few cobbles up to 2"-diameter.
								6.0 / 1052.3
		D&M	GP6-S5	70	7			**SILTY SAND**, dark brown, fine-grained, moist, loose, some wood.
7.5		D&M	GP6-S6	100	8	SM		
								9.5 / 1048.8
10.0		D&M	GP6-S7	100	31			**SAND**, gray, fine-grained, medium-dense, moist.
		D&M	GP6-S8	50	37	SP		@ 11.0 feet: Becomes medium- to coarse-grained sand, some fine to coarse gravel, few cobbles up to 3"-diameter.
12.5								▽ @ 13.0 feet: Becomes wet, broken cobble in sampler,

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

(Continued Next Page)

Figure D-6 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-6

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
						SP		no recovery.	Native slough
14.0								**SAND**, gray, fine-grained, medium-dense, moist. *(continued)* 1044.3	
								Boring completed at 14.0 feet.	

SOIL VAPOR PROBE COMPLETION DETAILS:

+3.1 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 6.8 feet: 1"-diameter Sch. 40 PVC blank riser.
6.8 to 11.6 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
11.6 to 11.9 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 5.5 feet: Hydrated bentonite chips.
5.5 to 12.5 feet: 2x12 Colorado silica sand.
12.5 to 13 feet: Hydrated bentonite chips.
13 to 14 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-6 (Page 2 of 2)

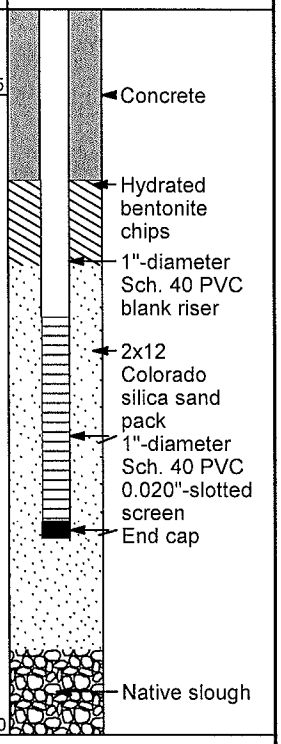
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-7

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/18/09 **COMPLETED** 2/18/09
GROUND ELEVATION 1045.54 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 7.0 ft / Elev 1038.5 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, dark brown, little medium to coarse rounded gravel, moist.
1.0								1044.5
								SANDY GRAVEL, brown, fine to coarse, some fine- to coarse-grained sand, little silt, very dense, moist.
2.5	X	D&M	GP7-S1	50	50/6"			
5.0	X	D&M		50	50/2"	GW		
7.5	X	D&M		60	50/6"			▽ @ 6.5 feet: Becomes olive gray. @ 7.0 feet: Becomes wet. @ 7.5 feet: Orange-brown staining, trace silt, broken cobble in sampler.
8.5								1037.0

PROBE DIAGRAM



Boring completed at 8.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+3 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 3.6 feet: 1"-diameter Sch. 40 PVC blank riser.
3.6 to 6 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
6 to 6.2 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 3 feet: Hydrated bentonite chips.
3 to 7.5 feet: 2x12 Colorado silica sand.
7.5 to 8.5 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-7

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

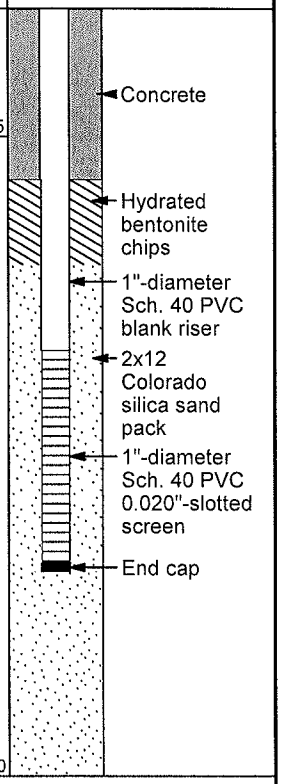
PROBE NUMBER GP-8

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/18/09 COMPLETED 2/18/09
GROUND ELEVATION 1046.98 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 8.1 ft / Elev 1038.9 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, little medium to coarse gravel, dry to moist.
1.5								1045.5
2.5								**SANDY GRAVEL**, brown, fine to coarse, some fine- to coarse-grained sand, few fines, medium-dense, moist.
	X	D&M	GP8-S1	66	37			
5.0		D&M			50/0"	GW		@ 5.0 feet: No recovery, cuttings indicate sandy gravel.
7.5								@ 7.5 feet: Broken cobble in sampler.
	X	D&M		10	36			▽ @ 8.1 feet: Becomes wet.
9.0								1038.0

Boring completed at 9.0 feet.

PROBE DIAGRAM



SOIL VAPOR PROBE COMPLETION DETAILS:

+2.8 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 4 feet: 1"-diameter Sch. 40 PVC blank riser.
4 to 6.5 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
6.5 to 6.6 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 3 feet: Hydrated bentonite chips.
3 to 9 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-8

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-9

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/18/09 COMPLETED 2/18/09
GROUND ELEVATION 1048.09 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 7.0 ft / Elev 1041.1 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
0.0								**WOOD WASTE**, bark mulch, little medium to coarse gravel, dry to moist.	Concrete
1.5								1046.6	
								GRAVELLY SAND, brown, medium- to coarse-grained, fine to medium gravel, medium-dense, damp.	Hydrated bentonite chips
2.5		D&M	GP9-S1	75	22	SP			1"-diameter Sch. 40 PVC blank riser
4.5								1043.6	
5.0		D&M		90	50/6"			**SANDY GRAVEL**, brown, fine to coarse, well-rounded to flattened, medium- to coarse-grained sand, very dense, damp, cobble in sampler.	2x12 Colorado silica sand pack
						GW		@ 6.0 feet: Grades to olive gray.	1"-diameter Sch. 40 PVC 0.020"-slotted screen
7.5		D&M		90	50/6"			▽ @ 7.0 feet: Becomes wet.	End cap
8.0								1040.1	Native slough

Boring completed at 8.0 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+3 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 4.2 feet: 1"-diameter Sch. 40 PVC blank riser.
4.2 to 6.8 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
6.8 to 6.9 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 3 feet: Hydrated bentonite chips.
3 to 7.5 feet: 2x12 silica sand.
7.5 to 8 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure D-9

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-10

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/18/09 **COMPLETED** 2/18/09
GROUND ELEVATION 1065.30 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 12.9 ft / Elev 1052.4 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
0.0								0.3 **ASPHALT** 1065.1	Concrete
						GP		0.5 **ROAD BASE** 1064.8	
								SILTY GRAVEL, dark brown, fine to coarse, some silt and wood waste, medium-dense, moist.	
2.5						GM			
		D&M	GP10-S1	80	18				
								4.5 1060.8	Hydrated bentonite chips
5.0								**SANDY GRAVEL**, olive brown, fine to coarse, fine- to coarse-grained sand, cobbles, medium-dense, moist.	
		D&M	GP10-S2	40	31				
7.5									1"-diameter Sch. 40 PVC blank riser
		D&M		0	50/6"				
						GW			2x12 Colorado silica sand pack
10.0								@ 10.0 feet: Difficult drilling.	1"-diameter Sch. 40 PVC 0.020"-slotted screen
		D&M		0	37				
12.5								13.0 ▽ @ 12.9 feet: Becomes wet. 1052.3	End cap
								Boring completed at 13.0 feet.	

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

(Continued Next Page)

Figure D-10 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-10

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM

SOIL VAPOR PROBE COMPLETION DETAILS:

+3 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 7.4 feet: 1"-diameter Sch. 40 PVC blank riser.
7.4 to 12.2 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
12.2 to 12.5 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 6.5 feet: Hydrated bentonite chips.
6.5 to 13 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

Figure D-10 (Page 2 of 2)

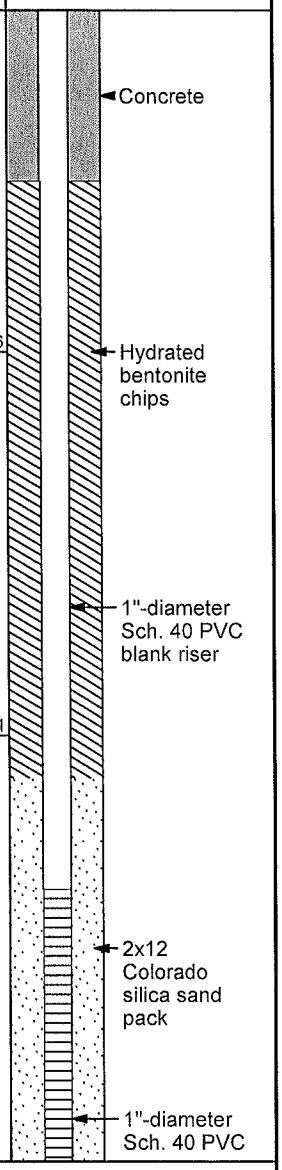
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-11

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 COMPLETED 2/19/09
GROUND ELEVATION 1065.58 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch, some silty sand, little gravel.
4.0								1061.6
						SM		**SILTY SAND**, fine- to coarse-grained, some silt, little fine to coarse well-rounded gravel, few wood waste, medium dense, moist.
5.0		D&M		90	22			
8.5								1057.1
								WOOD WASTE, reddish brown, bark mulch and wood chips, moist.
10.0		D&M		80	38			

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-11

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
15.0								**WOOD WASTE**, reddish brown, bark mulch and wood chips, moist. *(continued)*	0.020"-slotted screen
	X	D&M			50/5"			@ 15.0 feet: Piece of wood caught in sampler, no recovery, moist.	End cap
							15.5	Boring completed at 15.5 feet.	1050.1

SOIL VAPOR PROBE COMPLETION DETAILS:

+2.8 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 10.3 feet: 1"-diameter Sch. 40 PVC blank riser.
10.3 to 15 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
15 to 15.4 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 9 feet: Hydrated bentonite chips.
9 to 15.5 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-11 (Page 2 of 2)

SLR
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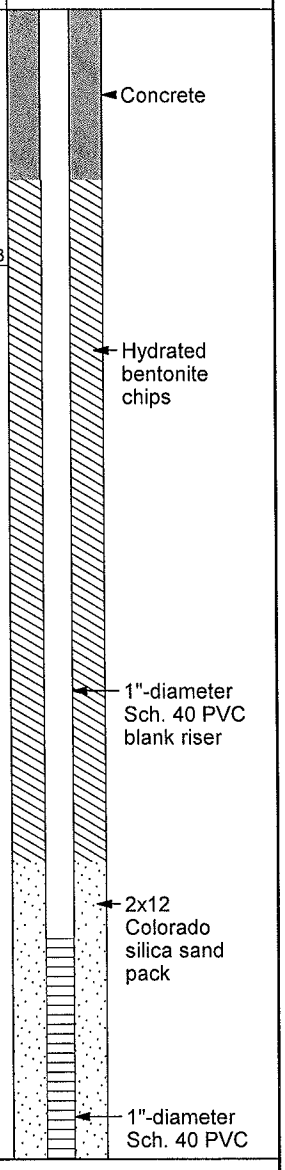
PROBE NUMBER GP-12

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 **COMPLETED** 2/19/09
GROUND ELEVATION 1062.34 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING 17.5 ft / Elev 1044.8 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch, moist.
2.5								
		D&M	GP12-S1	90	39			3.0 1059.3 **SILTY SAND**, olive gray, fine- to coarse-grained, little fine to coarse rounded gravel, medium-dense, moist.
5.0								5.0 to 10.0 feet: Little wood waste.
		D&M	GP12-S2	80	25			
7.5								
		D&M		5	10	SP-SM		
10.0								@ 10.0 feet: Becomes dark olive brown, some wood waste, cobble caught in sampler.
		D&M		40	18			
12.5								@ 12.5 feet: No recovery. Cuttings indicate silty sand with some gravel.
		D&M		0	18			

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

Figure D-12 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

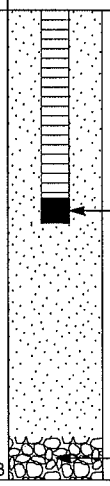
PROBE NUMBER GP-12

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
15.0						SP-SM		**SILTY SAND**, olive gray, fine- to coarse-grained, little fine to coarse rounded gravel, medium-dense, moist. *(continued)*
		D&M		5	36			
17.5								@ 17.0 feet: Becomes olive gray, fine-grained, moist to wet, trace organics. ▽
		D&M	GP12-S3	100	38			@ 17.5 feet: Becomes wet.
								19.0 Boring completed at 19.5 feet, sandy gravel in end of sampler shoe.

PROBE DIAGRAM



SOIL VAPOR PROBE COMPLETION DETAILS:

+3.1 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 10.9 feet: 1"-diameter Sch. 40 PVC blank riser.
10.9 to 15.7 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
15.7 to 16.0 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 10 feet: Hydrated bentonite chips.
10 to 18.5 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

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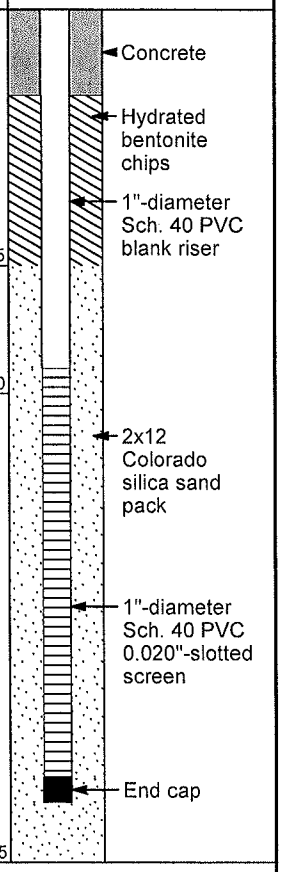
PROBE NUMBER GP-13

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/23/09 COMPLETED 2/23/09
GROUND ELEVATION 1062.49 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, some gravelly sand, little silt.
2.5								
	X	D&M	GP13-S1	100	10	SP		**GRAVELLY SAND**, gray, fine- to medium-grained, fine to coarse gravel, loose, moist.
5.0								
	X	D&M	GP13-S2	100	29			**WOOD WASTE**, trace fine gravel, moist.
7.5								
	X	D&M	GP13-S3	10	17			
10.0								

3.0 1059.5
4.5 1058.0
10.0 1052.5

PROBE DIAGRAM



Boring completed at 10.0 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+2.9 to 0 feet: 1"-diameter Sch. 40 PVC blank riser encased in an 8"-diameter protective steel monument set in concrete with three protective concrete-filled steel bollards.
0 to 4.2 feet: 1"-diameter Sch. 40 PVC blank riser.
4.2 to 9 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
9 to 9.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 3 feet: Hydrated bentonite chips.
3 to 10 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure D-13

SLR
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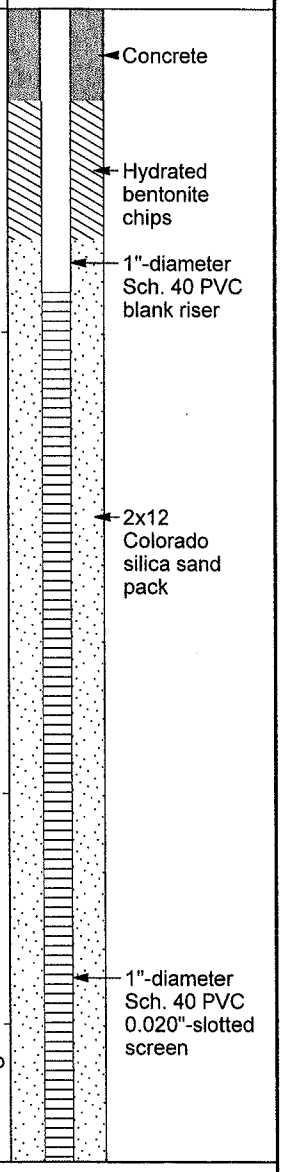
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-14

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 4/16/09 **COMPLETED** 4/16/09
GROUND ELEVATION _____ **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 13.5 ft
LOGGED BY C. Lee **CHECKED BY** _____
AT END OF ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SANDY SILT**, brown, low plasticity, little fine-grained sand, very stiff, damp, trace roots.
2.5		D&M		80	20	ML		
								3.5
								SANDY GRAVEL, gray, medium to coarse, little brown fine-grained sand, loose, damp.
5.0		D&M		25	17			
						GP		
7.5		D&M		25	17			
								8.5
								GRAVELLY SAND, brown, fine-grained, some fine gravel, little fractured cobbles, medium-dense, damp.
10.0		D&M		50	18	SP		
								11.0
								SANDY GRAVEL, gray, coarse, fractured, little fine-grained sand, trace fine gravel, medium-dense, damp to moist.
12.5		D&M		75	27	GP		

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

(Continued Next Page)

Figure D-14 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-14

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5						GP		**SANDY GRAVEL**, gray, coarse, fractured, little fine-grained sand, trace fine gravel, medium-dense, damp to moist. *(continued)*	End cap
								▽ @ 13.5 feet: Little fine gravel, few fine-grained sand, trace brown silt, wet.	
15.0		D&M		50	31				Native slough.
								15.5	

Boring completed at 15.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 3.1 feet: 1"-diameter Sch. 40 PVC blank riser.
3.1 to 12.9 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
12.9 to 13.2 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 2.5 feet: Hydrated bentonite chips.
3 to 14 feet: 2x12 Colorado silica sand.
14 to 15.5 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

Figure D-14 (Page 2 of 2)

SLR
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22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-15

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 4/16/09 **COMPLETED** 4/16/09
GROUND ELEVATION _____ **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 13.5 ft
LOGGED BY C. Lee **CHECKED BY** _____
AT END OF ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SAND**, brown, fine-grained, few fine to medium gravel, few fractured cobbles, medium-dense, damp, trace roots.
2.5		D&M		30	23	SP		
3.5								**GRAVEL**, gray, medium to coarse, subangular to subrounded, trace fine gravel, trace fine-grained brown sand, medium-dense, damp.
5.0		D&M		50	24	GP		
6.0								**SANDY GRAVEL**, gray, coarse, subangular to subrounded, some fractured cobbles, little fine-grained sand, very dense, damp.
7.5		D&M		50	50/6"	GP		
8.0								**GRAVEL**, gray, coarse, subrounded, very dense, damp.
		D&M		50	50/6"	GP		
10.0								
10.5								**SANDY GRAVEL**, gray, coarse, subrounded, some fractured cobbles, little fine-grained sand, very dense, moist.
12.5		D&M			72	GP		

PROBE DIAGRAM

- Concrete
- Hydrated bentonite chips
- 1"-diameter Sch. 40 PVC blank riser
- 2x12 Colorado silica sand pack
- 1"-diameter Sch. 40 PVC 0.020"-slotted screen

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

Figure D-15 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-15

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5						GP		**SANDY GRAVEL**, gray, coarse, subrounded, some fractured cobbles, little fine-grained sand, very dense, moist. *(continued)*	End cap
								▽ @ 13.5 feet: Little fine- to medium-grained sand, medium-dense, wet.	
15.0		D&M			44				Native slough.
								15.5	

Boring completed at 15.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 3 feet: 1"-diameter Sch. 40 PVC blank riser.
3 to 12.8 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
12.8 to 13.1 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 2.5 feet: Hydrated bentonite chips.
3 to 14 feet: 2x12 Colorado silica sand.
14 to 15.5 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

Figure D-15 (Page 2 of 2)

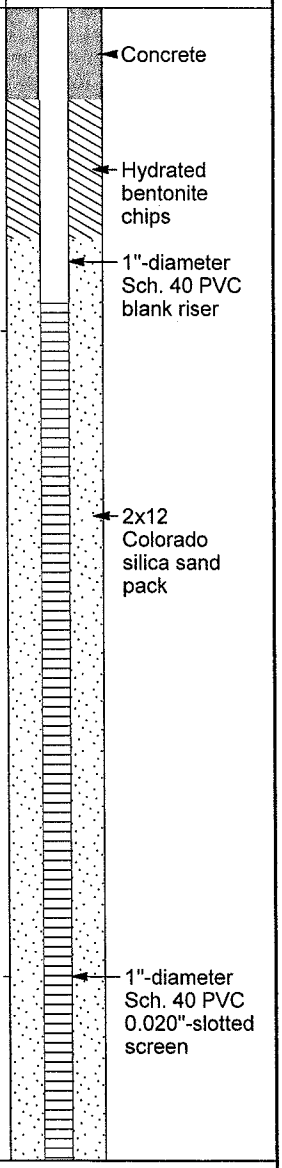
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-16

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 4/16/09 **COMPLETED** 4/16/09
GROUND ELEVATION _____ **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 13.5 ft
LOGGED BY C. Lee **CHECKED BY** _____
AT END OF ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY GRAVEL**, gray, coarse, subrounded, little brown silt, few fine gravel, few fine-grained sand, medium-dense, moist.
2.5		D&M		100	34	GM		
3.5								**GRAVEL**, gray, coarse, some cobbles, few fine-grained sand, very dense, damp.
		D&M		0	50/2"			
5.0								
		D&M		0	50/6"	GP		
7.5								
		D&M		10	50/6"			
10.0								
10.5								**SANDY GRAVEL**, gray, coarse, subangular, some fractured cobbles, little fine- to medium-grained sand, dry.
		D&M		80	50/6"	GP		
12.5								

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

(Continued Next Page)

Figure D-16 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-16

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5						GP		**SANDY GRAVEL**, gray, coarse, subangular, some fractured cobbles, little fine- to medium-grained sand, dry. *(continued)*	End cap
								13.5 ▽	
								GRAVELLY SAND, brown, fine- to coarse-grained, little medium to coarse gravel, little fractured cobbles, trace silt, wet.	
15.0		D&M		50	18	SW			Native slough.
								15.5	

Boring completed at 15.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 3.2 feet: 1"-diameter Sch. 40 PVC blank riser.
3.2 to 13 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
13 to 13.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 2.5 feet: Hydrated bentonite chips.
3 to 14 feet: 2x12 Colorado silica sand.
14 to 15.5 feet: Native slough.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

Figure D-16 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-17

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 4/17/09 **COMPLETED** 4/17/09
GROUND ELEVATION _____ **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 14.5 ft
LOGGED BY C. Lee **CHECKED BY** _____
AT END OF ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY GRAVEL**, gray, coarse, subangular to subrounded, some fractured cobbles, some brown silt, trace fine- to medium-grained sand, medium-dense, moist.
2.5		D&M		80	23	GM		
3.5								**GRAVEL**, gray, coarse, subangular to subrounded, some fractured cobbles, few fine- to medium-grained brown sand, trace silt, very dense, damp.
5.0		D&M		100	50/6"	GP		@ 5.5 feet: No silt.
7.5		D&M		70	50/6"			
8.5						GP		**SANDY GRAVEL**, gray, medium to coarse, subrounded to rounded, some fractured cobbles, little fine- to medium-grained brown sand, medium-dense, damp.
10.0		D&M		50	31			
11.0						GP		**GRAVEL**, gray, coarse, subrounded to rounded, some fractured cobbles, very dense, damp.
12.5		D&M		100	50/5"			

PROBE DIAGRAM: Concrete; Hydrated bentonite chips; 1"-diameter Sch. 40 PVC blank riser; 2x12 Colorado silica sand pack; 1"-diameter Sch. 40 PVC 0.020"-slotted screen

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR
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Bothell, Washington 98021
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Fax: 425.402.8488

PROBE NUMBER GP-17

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5						GP		**GRAVEL**, gray, coarse, subrounded to rounded, some fractured cobbles, very dense, damp. *(continued)* @ 13.0 feet: Few fine- to medium-grained sand.	End cap
15.0		D&M		50	36			▽ @ 14.5 feet: Becomes wet. 15.0 Boring completed at 15.0 feet.	

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 3.2 feet: 1"-diameter Sch. 40 PVC blank riser.
3.2 to 13 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
13 to 13.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 2.5 feet: Hydrated bentonite chips.
3 to 15 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/23/09

Figure D-17 (Page 2 of 2)

SLR
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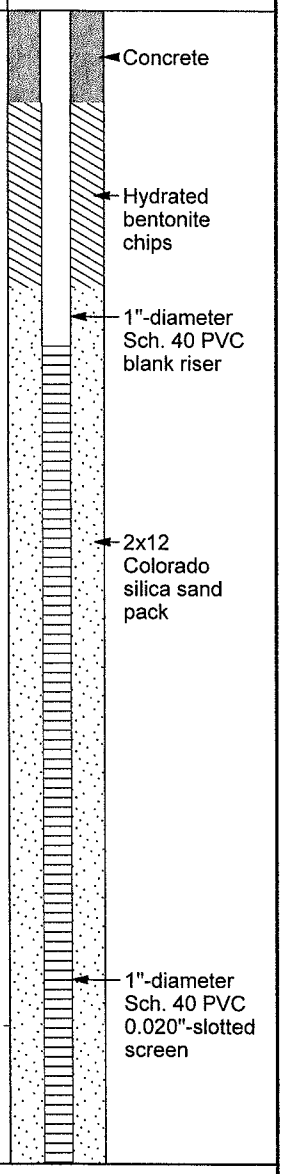
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-18

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 4/17/09 **COMPLETED** 4/17/09
GROUND ELEVATION _____ **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY C. Lee **CHECKED BY** _____
AT END OF ---
NOTES _____
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GP		**GRAVEL**, gray, coarse, some cobbles up to 8"-diameter, little fine-grained sand, damp.
2.5		D&M		0	26			@ 1.5 feet: No recovery.
5.0		D&M		25	16			@ 3.5 feet: Medium to coarse gravel, little fractured cobbles, trace fine- to medium-grained sand, loose.
7.5		D&M		10	71			@ 6.5 feet: Some fractured cobbles, few fine- to medium-grained sand, very dense, dry.
10.0								
11.0						GP		**SANDY GRAVEL**, gray, coarse, some fractured cobbles, little brown fine- to medium-grained sand, medium-dense, damp.
12.5		D&M		80	51			

PROBE DIAGRAM



REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

Did not encounter water in boring.

(Continued Next Page)

SLR
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Telephone: 425.402.8800
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PROBE NUMBER GP-18

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5						GP		**SANDY GRAVEL**, gray, coarse, some fractured cobbles, little brown fine- to medium-grained sand, medium-dense, damp. *(continued)* @ 13.5 feet: Medium to coarse gravel, moist.	End cap
15.0		D&M		50	53				
								15.5	

Boring completed at 15.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 3.2 feet: 1"-diameter Sch. 40 PVC blank riser.
3.2 to 13 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
13 to 13.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1 foot: Concrete.
1 to 2.5 feet: Hydrated bentonite chips.
3 to 15.5 feet: 2x12 Colorado silica sand.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

Did not encounter water in boring.

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PROBE NUMBER GP-19

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/4/09 **COMPLETED** 11/4/09
GROUND ELEVATION 1060.71 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 14.5 ft / Elev 1046.2 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
0.0						WW		0.5 **WOOD WASTE**, sawdust, bark, ash. 1060.2	Concrete
						SM		**SILTY SAND**, dark reddish-brown, fine-grained, little fines, few fine gravel, very moist.	
2.5								2.0 1058.7 **MUNICIPAL SOLID WASTE**, medium dense, moist.	
		D&M		30	30			@ 2.5 feet: Paper, wood, glass.	
5.0									Hydrated bentonite chips
		D&M		60	22			@ 5 feet: Fiber, wood, soil/decomposable (50% by volume).	
7.5						MSW			
		D&M		60	18			@ 7.5 feet: Paper, plastic, soil/decomposable (20% by volume).	1"-diameter Sch. 40 PVC blank riser
10.0									
		D&M		50	19			@ 10 feet: Paper, plastic, fiber, soil/decomposable (10% by volume).	2x12 Colorado silica sand pack
12.5									

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

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Fax: 425.402.8488

PROBE NUMBER GP-19

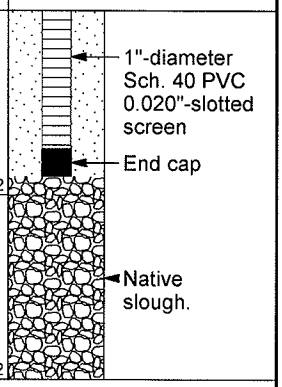
CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		70	10	MSW		**MUNICIPAL SOLID WASTE**, medium dense, moist. *(continued)* @ 12.5 feet: Wood, plastic, glass, soil/decomposable (25% by volume).
								14.5 ▽ 1046.2
15.0								**SILTY SAND**, gray, fine-grained, little fines, very dense, wet.
		D&M		70	62	SM		
								16.5 1044.2

Boring completed at 16.5 feet.

PROBE DIAGRAM



SOIL VAPOR PROBE COMPLETION DETAILS:

+3 to 9.2 feet: 1"-diameter Sch. 40 PVC blank riser.
9.2 to 14 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
14 to 14.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 1.5 feet: Concrete.
1.5 to 7 feet: Hydrated bentonite chips.
7 to 14.3 feet: 2x12 Colorado silica sand.
14.3 to 16.5 feet: Native slough.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

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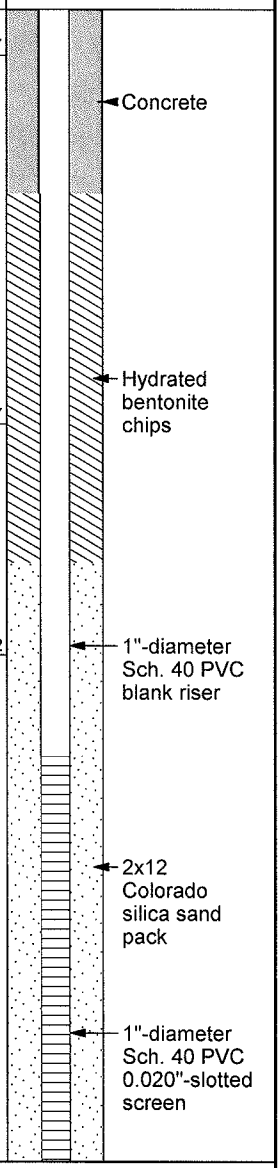
PROBE NUMBER GP-20

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/3/09 **COMPLETED** 11/3/09
GROUND ELEVATION 1057.16 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 14.0 ft / Elev 1043.2 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						WW		**WOOD WASTE**, sawdust, bark, ash, very moist.
								0.5 — 1056.7
								SANDY GRAVEL, reddish brown, medium- to coarse-grained, little fine- to coarse-grained sand, few fines, medium dense, very moist.
2.5						GP		
	X	D&M		30	24			
								4.5 — 1052.7
5.0								**SILTY SAND**, dark brown, fine-grained, little fines, medium dense, very moist to moist.
	X	D&M		50	12	SM		
								7.0 — 1050.2
7.5								**MUNICIPAL SOLID WASTE**, medium dense.
	X	D&M		50	23			@ 7.5 feet: Metal, wood, glass, paper, soil/decomposable (50% by volume), moist.
10.0						MSW		
	X	D&M		50	19			@ 10 feet: Wood, paper, plastic, fiber, soil/decomposable (20% by volume), moist.
12.5								

PROBE DIAGRAM



REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure D-20 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-20

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5									
		D&M		30	24	MSW		**MUNICIPAL SOLID WASTE**, medium dense. *(continued)* @ 12.5 feet: Metal, wood, soil/decomposable (40% by volume), moist to wet. ▽ @ 14 feet: Becomes wet.	End cap
								14.5 — 1042.7	
15.0								**SANDY SILT**, dark gray, little fine-grained sand, hard, wet, trace roots.	Native material and municipal solid waste slough.
		D&M		30	47	ML			
								16.5 — 1040.7	

Boring completed at 16.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+3.1 to 8.1 feet: 1"-diameter Sch. 40 PVC blank riser.
8.1 to 12.9 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
12.9 to 13.2 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 6 feet: Hydrated bentonite chips.
6 to 13.5 feet: 2x12 Colorado silica sand.
13.5 to 16.5 feet: Native material and municipal solid waste slough.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure D-20 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-21

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/5/09 **COMPLETED** 11/5/09
GROUND ELEVATION 1063.38 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING --
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
0.0									
						WW		**WOOD WASTE**, wood chips, sawdust, damp.	Concrete
2.5									
	X	D&M		100	37	SM		3.0 1060.4 **SILTY SAND**, dark gray, fine-grained, little fines, few fine gravel, dense, damp. 4.0 1059.4	
						MSW		**MUNICIPAL SOLID WASTE**, medium dense, moist to damp.	Hydrated bentonite chips
5.0									
	X	D&M		100	24			@ 5 feet: Brick, wood, metal, soil/decomposable (20% by volume).	
7.5									
	X	D&M		30	15			@ 7.5 feet: Plastic, metal, soil/decomposable (70% by volume).	1"-diameter Sch. 40 PVC blank riser
10.0									
	X	D&M		15	16			@ 10 feet: Ash, fiber, paper.	2x12 Colorado silica sand pack
12.5									

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

Figure D-21 (Page 1 of 2)

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-21

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5									
		D&M		100	25	MSW		**MUNICIPAL SOLID WASTE**, medium dense, moist to damp. *(continued)* @ 12.5 feet: Wood, glass, metal, soil/decomposable (30% by volume). @ 13.5 feet: Some Ponderosa pine bark.	1"-diameter Sch. 40 PVC 0.020"-slotted screen
							13.5	1049.9	
						SM		**SILTY SAND**, gray, fine-grained, little fines, medium dense, moist.	End cap
							14.5	1048.9	
15.0								**GRAVELLY SAND**, gray, fine-grained, some fine to medium gravel, few fines, very dense, moist.	
		D&M		70	51	SP			
							16.5	1046.9	

Boring completed at 16.5 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

0 to 9.2 feet: 1"-diameter Sch. 40 PVC blank riser.
9.2 to 14 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
14 to 14.3 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 7 feet: Hydrated bentonite chips.
7 to 16.5 feet: 2x12 Colorado silica sand.

REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure D-21 (Page 2 of 2)

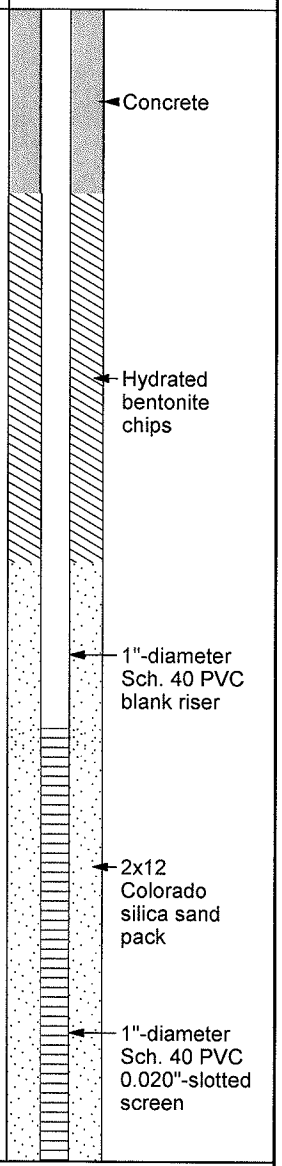
SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-22

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00006
PROJECT LOCATION Yakima, Washington
DATE STARTED 11/2/09 **COMPLETED** 11/2/09
GROUND ELEVATION 1063.30 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 13.0 ft / Elev 1050.3 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, sawdust, trace fine gravel, damp to wet.
2.5	X	D&M		100	50/4"			
5.0	X	D&M		25	50/3"	WW		@ 6.5 feet: Bark chips and sawdust.
7.5	X	D&M		0	50/5"			@ 7.5 feet: No recovery.
10.0	X	D&M		100	21			
12.5								

PROBE DIAGRAM



REMARKS

D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

PROBE NUMBER GP-22

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00006 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PROBE DIAGRAM
12.5									
		D&M		100	28	WW		**WOOD WASTE**, sawdust, trace fine gravel, damp to wet. *(continued)* @ 13 feet: Becomes wet.	End cap Native slough.
								14.0	1049.3

Boring completed at 14.0 feet.

SOIL VAPOR PROBE COMPLETION DETAILS:

+3.5 to 7.8 feet: 1"-diameter Sch. 40 PVC blank riser.
7.8 to 12.6 feet: 1"-diameter Sch. 40 PVC 0.020"-slotted screen.
12.6 to 12.9 feet: 1"-diameter Sch. 40 PVC end cap.

0 to 2 feet: Concrete.
2 to 6 feet: Hydrated bentonite chips.
6 to 13 feet: 2x12 Colorado silica sand.
13 to 14 feet: Native slough.

REMARKS

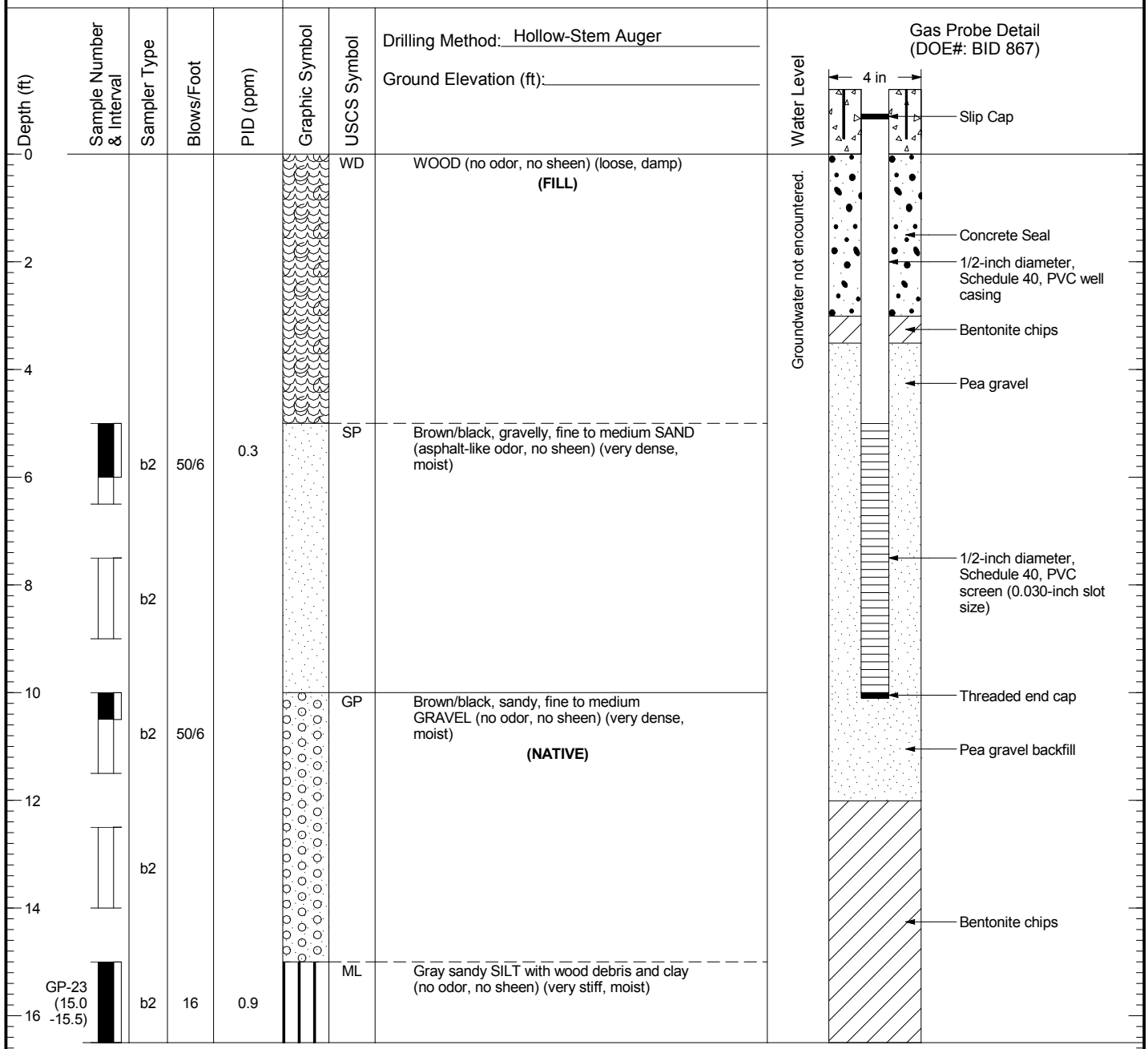
D&M = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. wireline hammer.

▽ Water level at time of drilling.

SLR GP LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 11/19/09

Figure D-22 (Page 2 of 2)

GP-23



Boring Completed 10/30/14
Total Depth of Boring = 16.5 ft.

Gas Probe Completed 10/31/14
Total Depth of Gas Probe = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.020.022 3/11/15 N:\PROJECTS\1148008.020.022.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Gas Probe GP-23

Figure
D-23

GP-23A

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft):	Water Level
0						AC	ASPHALT	Groundwater not encountered.
						GP	**(ASPHALT)** Brown/black, sandy, fine to medium GRAVEL with wood debris (asphalt-like odor, no sheen) (medium dense, damp) **(FILL)**	
4								
6		b2	13	0.6		SP	Brown, gravelly, fine to medium SAND with trace wood debris (no odor, no sheen) (medium dense to very dense, damp)	
8		b2	44					
10		b2				DB	Rubber, plastic, metal DEBRIS (hydrogen sulfide like odor, no sheen) (medium dense to very dense, moist) **(MUNICIPAL SOILD WASTE)**	
12								

Detail: 4 in

Boring Completed 10/30/14
Total Depth of Boring = 12.0 ft.

Completed 10/31/14

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.020.022 3/11/15 N:\PROJECTS\1148008.020.022.GPJ WELL LOG

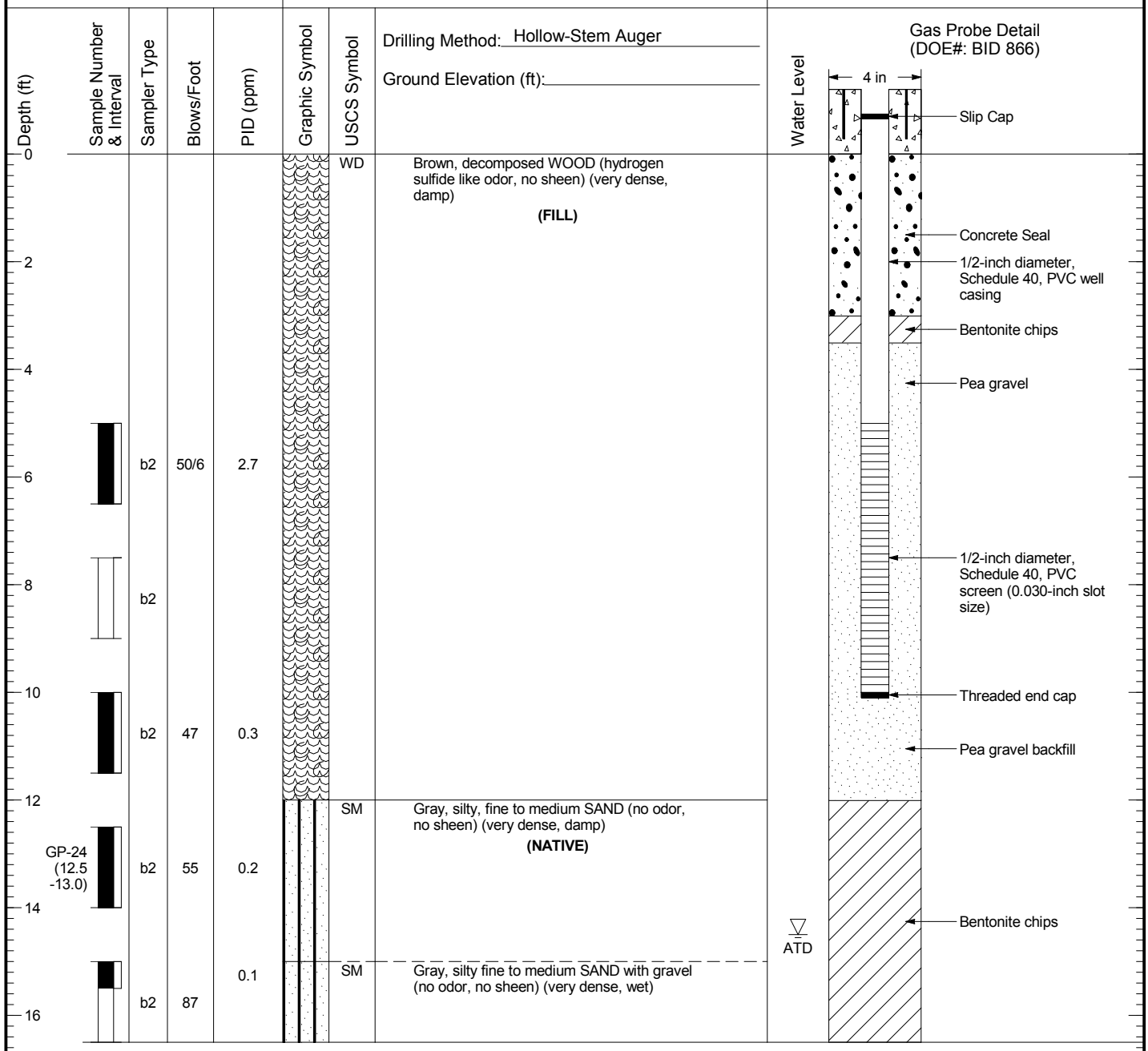
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of GP-23A

Figure D-24

GP-24



Boring Completed 10/30/14
Total Depth of Boring = 16.5 ft.

Gas Probe Completed 10/30/14
Total Depth of Gas Probe = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.020.022 3/11/15 N:\PROJECTS\1148008.020.022.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Gas Probe GP-24

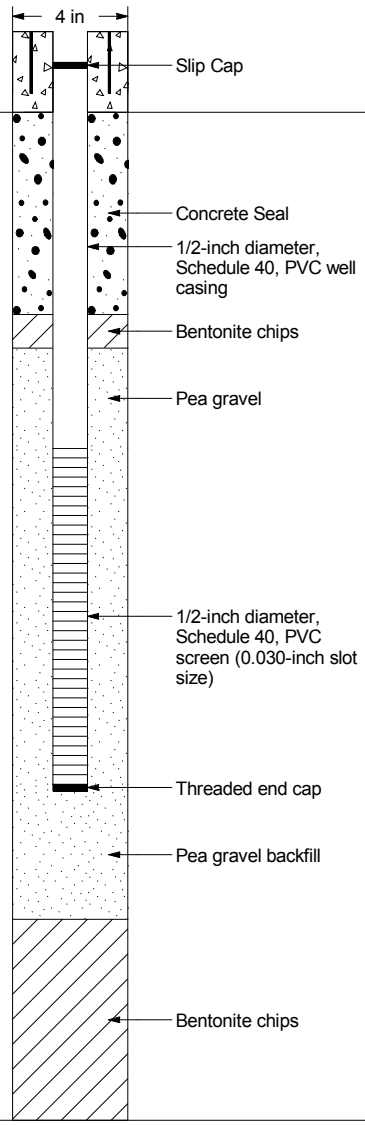
Figure
D-25

GP-25

SAMPLE DATA				SOIL PROFILE			GROUNDWATER
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	PID (ppm)	Graphic Symbol	USCS Symbol	Drilling Method: Hollow-Stem Auger Ground Elevation (ft):	Water Level
0						WD	Brown, decomposed WOOD (hydrogen sulfide like odor, no sheen) (very dense, damp to moist) **(FILL)**	Groundwater not encountered.
8		b2	74/3	1.5				
10		b2	100/3	6.2				
12		b2	100/3	0.0				

Boring Completed 10/30/14
Total Depth of Boring = 15.0 ft.

Gas Probe Detail
(DOE#: BID 865)



Gas Probe Completed 10/30/14
Total Depth of Gas Probe = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.020.022 3/11/15 N:\PROJECTS\1148008.020.022.GPJ WELL LOG

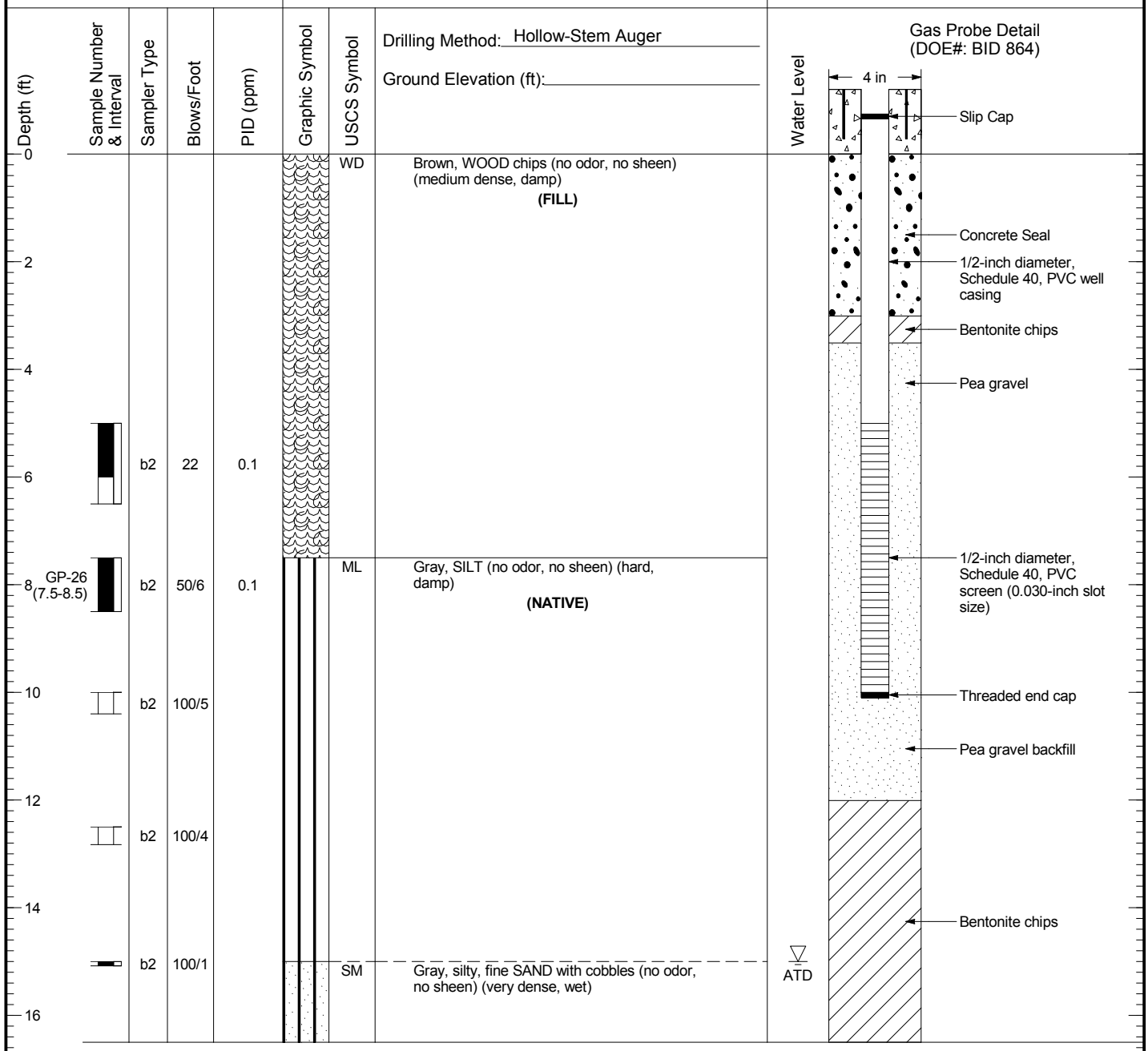
LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Gas Probe GP-25

Figure
D-26

GP-26



Boring Completed 10/29/14
Total Depth of Boring = 16.5 ft.

Gas Probe Completed 10/29/14
Total Depth of Gas Probe = 10.0 ft.

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148008.020.022 3/11/15 N:\PROJECTS\1148008.020.022.GPJ WELL LOG

LANDAU ASSOCIATES

Closed City of Yakima Landfill Site
Yakima, Washington

Log of Gas Probe GP-26

Figure D-27

APPENDIX E

Soil Boring Logs

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-1

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/9/09 **COMPLETED** 2/9/09
GROUND ELEVATION 1053.37 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1036.4 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY GRAVEL**, brown, fine to coarse, some fines, few bricks, loose dry.
2.5	X	D&M		66	12	GM		@ 3.0 feet: Becomes black, with some municipal solid waste (glass, plastic, wood), little sand.
5.0	X	D&M		100	50/4"			@ 5.0 feet: Becomes very dense.
7.5							7.5	1045.9
	X	D&M		80	6		8.5	**WOOD WASTE**, loose, moist to wet. 1044.9
10.0	X	D&M		60	21	OL		**SILT**, Black, organic, little municipal solid waste, medium dense, moist to wet.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-1

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**SILT**, Black, organic, little municipal solid waste, medium dense, moist to wet. *(continued)*
		D&M		5	36			
15.0								
		D&M		0	11	OL		
17.5								▽ @ 17 feet: Becomes wet.
		D&M		80	40			18.0 — 1035.4 **SANDY GRAVEL**, dark olive gray, fine to medium, subrounded to rounded, some angular, some sand, medium dense, wet.
						GP		19.5 — 1033.9
20.0						SP		**SAND**, dark gray, fine- to medium-grained, very dense, wet.
		D&M		120	50/6"			20.5 — 1032.9
						GW		21.0 — 1032.4 **SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, trace cobbles, very dense, wet. Boring completed at 21.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-1 (Page 2 of 2)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-2

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/9/09 **COMPLETED** 2/9/09
GROUND ELEVATION 1054.95 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.0 ft / Elev 1037.0 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, intermixed fine to coarse-grained gravel, loose.
2.5								
		D&M		5	9			@2.5 feet: Becomes intermixed with brown silty sand and organics.
5.0								
		D&M		5	18			@ 5.0 feet: Becomes medium dense.
7.5								7.0 1048.0 **MUNICIPAL SOLID WASTE**, dark grey, silt, sand, plastic, glass, and wood waste, loose, moist.
		D&M		30	8			
10.0								
		D&M		10	4			@ 10 feet: Becomes particle board and painted wood, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-2

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
12.5									
		D&M		100	12			**MUNICIPAL SOLID WASTE**, dark grey, silt, sand, plastic, glass, and wood waste, loose, moist. *(continued)*	
								@ 12.5 feet: Becomes silty sand, olive gray, fine- to medium-grained (60% by volume), paper, glass, wood (40% by volume), moist.	
								13.5	1041.5
								SAND, olive gray, fine-grained, some medium-grained rounded gravel, trace silt, loose, moist.	
15.0									
		D&M		90	5	SP			
								17.0	1038.0
17.5								**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, fine- to coarse-grained sand, trace silt, medium dense, wet.	
		D&M			33	GW		▽	
								19.5	1035.5
20.0								**GRAVELLY SAND**, olive gray, fine to coarse, fine to medium well-rounded gravel, loose, wet.	
		D&M			8	SP			
								21.5	1033.5
								Boring completed at 21.5 feet.	

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR
SLR International Corp
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Bothell, Washington 98021
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Fax: 425.402.8488

BORING NUMBER SB-3

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/9/09 COMPLETED 2/9/09
GROUND ELEVATION 1057.91 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 19.0 ft / Elev 1038.9 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						ML		**GRAVELLY SILT**, brown, some fine to coarse gravel, intermixed wood waste.
								1.3 — 1056.7
2.5								**WOOD WASTE**, bark mulch, loose, moist.
	X	D&M		60	12			
5.0								
	X	D&M		0	5			
7.5								7.0 — 1050.9
	X	D&M		45	23	SP-SM		**SILTY SAND**, olive gray, fine-grained, some fines, little fine to coarse gravel, medium dense to loose, moist.
10.0								
	X	D&M		10	7			@ 10 feet: Gravel caught in sampler, no recovery.
12.5								12.0 — 1045.9
	X	D&M		30	9			**MUNICIPAL SOLID WASTE**, wood, paper, cloth, silty sand (25% by volume), loose, wet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-3

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
15.0								**MUNICIPAL SOLID WASTE**, wood, paper, cloth, silty sand (25% by volume), loose, wet. *(continued)*
		D&M		100	10	SM		15.5 1042.4 **SILTY SAND**, olive gray, fine-grained, some fines, some organics, loose, moist.
17.5								17.0 1040.9 **SANDY GRAVEL**, gray, fine to coarse, some fine to coarse-grained sand, rounded, very dense, moist to wet.
		D&M		60	50/4"	GW		▽
20.0		D&M		0	50/4"			@ 20.0 feet: Sampler wet.
								20.5 1037.4 Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-3 (Page 2 of 2)

BORING NUMBER SB-4

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

CLIENT City of Yakima
PROJECT NUMBER 001.0221.00004
DATE STARTED 2/9/09 COMPLETED 2/9/09
DRILLING DRILLING CONTRACTOR Cascade Drilling
DRILLING DRILLING METHOD Hollow Stem Auger
LOGGED BY B. Robinson CHECKED BY
NOTES

PROJECT NAME Former City of Yakima Landfill
PROJECT LOCATION Yakima, Washington
GROUND ELEVATION 1059.17 ft HOLE SIZE 8.5" Diameter
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 17.0 ft / Elev 1042.2 ft
AT END OF ---
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, large pieces of wood up to 12 inches.
2.5								@ 2.5 feet: Becomes reddish brown, bark mulch, loose, moist.
		SS		100	7			
5.0								@ 5.0 feet: Becomes fine bark mulch, dense.
		SS		10	50/5"			
7.5								
		SS		10	10			
10.0								@ 10.0 feet: Trace gravel, loose. 1048.7
		SS		40	9			10.5 **MUNICIPAL SOLID WASTE**, dark gray, paper and yard waste, loose.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-4 (Page 1 of 2)

SLR
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22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-4

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, dark gray, paper and yard waste, loose. *(continued)*
		SS		100	13			@ 12.5 feet: Becomes plastic, paper, and soil (25% by volume).
								13.5 — 1045.7
								SILTY SAND, fine-grained, some fines, some waste, loose.
15.0						SM		@ 14.5 feet: Becomes olive gray, some organics, no waste, wet.
		SS			14			
								17.0 ▽ — 1042.2
17.5						GW		**SANDY GRAVEL**, gray, fine to coarse, some fine to coarse-grained sand, very dense, wet.
		SS			50/3"			
								18.0 — 1041.2
								Boring complete, refusal at 18.0 feet. Sampler wet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-4 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-5

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/9/09 **COMPLETED** 2/9/09
GROUND ELEVATION 1058.29 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GP		0.3 **GRAVEL.** 1058.0 **WOOD WASTE**, bark mulch, some sand, loose, moist.
2.5								@ 2.0 feet: Plastic sheets in wood waste.
	X	D&M		80	15			
5.0								
	X	D&M		70	14			6.0 1052.3 **MUNICIPAL SOLID WASTE**, wood waste, paper, metal foil, (50% wood waste by volume), loose, wet.
7.5								
	X	D&M		60	7			
10.0								
	X	D&M		25	7			
12.5								
	X	D&M		25	6			

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-5

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
15.0								**MUNICIPAL SOLID WASTE**, wood waste, paper, metal foil, (50% wood waste by volume), loose, wet. *(continued)*	
		D&M		60	16				
								16.0	1042.3
						SM		**SILTY SAND**, dark olive gray, fine- to coarse-grained, some fines, medium dense, moist.	
								17.0	1041.3
17.5								**SILTY GRAVEL**, olive gray, fine to coarse, subangular to rounded, some silt, little fine- to coarse-grained sand, trace cobbles, very dense, moist to wet.	
		D&M		100	50/6"	GW-GM			
								18.5	1039.8
								Boring completed at 18.5 feet.	

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-5 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-6

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 **COMPLETED** 2/10/09
GROUND ELEVATION 1060.02 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1043.0 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GP		0.3 **GRAVEL.** 1059.8 **WOOD WASTE**, bark mulch, soil, 50-60% wood waste by volume, moist.
								1.0 1059.0 **SILTY GRAVEL**, dark gray, fine to coarse, rounded, some fines, little fine- to coarse-grained sand, medium dense, moist.
2.5								
	X	D&M		90	34	GM		
5.0								
	X	D&M		70	12			5.5 1054.5 **MUNICIPAL SOLID WASTE**, plastic, paper, glass, tires, wood, soil (25% by volume), loose, moist.
7.5								
	X	D&M		60	53			@ 7.5 feet: Gravel caught in sampler.
10.0								
	X	D&M		40	3			@ 10 feet: Soil 30-40% by volume.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

Figure E-6 (Page 1 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-6

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		40	9			**MUNICIPAL SOLID WASTE**, plastic, paper, glass, tires, wood, soil (25% by volume), loose, moist. *(continued)*
15.0								
		D&M		66	43			
15.5								1044.5
						GW		**SANDY GRAVEL**, dark gray, fine to coarse, rounded, some fine- to coarse-grained sand, trace to few fines, dense to very dense, moist.
17.5								▽ @ 17 feet: Becomes wet.
		D&M			50/4"			
18.5								1041.5

Boring complete, refusal at 18.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-6 (Page 2 of 2)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-7

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 **COMPLETED** 2/10/09
GROUND ELEVATION 1062.05 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1045.1 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch intermixed with gravel, loose.
2.5								
	X	D&M		70	14	GM		3.0 (1059.1) **SILTY GRAVEL**, dark olive gray, fine to coarse, subangular to rounded, some fines, little fine- to coarse-grained sand, loose, moist. 3.5 (1058.6) **MUNICIPAL SOLID WASTE**, paper, plastic, cloth, wood, soil (<25% by volume), very dense to loose, moist, strong odor.
5.0								
	X	D&M			50/4"			
7.5								From 6.0 to 7.0 feet: Drilling through wood.
	X	D&M		100	50/3"			
10.0								
	X	D&M		0	9			
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

SLR
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Fax: 425.402.8488

BORING NUMBER SB-7

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		5	8			**MUNICIPAL SOLID WASTE**, paper, plastic, cloth, wood, soil (<25% by volume), very dense to loose, moist, strong odor. *(continued)* @ 12.5 feet: Wood and grass clippings in cuttings.
15.0								
		D&M		40	15			@ 15.0 feet: Wood and paper.
								16.0 1046.1
						GW		**SANDY GRAVEL**, olive gray, fine to coarse, rounded, some fine- to coarse-grained sand, little silt, very dense, moist to wet.
17.5								▽ @ 17.0 feet: Becomes wet.
		D&M			73			@ 17.5 feet: Cobble stuck in sampler, oil sheen on sample.
								19.0 1043.1
								Boring completed at 19.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-7 (Page 2 of 2)

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Fax: 425.402.8488

BORING NUMBER SB-8

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 **COMPLETED** 2/10/09
GROUND ELEVATION 1063.18 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.5 ft / Elev 1044.7 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GP		0.3 **GRAVEL.** 1062.9
								SILTY GRAVEL, olive gray, fine to coarse, subangular to rounded, some fines, little fine- to coarse-grained sand, very dense, damp.
2.5								
	X	D&M		80	50/4"			From 2.0 to 6.0 feet: Difficult drilling, few wood waste, dense.
5.0						GM		
	X	D&M		100	40			@ 6.0 feet: Becomes dark gray, fine to medium, trace waste (paper and plastic), very loose, moist.
7.5								
	X	D&M		66	3			
10.0								9.5 1053.7
	X	D&M		40	6			**MUNICIPAL SOLID WASTE**, plastic, paper, glass, ~40% to 50% soil, loose, moist
12.5								
	X	D&M		66	8			

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

SLR
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BORING NUMBER SB-8

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
	X							**MUNICIPAL SOLID WASTE**, plastic, paper, glass, ~40% to 50% soil, loose, moist *(continued)*
15.0								
	X	D&M		10	5			@ 15.0 feet: Tire caught in sampler.
								17.0 1046.2
17.5						SM		**SILTY SAND**, olive gray, fine-grained sand, some fines, trace organics, loose, moist.
	X	D&M		70	27			18.5 ▽ 1044.7
						GW		**SANDY GRAVEL**, dark olive gray, fine to coarse, some fine- to coarse-grained sand, medium dense, wet. 1044.2
								19.0 Boring completed at 19.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-8 (Page 2 of 2)

SLR
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BORING NUMBER SB-9

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 COMPLETED 2/10/09
GROUND ELEVATION 1062.66 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 17.0 ft / Elev 1045.7 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch and branches.
2.5								1060.2
	X	D&M		60	16	GP-GM		**SILTY GRAVEL**, grayish brown, fine to coarse, angular to rounded, some silt, little fine- to coarse-grained sand, medium dense, moist, few concrete rubble.
5.0								4.5 1058.2 **MUNICIPAL SOLID WASTE**, metal, glass, paper, ~25% soil, loose.
	X	D&M		50	7			
7.5								
	X	D&M		70	14			@7.5 feet: Becomes wood and concrete, (cobble caught in sampler).
10.0								9.5 1053.2 **SILTY SAND**, dark olive brown, fine- to medium-grained, little wood waste, loose, moist, strong odor.
	X	D&M		100	4	SM		
12.5								@ 12.5 feet: decreased wood waste.
	X	D&M		100	3			

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

Figure E-9 (Page 1 of 2)

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BORING NUMBER SB-9

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
						SM		**SILTY SAND**, dark olive brown, fine- to medium-grained, little wood waste, loose, moist, strong odor. *(continued)*
15.0								@14.5 feet: Becomes olive brown, fine-grained, trace to few wood and bark, moist.
		D&M		100	3			
17.5								▽ @17 feet: Becomes olive gray, fine- to medium-grained, trace wood, wet.
		D&M		100	6			
								19.5 1043.2
20.0						GW		**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, rounded to well rounded, few cobbles, medium dense, wet.
		D&M			37			
								21.5 1041.2
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-9 (Page 2 of 2)

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BORING NUMBER SB-10

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 **COMPLETED** 2/10/09
GROUND ELEVATION 1063.96 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1047.0 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								
								WOOD WASTE, bark mulch, trace fine- to medium-grained gravel, dense, moist.
2.5		D&M		100	41			
								3.5 1060.5
						GM		**SILTY GRAVEL**, olive gray, fine to coarse, well-rounded, some fines, little fine- to coarse-grained sand, damp, few concrete rubble. From 4.0 to 6.0 feet: Difficult drilling.
5.0		D&M		70	14			
								6.0 1058.0
								MUNICIPAL SOLID WASTE, paper, glass, loose, wood.
7.5		D&M		70	6			7.0 1057.0
								SILTY GRAVEL, dark olive gray, fine to coarse, some silt, little fine- to coarse-grained sand, loose to very loose, moist.
10.0		D&M		50	12	GW-GM		@ 10.0 feet: Little wood and plastic.
12.5		D&M		100	5			13.5 1050.5

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-10

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
								MUNICIPAL SOLID WASTE, glass, paper, wood, 25% soil, very loose.
15.0								
		D&M		40	5			@ 15 feet: Becomes silty sand (75% by volume), and solid waste.
								17.0 ▽ 1047.0
17.5								**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, few cobbles, fine- to coarse-grained sand, very dense, wet.
		D&M		90	72	GW		
								19.0 1045.0
								Boring completed at 19.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-10 (Page 2 of 2)

SLR
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BORING NUMBER SB-11

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 COMPLETED 2/10/09
GROUND ELEVATION 1064.00 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						WW		**WOOD WASTE.**
2.0								1062.0
2.5		D&M		80	40	GM		**SILTY GRAVEL**, grayish brown, fine to coarse, rounded, some fines, little fine- to coarse-grained sand, medium dense.
4.5								1059.5
5.0		D&M		70	40			**MUNICIPAL SOLID WASTE**, glass, paper, cloth, plastic, little silty sand (25% by volume), medium dense to loose.
7.5		D&M		75	11			@ 7.5 feet: Becomes 75% soil by volume, strong odor.
10.0		D&M		10	11			@ 10.0 feet: Tire tube caught in sampler.
12.0								1052.0
12.5						GM		**SILTY GRAVEL**, dark olive brown, fine to coarse, rounded, some fines, few waste (linoleum), very loose, moist.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-11

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
12.5									
		D&M		100	4	GM		**SILTY GRAVEL**, dark olive brown, fine to coarse, rounded, some fines, few waste (linoleum), very loose, moist. *(continued)*	
								14.5	1049.5
15.0								**SILTY SAND**, olive brown, fine-grained, little wood waste, medium dense, moist .	
		D&M			36	SM		@ 16.0 feet: Becomes olive gray, fine- to medium-grained, no waste.	
								17.0	1047.0
17.5								**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, some fine- to coarse-grained sand, moist.	
		D&M			50/6"	GW		18.5	1045.5
								Boring completed at 18.5 feet.	

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

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BORING NUMBER SB-12

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/10/09 **COMPLETED** 2/10/09
GROUND ELEVATION 1063.26 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.0 ft / Elev 1045.3 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, little fine- to coarse-grained sand, little silt, few fine gravel.
2.5								
	X	D&M		90	11			3.0 1060.3 **MUNICIPAL SOLID WASTE**, loose.
5.0								
	X	D&M		5	40			@ 5 feet: Wood caught in shoe.
7.5								
	X	D&M		50	50/5"			@ 7.5 feet: Glass, paper, plastic, grass clippings, some silty sand (50% by volume), very dense.
10.0								
	X	D&M		100	85			@ 10.0 feet: Roofing material.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

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BORING NUMBER SB-12

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		80	6			**MUNICIPAL SOLID WASTE**, loose. *(continued)* @ 12.5 feet: Glass, paper, plastic, wood, silty fine gravel (50% by volume), very loose.
15.0								
		D&M		70	36			@ 15.0 feet: Metal, plastic, wood, silty fine gravel (25% by volume), medium dense.
17.5								
		D&M		5	50/6"			@ 17.5 feet: Cobble caught in sampler.
								18.0 ▽ 1045.3
						GW		**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, fine- to coarse-grained sand, trace silt, dense, wet.
20.0								
		D&M			64			
								21.5 1041.8
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-12(Page 2 of 2)

SLR
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BORING NUMBER SB-13

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 **COMPLETED** 2/11/09
GROUND ELEVATION 1060.65 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								
								WOOD WASTE, little gravel, little silt, few sand, moist.
2.5								
	X	D&M	SB13-S1	75	12			3.0 1057.7 **MUNICIPAL SOLID WASTE**, paper, grass, glass, ~10% soil, loose, moist.
5.0								
	X	D&M	SB13-S2	75	15			
7.5								
	X	D&M		80	27			@ 7.5 feet: Paper, plastic, grass clippings, soil (<5% by volume), medium dense.
10.0								
	X	D&M		40	40			@ 10.0 feet: Glass, grass clippings, soil (25% by volume), medium dense.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

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Fax: 425.402.8488

BORING NUMBER SB-13

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, paper, grass, glass, ~10% soil, loose, moist. *(continued)*
		D&M		20	9			
15.0								@ 15.0 feet: Becomes silty sand (70% by volume), and 30% wood, medium dense.
		D&M		10	16			
17.5								Waste: Sand and gravel (70% by volume), plastic sheeting.
18.0								1042.7
		D&M		15	39	GW		**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, medium dense, moist to wet.
20.0								From 19.0 to 23.0 feet: Difficult drilling.
22.5								
23.0								1037.7
								Boring completed at 23.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-13(Page 2 of 2)

SLR
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BORING NUMBER SB-14

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 **COMPLETED** 2/11/09
GROUND ELEVATION 1060.74 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 21.0 ft / Elev 1039.7 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**SILTY GRAVEL**, fine to coarse, some fines, some wood waste, medium dense to loose.
2.5	X	D&M		0	39	GM		
5.0	X	D&M	SB14-S1A, SB14-S1B	80	6			@ 5.0 feet: Becomes dark olive brown, little fine- to coarse-grained sand, few municipal waste, loose, moist.
6.0								1054.7
7.5	X	D&M		0	4			**MUNICIPAL SOLID WASTE**, soil, wood, paper, plastic, glass, very loose. @ 7.5 feet: Plastic caught in sampler.
10.0	X	D&M	SB14-S2	40	30			@ 10.0 feet: Paper, plastic, glass, soil, medium dense, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-14

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		10	13			**MUNICIPAL SOLID WASTE**, soil, wood, paper, plastic, glass, very loose. *(continued)* @ 12.5 feet: Wood, glass, paper, very moist. Wood caught in sampler, limited recovery.
15.0								
		D&M		5	8			@ 15 feet: Paper, loose.
17.5								
		D&M	SB14-S3	40	13			@ 17.5 feet: Metal can, plastic, wood, fabric, soil (10% by volume), moist, loose.
18.0								1042.7
		D&M	SB14-S3	40	13	GW		**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, fine- to coarse-grained sand, moist.
20.0								
		D&M	SB14-S4	80	34			@ 21 feet: Becomes wet. ▽
21.5								1039.2
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-14(Page 2 of 2)

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BORING NUMBER SB-15

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 COMPLETED 2/11/09
GROUND ELEVATION 1058.77 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 21.0 ft / Elev 1037.8 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch.
0.5								1058.3
2.5		D&M	SB15-S1	60	32	GM		**SILTY GRAVEL**, dark brown, medium to coarse, well-rounded, some silt, little fine- to medium-grained sand, few cobbles, medium dense, damp.
5.0		D&M	SB15-S2	33	9			@ 4.5 feet: Becomes olive gray, some fines, little sand, loose, moist to wet.
7.0								1051.8
7.5		D&M	SB15-S3	10	4			**MUNICIPAL SOLID WASTE**, styrofoam, plastic, wood, silty sand (40% by volume)
10.0		D&M	SB15-S4	30	4			@ 10.0 feet: Tires, plastic, wood, soil (20% by volume), loose.
12.5		D&M	SB15-S5	45	30			@ 12.5 feet; Paper, grass, wood, glass, plastic, medium dense.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

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Fax: 425.402.8488

BORING NUMBER SB-15

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
								MUNICIPAL SOLID WASTE, styrofoam, plastic, wood, silty sand (40% by volume) *(continued)*
15.0								
		D&M		0	14			@ 15.0 feet: No recovery.
17.5								
		D&M		<5	9			@ 17.5 feet: No recovery, piece of wood blocking sampler.
								19.5 1039.3
20.0								**SILTY SAND**
		D&M		20	38	SM		21.0 ▽ 1037.8
						GW		**SANDY GRAVEL**, olive gray, fine to coarse, rounded, some fine- to coarse-grained sand, medium dense, wet. 21.5 1037.3
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-15(Page 2 of 2)

SLR
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BORING NUMBER SB-16

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 **COMPLETED** 2/11/09
GROUND ELEVATION 1056.25 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1039.3 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GW		**SANDY GRAVEL**, dark olive brown, fine to coarse, well-rounded, some fines, little fine- to coarse-grained sand, few cobbles, medium dense, damp.
2.0								1054.3
2.5						GM		**SILTY GRAVEL**, olive gray, medium to coarse, some fines, little fine- to medium-grained sand, medium dense, moist.
	X	D&M	SB16-S1	40	32			
4.5								1051.8
5.0								**MUNICIPAL SOLID WASTE**, wood, grass, paper, glass, plastic, metal, loose.
	X	D&M		0	9			
7.5								
	X	D&M	SB16-S2	33	3			
10.0								
	X	D&M		15	2			
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-16

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		0	10			**MUNICIPAL SOLID WASTE**, wood, grass, paper, glass, plastic, metal, loose. *(continued)*
15.0								
		D&M	SB16-S3	40	43			
								17.0 ▽ 1039.3
17.5								**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, some fine- to coarse-grained sand, medium dense, wet.
		D&M	SB16-S4	90	33	GW		
20.0								
		D&M	SB16-S5	66	26			
								21.5 1034.8
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-16(Page 2 of 2)

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BORING NUMBER SB-17

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/11/09 **COMPLETED** 2/11/09
GROUND ELEVATION 1053.21 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**GRAVELLY SILT**, brown, fine to coarse, subangular to well-rounded gravel, some fines, little sand, organic, few construction debris, stiff, dry.
2.5	X	D&M		25	14	ML		
5.0	X	D&M	SB17-S1, SB17-S2	30	8			
6.0								1047.2
7.5	X	D&M	SB17-S3	40	50/5"			**MUNICIPAL SOLID WASTE**, glass, plastic, loose. @ 7.5 feet: Gravel, silt, paper, plastic, and glass, very dense.
10.0	X	D&M		0	50/1"			@ 10.0 feet: Plastic sheet on outside of sampler, no recovery.
11.5								1041.7
12.5						GP		**SANDY GRAVEL**, olive gray with orange staining, fine to coarse, well-rounded, some fine- to coarse-grained sand, few cobbles, damp.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

(Continued Next Page)

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BORING NUMBER SB-17

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB17-S4	100	50/5"	GP		**SANDY GRAVEL**, olive gray with orange staining, fine to coarse, well-rounded, some fine- to coarse-grained sand, few cobbles, damp. *(continued)*
15.0								
		D&M	SB17-S5	20	50/5"			
								16.0 1037.2

Boring completed at 16 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

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BORING NUMBER SB-18

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 **COMPLETED** 2/12/09
GROUND ELEVATION 1064.27 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, reddish brown, bark mulch.
2.5	X	D&M	SB18-S1	100	12			
5.0	X	D&M	SB18-S2	100	17			
6.0								1058.3
7.5	X	D&M	SB18-S3	50	24			**MUNICIPAL SOLID WASTE**, silty gravel (90% by volume), glass, metal, medium dense, moist.
								@ 7.5 feet: Gravelly sand (60% by volume), paper, wood, glass, plastic, moist.
10.0	X	D&M	SB18-S4	70	50/4"			@ 10.0 feet: Soil (10% by volume), paper, wood, plastic, very dense, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

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Fax: 425.402.8488

BORING NUMBER SB-18

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, silty gravel (90% by volume), glass, metal, medium dense, moist. *(continued)*
		D&M	SB18-S5	35	14			@ 12.5 feet: Soil (25% by volume), tires, plastic, wood, loose, moist.
15.0								
		D&M	SB18-S6	45	8			@ 15 feet: Soil (10% by volume), plastic, tires, loose, moist to wet.
17.5								
		D&M	SB18-S7	33	54			@ 17.5 feet: Silty sand (50% by volume), paper, metal, moist.
								19.0 1045.3
		D&M	SB18-S8	100	67	SM		**SILTY SAND**, fine-grained, some silt, organic, dense, moist.
20.0								19.5 1044.8
						GW		**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, few cobbles, dense.
22.5								23.0 1041.3
								Boring completed at 23.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-18(Page 2 of 2)

SLR
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BORING NUMBER SB-19

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 **COMPLETED** 2/12/09
GROUND ELEVATION 1060.86 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.5 ft / Elev 1042.4 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, some fine to medium gravel, loose.
2.5	X	D&M	SB19-S1	80	11			
5.0								
	X	D&M	SB19-5.5-6'	85	10			
						SM		**SILTY SAND**, olive gray, fine-grained, some fines, little wood, few bricks.
7.5								5.5 1055.4 — 7.0 1053.9 **MUNICIPAL SOLID WASTE**, Soil (50% by volume), plastic, wood, layers of waste and soil, very loose.
	X	D&M	SB19-S2	60	5			
10.0								@ 10.0 feet: Silty sand layer 8" thick, wood, plastic, glass, very loose, moist.
	X	D&M	SB19-S3	60	3			
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-19

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB19-S4	10	12			**MUNICIPAL SOLID WASTE**, Soil (50% by volume), plastic, wood, layers of waste and soil, very loose. *(continued)* @12.5 feet: Soil and decomposable (80% by volume), plastic, loose, moist.
15.0								
		D&M	SB19-S5	40	18			@ 15.0 feet: soil, wood, paper, glass, plastic, medium dense, moist.
17.5								
		D&M	SB19-S6	90	44			@ 17.5 feet: soil, wood, metal, dense, moist.
18.0								1042.9
		D&M	SB19-S7	20	32	GP		**SANDY GRAVEL**, olive gray, fine to coarse, well-rounded, some fine- to ▽ coarse-grained sand, few cobbles, dense to medium dense, moist to wet.
20.0								
20.5								1040.4
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-19(Page 2 of 2)

SLR
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BORING NUMBER SB-20

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 **COMPLETED** 2/12/09
GROUND ELEVATION 1062.25 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.5 ft / Elev 1043.8 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, fine, trace fine to medium gravel, medium dense, moist.
2.5	X	D&M	SB20-S1	100	16			
4.5								1057.8
5.0	X	D&M	SB20-S2	80	19	SM		**SILTY SAND**, gray, little fine- to coarse-grained, some fines, fine to coarse gravel, rounded, trace glass and plastic, medium dense, moist .
7.0								1055.3
7.5	X	D&M	SB20-S3	66	16			**MUNICIPAL SOLID WASTE**, Soil (25% by volume), glass, plastic, metal, wood, medium dense, moist.
10.0	X	D&M	SB20-S4	33	5			@ 10.0 feet: Paper, yard waste, soil, very loose, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

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BORING NUMBER SB-20

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB20-S5	66	12			**MUNICIPAL SOLID WASTE**, Soil (25% by volume), glass, plastic, metal, wood, medium dense, moist. *(continued)* @ 12.5 feet: Decomposable (90% by volume), paper, plastic, glass, loose, moist.
15.0								
		D&M	SB20-S6	33	18			@ 15.0 feet: Paper, medium dense.
								15.5 1046.8
								SANDY GRAVEL, gray, fine to coarse, some fine- to medium-grained sand, little fines, moist.
17.5								
		D&M	SB20-S7	30	36/6"	GW		▽ @ 18.5 feet: Becomes wet.
20.0		D&M	SB20-S8	66	36			
								20.5 1041.8
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-20(Page 2 of 2)

SLR
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Fax: 425.402.8488

BORING NUMBER SB-21

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/12/09 **COMPLETED** 2/12/09
GROUND ELEVATION 1063.80 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 19.0 ft / Elev 1044.8 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, fine, bark and sawdust, few fine to medium gravel, loose to medium dense, damp.
2.5								
	X	D&M	SB21-S1	100	6			
5.0								
	X	D&M	SB21-S2	100	16			
7.5								
	X	D&M	SB21-S3	100	24			
								8.5 1055.3
						SM		**SILTY SAND**, gray, fine- to coarse-grained, some fines, little fine to coarse gravel, few cobbles, medium dense, moist.
								9.5 1054.3
10.0								**MUNICIPAL SOLID WASTE.**
	X	D&M	SB21-S4	5	4			@ 10.0 feet: Soil/decomposable (95% by volume), paper, very loose.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

(Continued Next Page)

SLR
SLR International Corp
22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-21

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**. *(continued)*
		D&M	SB21-S5	15	8			@ 12.5 feet: Soil/decomposable (90% by volume), paper, loose.
15.0								
		D&M	SB21-S6	80	7			@ 15 feet: Soil (35% by volume), paper, wood, plastic, glass, loose.
17.5								
		D&M	SB21-S7	50	13			@17.5 feet: Soil/decomposable (60% by volume), wood, plastic, metal, loose.
								19.0 ▽ 1044.8
		D&M	SB21-19-19.4'	100	50/5"			**WOOD WASTE**, sludge, trace municipal solid waste, mostly decomposed, very dense, wet. 19.5 1044.3
20.0								**GRAVELLY SAND**, gray, fine- to coarse-grained, some fine to coarse gravel, few cobbles and silt, medium dense, wet.
		D&M	SB21-S8	100	36	SP		
								21.5 1042.3
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-21 (Page 2 of 2)

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BORING NUMBER SB-22

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 COMPLETED 2/13/09
GROUND ELEVATION 1058.85 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 17.0 ft / Elev 1041.9 ft
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, some gravel.
						GM		0.5 — 1058.4 **SILTY GRAVEL**, gray, fine to coarse, some silt, little fine- to coarse-grained sand, moist.
2.5								1.8 — 1057.1 **MUNICIPAL SOLID WASTE**, soil/decomposable (95% by volume), plastic, glass, moist, layers of gray silty sand with few coarse gravel, loose.
	X	D&M	SB22-S1	66	4			
5.0								
	X	D&M	SB22-S2	20	4			
7.5								7.0 — 1051.9 **SANDY SILT**, gray, fine-grained, trace municipal solid waste, trace cobbles, medium stiff to hard, moist.
	X	D&M	SB22-S3	33	10			
10.0						ML		@10.0 feet: No municipal solid waste.
	X	D&M	SB22-S4	60	6			
12.5								
	X	D&M		90	8			@13 feet: Becomes wet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

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BORING NUMBER SB-22

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
						ML		**SANDY SILT**, gray, fine-grained, trace municipal solid waste, trace cobbles, medium stiff to hard, moist. *(continued)*
15.0								
		D&M		80	58			
								17.0 ▽ 1041.9
17.5						GM		**SANDY GRAVEL**, gray, medium to coarse, some fine- to coarse-grained sand, few cobbles, dense, wet.
		D&M		80	43			
20.0		D&M		80	55			20.5 1038.4
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-22(Page 2 of 2)

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BORING NUMBER SB-23

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 **COMPLETED** 2/13/09
GROUND ELEVATION 1059.30 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 17.0 ft / Elev 1042.3 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						SP		**SAND**, brown, fine-grained, some fine to medium gravel, loose, damp.
2.5								
	X	D&M	SB23-S1	55	6			
								MUNICIPAL SOLID WASTE, soil/decomposable (95% by volume), glass, plastic, paper, loose to very loose, moist.
5.0								
	X	D&M	SB23-S2	50	4			@ 5 feet: Soil/decomposable (65% by volume), plastic, glass, paper.
7.5								3.0 1056.3 — 7.0 1052.3
	X	D&M	SB23-S3	100	14	SM		**SILTY SAND**, gray, fine-grained, some fines, little fine gravel, loose, moist.
10.0								
	X	D&M	SB23-S4	60	7			
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

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BORING NUMBER SB-23

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB23-S5	100	15	SM		**SILTY SAND**, gray, fine-grained, some fines, little fine gravel, loose, moist. *(continued)*
								14.5 1044.8
15.0								**SANDY GRAVEL**, gray, fine to coarse, some medium- to coarse-grained sand, few cobbles, medium dense to dense, moist.
		D&M	SB23-S6	100	33			
17.5						GW		@17.5 feet: increased cobbles, becomes wet.
		D&M	SB23-S7	60	88			
20.0		D&M			51			
								20.5 1038.8
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-23(Page 2 of 2)

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BORING NUMBER SB-24

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 COMPLETED 2/13/09
GROUND ELEVATION 1058.79 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						SP		**SAND**, dark brown, fine-grained, moist.
								1.5 — 1057.3
								WOOD WASTE, mixed with gray, fine-grained silty sand, little fine gravel, few cobbles, loose to medium dense, moist.
2.5								
	X	D&M	SB24-S1	85	3			
5.0								
	X	D&M	SB24-S2	66	8			
7.5								7.0 — 1051.8
	X	D&M	SB24-S3	85	8			**MUNICIPAL SOLID WASTE**, soil/decomposable (40% by volume), wood, plastic, cloth/fiber, layers of brown, fine-grained sand with few cobbles, loose to medium dense, moist.
10.0								
	X	D&M	SB24-S4	66	14			@ 10.0 feet: Plastic, paper, wood, soil/decomposable (10% by volume), loose, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-24

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB24-S5	10	21			**MUNICIPAL SOLID WASTE**, soil/decomposable (40% by volume), wood, plastic, cloth/fiber, layers of brown, fine-grained sand with few cobbles, loose to medium dense, moist. *(continued)* @12.5 feet: Soil/decomposable (95% by volume), plastic, medium dense, moist. @ 13.5 feet: Becomes wet.
								14.5 1044.3
15.0								**SILTY SAND**, gray, fine-grained, dense, moist, trace municipal solid waste.
		D&M	SB24-S6	15	49	SM		
17.5								18.0 1040.8
								Boring completed, refusal at 18.0 feet. Drill action indicated presence of large cobbles.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

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BORING NUMBER SB-25

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 COMPLETED 2/13/09
GROUND ELEVATION 1058.01 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						SP		**SAND**, brown, fine-grained, moist.
								1.5 — 1056.5
2.5						SM		**SILTY SAND**, dark brown, fine-grained, some fines, little medium-grained gravel, little wood waste, loose to very loose, moist.
	X	D&M	SB25-S1	15	8			
5.0								
	X	D&M	SB25-S2	10	5			
7.5								7.0 — 1051.0
	X	D&M	SB25-S3	15	8			**MUNICIPAL SOLID WASTE**, Fiber, plastic, glass, soil/decomposable (10% by volume), loose, moist.
10.0								
	X	D&M	SB24-S4	25	15			@ 10.0 feet: Fiber, paper, soil/decomposable (25% by volume), loose, moist.
12.5								
	X	D&M	SB25-S5		17			@ 12.5 feet: Fabric, soil/decomposable (25% by volume), medium dense, moist.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

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BORING NUMBER SB-25

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG		MATERIAL DESCRIPTION
	X								**MUNICIPAL SOLID WASTE**, Fiber, plastic, glass, soil/decomposable (10% by volume), loose, moist. *(continued)*
								14.5	1043.5
15.0						SW			**GRAVELLY SAND**, gray, fine to coarse, some fine- to coarse-grained gravel, very dense, moist.
	X	D&M			50/5"			15.5	1042.5
									Boring completed, refusal at 15.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-25(Page 2 of 2)

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BORING NUMBER SB-26

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/13/09 **COMPLETED** 2/13/09
GROUND ELEVATION 1058.50 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 14.5 ft / Elev 1044.0 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						SP		**SAND**, brown, fine-grained, little fine to medium gravel, moist.
								1.5 — 1057.0
2.5						SM		**SILTY SAND**, gray, fine-grained, some fines, little fine to coarse gravel, trace municipal solid waste, loose, moist.
	X	D&M	SB26-S1	50	6			
5.0								4.5 — 1054.0
	X	D&M	SB26-S2	50	6			**MUNICIPAL SOLID WASTE**, Soil (60% by volume), wood, plastic, loose, moist.
7.5								
	X	D&M	SB26-S3	75	8			@ 7.5 feet: Soil (50% by volume), wood, plastic, loose, moist.
10.0								
	X	D&M	SB26-S4	66	4			@10.0 feet: Soil (75% by volume), wood, plastic, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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Fax: 425.402.8488

BORING NUMBER SB-26

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB26-S5	33	10			**MUNICIPAL SOLID WASTE**, Soil (60% by volume), wood, plastic, loose, moist. *(continued)* @12.5 feet: Soil (50% by volume), paper, plastic, glass.
								14.5 ▽ 1044.0
15.0								**SANDY GRAVEL**, gray, fine to coarse, some medium- to coarse-grained sand, little cobbles, very dense, wet.
		D&M	SB26-S6	100	50/5"	GW		
17.5								
		D&M		0	50/4"			
								18.5 1040.0
								Boring completed, refusal at 18.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-26(Page 2 of 2)

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BORING NUMBER SB-27

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/17/09 **COMPLETED** 2/17/09
GROUND ELEVATION 1063.45 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, few fine gravel, very dense.
2.5	X	D&M	SB27-S1	100	50/5"			
4.5								1059.0
5.0	X	D&M	SB27-S2	80	21			**MUNICIPAL SOLID WASTE**, Soil/decomposable (90% by volume), plastic, glass, wood, paper, medium dense to very loose, moist.
7.5	X	D&M	SB27-S3	50	33			@ 7.5 feet: Wood, soil/decomposable (30% by volume), paper, plastic, glass, moist.
10.0	X	D&M	SB27-S4	66	10			@ 10.0 feet: Paper, soil/decomposable (40% by volume), plastic, glass, loose, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-27

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								@ 12.5 feet: Plastic, glass, very loose.
								13.0 / 1050.5
		D&M	SB27-S5	100	4	SM		**SILTY SAND**, gray, fine-grained, some fines, some bark, very loose to very dense, wet.
15.0								
		D&M	SB27-S6	100	50/5"			
								17.0 / 1046.5
17.5								**SANDY GRAVEL**, fine to coarse, some fine- to medium-grained sand, very dense, moist.
		D&M	SB27-S7	66	50/6"	GW		
20.0								
		D&M		0	50/6"			20.5 / 1043.0
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-27 (Page 2 of 2)

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BORING NUMBER SB-28

CLIENT City of Yakima
PROJECT NUMBER 001.0221.00004
DATE STARTED 2/18/09 COMPLETED 2/18/09
DRILLING DRILLING CONTRACTOR Cascade Drilling
DRILLING DRILLING METHOD Hollow Stem Auger
LOGGED BY B. Robinson CHECKED BY
NOTES

PROJECT NAME Former City of Yakima Landfill
PROJECT LOCATION Yakima, Washington
GROUND ELEVATION 1060.00 ft HOLE SIZE 8.5" Diameter
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 13.5 ft / Elev 1046.5 ft
AT END OF ---
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch, some fine to coarse gravel, dry to damp.
2.5								
		D&M		70	19	GW-GM		
5.0								
		D&M		66	10			
7.5								
		D&M		40	16			
10.0								
		D&M		30	50			
12.5								
		D&M		22	40	GP		

3.0 — 1057.0
SILTY GRAVEL, dark gray, fine to coarse, some silt, little fine- to coarse-grained sand, medium dense, moist, odor.

5.5 — 1054.5
MUNICIPAL SOLID WASTE, Wood, paper, glass, loose to dense.

@ 7.5 feet: Wood, paper, soil/decomposable (10% by volume), medium dense.

@ 10.0 feet: Cobble caught in sampler, trace municipal solid waste in sampler, dense.

12.0 — 1048.0
SANDY GRAVEL, olive gray, fine to coarse, well-rounded to flatened, some fine- to coarse-grained sand, medium dense, moist to wet.

▽

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

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BORING NUMBER SB-28

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	
	X					GP		14.0	1046.0

Boring completed at 14.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-28(Page 2 of 2)

SLR
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22122 20th Avenue SE
Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-29

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 **COMPLETED** 2/19/09
GROUND ELEVATION 1068.95 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark mulch and wood fragments, trace fine to medium gravel, loose to medium dense, moist.
2.5	X	D&M	SB29-S1	100	14			
5.0	X	D&M	SB29-S2	85	21			
7.0								1062.0
7.5								**MUNICIPAL SOLID WASTE**, gravel, paper, plastic.
8.0								1061.0
	X	D&M		80	22			**WOOD WASTE**, bark and sawdust, medium dense, moist.
10.0	X	D&M		5	26			@ 10.0 feet: Plastic caught in sampler.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-29

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**WOOD WASTE**, bark and sawdust, medium dense, moist. *(continued)*
		D&M	SB29-S3	60	23			
15.0								
		D&M	SB29-S4	60	16			
17.5								
		D&M		33	34			
20.0								
		D&M	SB29-S5	66	31			
								21.0 1048.0
						SM		**SILTY SAND**, olive gray, fine-grained, some fines, dense, moist, trace organics
								21.5 1047.5

Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-29(Page 2 of 2)

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BORING NUMBER SB-30

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 **COMPLETED** 2/19/09
GROUND ELEVATION 1066.98 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, mulch and woodchips, some sand, some fine to medium gravel, medium dense, dry to damp.
2.5	X	D&M	SB30-S1	90	17			
5.0	X	D&M	SB30-S2	80	35			@ 5.0 feet: Little silty sand.
7.5	X	D&M		80	12			
								8.0 1059.0 **MUNICIPAL SOLID WASTE**, olive gray silty sand, plastic, paper, loose.
10.0	X	D&M		33	7			9.5 1057.5 **WOOD WASTE**, loose to medium dense.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-30

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB30-S3	66	9			**WOOD WASTE**, loose to medium dense. *(continued)*
15.0								
		D&M		50	40			@ 16.0 feet: 4" piece of wood in sampler.
17.5								
		D&M		30	16			
20.0								
		D&M	SB30-S4	100	12			20.5 1046.5
						ML		**SANDY SILT**, olive brown to olive gray, some fine- to medium-grained sand, trace gravel, stiff, moist.
								21.5 1045.5
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

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BORING NUMBER SB-31

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 COMPLETED 2/19/09
GROUND ELEVATION 1063.77 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0						GM		**SILTY GRAVEL**, dark brown, fine to coarse, angular to rounded, little fine- to coarse-grained sand, little wood waste, dense, moist.
2.5								From 2.0 to 2.5 feet: Wet.
	X	D&M	SB31-S1	100	43			
							3.5	1060.3
								WOOD WASTE.
							4.5	1059.3
5.0								
	X	D&M		50	50/4"	GM		**SILTY GRAVEL**, olive gray, fine to coarse, rounded, trace glass, very dense to medium dense.
7.5								
	X	D&M		5	13		8.5	1055.3
10.0								**MUNICIPAL SOLID WASTE**, medium dense.
	X	D&M		0	24			
12.5								@ 12.0 feet: Becomes wet.
	X	D&M		30	19			@12.5 feet: Wood, paper, silty sand (25% by volume), plastic, medium dense, wet, sheen on sample.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-31

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
								MUNICIPAL SOLID WASTE, medium dense. *(continued)*
								14.5 — 1049.3
15.0								**SILTY SAND**, grayish brown, fine-grained, some fines, moist, layers of bark.
		D&M	SB31-S2	100	7	SM		
17.5								
		D&M			50/5"			@ 17.5 feet: Broken cobble in sampler, no recovery.
								18.0 — 1045.8
								Boring completed at 18.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

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BORING NUMBER SB-32

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 **COMPLETED** 2/19/09
GROUND ELEVATION 1062.60 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, little gravel, moist.
2.5	X	D&M	SB32-S1	100	36	GM		3.0 1059.6 **SILTY GRAVEL**, olive gray, fine to coarse, rounded, some fines, little sand, medium dense, damp. 3.5 1059.1 **MUNICIPAL SOLID WASTE**, paper and decomposables (70% by volume), some silty sand, loose to medium dense.
5.0	X	D&M	SB32-S2	66	8			@ 5.0 feet: Soil/decomposable (95% by volume), metal, glass, loose.
7.5	X	D&M		10	28			@ 7.5 feet: Wood in sampler shoe, no recovery, medium dense.
10.0	X	D&M		5	16			@ 10.0 feet: Cobble in sampler, no recovery, medium dense.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-32

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M		0	50/5"			**MUNICIPAL SOLID WASTE**, paper and decomposables (70% by volume), some silty sand, loose to medium dense. *(continued)* @ 12.5 feet: Wood fragment in sampler, no recovery, very dense.
15.0								
		D&M	SB32-S3	10	78			@ 15.0 feet: Soil/decomposable (50% by volume), wood, paper, very dense.
17.5								17.0 1045.6
		D&M		30	61	GW		**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, very dense, damp.
								19.0 1043.6
								Boring completed at 19.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-32(Page 2 of 2)

SLR
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BORING NUMBER SB-33

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/19/09 COMPLETED 2/19/09
GROUND ELEVATION 1063.90 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, bark, wood mulch, some fine to coarse gravel, medium dense, moist.
2.5	X	D&M	SB33-S1	100	16			
5.0	X	D&M	SB33-S2	80	50/5"			
								5.5 1058.4
7.5	X	D&M		20	36	GP-GM		**SILTY GRAVEL**, olive gray, well-rounded, little cobbles, little silt, dense to medium dense, moist.
								9.5 1054.4
10.0	X	D&M	SB33-S3	40	4			**MUNICIPAL SOLID WASTE**, Soil (60% by volume), wood, paper, metal, plastic, loose to medium dense.
12.5	X	D&M	SB33-S4	33	7			@ 12.5 feet: Soil (50% by volume), paper, metal, plastic, rubber.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

SLR
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BORING NUMBER SB-33

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
								MUNICIPAL SOLID WASTE, Soil (60% by volume), wood, paper, metal, plastic, loose to medium dense. *(continued)*
15.0								
		D&M	SB33-S5	33	33			@ 15.0 feet: Soil/decomposable (90% by volume), glass, plastic.
17.5								
		D&M		5	23			@ 17.5 feet: Tire caught in sampler, no recovery.
								19.5 1044.4
20.0								**SANDY GRAVEL** observed on sampler, no recovery.
		D&M		0	63	GW		@ 20.0 feet: Very difficult drilling.
								21.5 1042.4
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-33(Page 2 of 2)

SLR
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BORING NUMBER SB-34

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/20/09 COMPLETED 2/20/09
GROUND ELEVATION 1061.41 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 18.0 ft / Elev 1043.4 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, wood chips, mulch, some fine to medium gravel.
2.5								
	X	D&M	SB34-S1	100	50			
5.0						GW-GM		
	X	D&M		80	31			
7.5								
	X	D&M		40	9			
10.0								
	X	D&M	SB31-S2	55	19			
12.5								
	X	D&M		50	50/6"			

3.0 — 1058.4
SILTY GRAVEL, olive brown, fine to coarse, well-rounded, some fines, little fine- to coarse-grained sand, dense.
5.5 — 1055.9
WOOD WASTE, mulch.
6.0 — 1055.4
SILTY GRAVEL, olive gray, angular to rounded, some fines, little sand, dense, damp.
GM
7.0 — 1054.4
MUNICIPAL SOLID WASTE, Soil/decomposable (95% by volume), glass, plastic, loose to very dense, moist.
@ 10.0 feet: Soil/decomposable (50% by volume), bricks, metal, plastic, medium dense.
@ 12.5 feet: Soil/decomposable (90% by volume), glass.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

(Continued Next Page)

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BORING NUMBER SB-34

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
15.0								**MUNICIPAL SOLID WASTE**, Soil/decomposable (95% by volume), glass, plastic, loose to very dense, moist. *(continued)*
		D&M		0	19			
17.5								
		D&M		20	50/6"			@ 17.5 feet: Metal and large cobble caught in sampler, limited recovery.
								18.0 ▽ 1043.4
20.0						GW		**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, few cobbles, dense, wet.
		D&M		20	39			
								21.5 1039.9
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 4/13/09

Figure E-34 (Page 2 of 2)

SLR
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BORING NUMBER SB-35

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/20/09 **COMPLETED** 2/20/09
GROUND ELEVATION 1060.03 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 18.0 ft / Elev 1042.0 ft
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, mulch, wood chips and bark, trace gravel.
2.5	X	D&M	SB35-S1	90	15			
5.0	X	D&M		10	50/5"			@ 5.5 feet: Broken cobble in sampler, limited recovery.
								6.5 — 1053.5
						GM		**SILTY GRAVEL**, based on cuttings.
7.5								7.0 — 1053.0
	X	D&M		15	58			**MUNICIPAL SOLID WASTE**, Soil/decomposable (90% by volume), glass, plastic, moist, medium dense to loose.
10.0	X	D&M		0	23			@10.0 feet: No recovery.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-35

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB35-S2	66	6			**MUNICIPAL SOLID WASTE**, Soil/decomposable (90% by volume), glass, plastic, moist, medium dense to loose. *(continued)* @ 12.5 feet: Soil/decomposable (90% by volume), paper, plastic, glass, moist.
15.0								
		D&M		20	10			@ 15 feet: Soil/decomposable (80% by volume), paper, wood, plastic, metal, glass, moist.
17.5								
		D&M	SB35-S3	80	38			18.0 ▽ 1042.0 **SANDY GRAVEL**, olive gray, fine to coarse, rounded, some fine- to coarse-grained sand, trace silt, medium dense, wet.
20.0						GW		
		D&M		50	27			21.5 1038.5
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-35(Page 2 of 2)

SLR
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BORING NUMBER SB-36

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/20/09 COMPLETED 2/20/09
GROUND ELEVATION 1059.20 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING ---
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, some silt, some sand, loose, moist.
2.5	X	D&M		90	8			
5.0	X	D&M	SB36-S1	100	20			
						ML		6.0 (1053.2) **SANDY SILT**, olive gray, some fine-grained sand, stiff, damp.
7.5	X	D&M	SB36-S2	30	8			7.0 (1052.2) **MUNICIPAL SOLID WASTE**, Soil/decomposable (90% by volume), glass, plastic, loose to medium dense.
10.0	X	D&M		0	4			@ 10.0 feet: No recovery.
12.5	X	D&M		5	6			@12.5 feet: Soil/decomposable (100% by volume), loose.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

(Continued Next Page)

SLR
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Bothell, Washington 98021
Telephone: 425.402.8800
Fax: 425.402.8488

BORING NUMBER SB-36

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
	X							**MUNICIPAL SOLID WASTE**, Soil/decomposable (90% by volume), glass, plastic, loose to medium dense. *(continued)*
15.0								
	X	D&M	SB36-S3	30	19			@ 15.0 feet: Soil/decomposable (100% by volume), medium dense.
								17.0 — 1042.2
17.5						SM		**SILTY SAND**, olive gray, fine-grained, some fines, little wood, very dense, moist.
	X	D&M		20	50/5"			18.0 — 1041.2
								Boring completed, refusal at 18.0 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

SLR SB LOG YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/25/09

Figure E-36(Page 2 of 2)

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BORING NUMBER SB-37

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/20/09 **COMPLETED** 2/20/09
GROUND ELEVATION 1063.93 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY B. Robinson **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								
								WOOD WASTE, wood mulch and bark, some fine- to coarse-grained sand, some fine to coarse gravel, medium dense.
2.5								
	X	D&M	SB37-S1	100	21			
5.0								
	X	D&M	SB37-S2	100	12			
								5.5 1058.4
						ML		**SANDY SILT**, olive gray, some fine- to coarse-grained sand, little fine to coarse gravel, few wood and bark, stiff, moist.
7.5								7.0 1056.9
	X	D&M		20	18			**MUNICIPAL SOLID WASTE**, soil/decomposable (80% by volume), gravel, glass, plastic, medium dense, moist.
10.0								
	X	D&M		0	19			@ 10.0 feet: No recovery.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-37

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								
		D&M	SB37-S3	30	19			**MUNICIPAL SOLID WASTE**, soil/decomposable (80% by volume), gravel, glass, plastic, medium dense, moist. *(continued)* @12.5 feet: soil/decomposable (50% by volume), paper, metal, glass, medium dense, moist.
								14.5 1049.4
15.0								**SANDY SILT**, olive gray, some fine- to coarse-grained sand, few wood, soft, moist.
		D&M	SB37-S4	100	5	ML		
								17.0 1046.9
17.5								**SANDY GRAVEL**, olive gray, fine to coarse, some fine- to coarse-grained sand, few cobbles, well rounded, very dense, moist.
		D&M		100	50/5"			
						GP		
20.0								
		D&M		50	50/5"			
								20.5 1043.4
								Boring completed at 20.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

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BORING NUMBER SB-38

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/20/09 COMPLETED 2/20/09
GROUND ELEVATION 1062.63 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 19.0 ft / Elev 1043.6 ft
LOGGED BY B. Robinson CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, woodchips and bark mulch, some sand and gravel, loose to medium dense, moist.
2.5	X	D&M		100	13			
5.0	X	D&M		33	43			
6.0								1056.6
7.5	X	D&M		20	50/0"	ML		**GRAVELLY SILT**, olive gray, fine to medium gravel, angular to rounded, little sand, hard, moist.
9.0								1053.6
10.0	X	D&M		60	6			**MUNICIPAL SOLID WASTE** silty gravel, plastic, tires, metal, soil/decomposable (<5% by volume), loose, moist.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-38

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE** silty gravel, plastic, tires, metal, soil/decomposable (<5% by volume), loose, moist. *(continued)*
		D&M	SB38-S1	80	8			@ 12.5 feet: soil/decomposable (80% by volume), plastic, metal, moist.
15.0								
		D&M		10	8			
17.5								
		D&M	SB38-S2	50	42			
20.0						GW		@ 18.5 feet: Becomes wet. ▽
		D&M			14			
								17.0 — 1045.6
								SANDY GRAVEL, olive gray, fine to coarse, some fine- to coarse-grained sand, very dense, moist to wet, cobbles.
								21.5 — 1041.1
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-38(Page 2 of 2)

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BORING NUMBER SB-39

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/23/09 **COMPLETED** 2/23/09
GROUND ELEVATION 1061.64 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ **AT TIME OF DRILLING** 19.5 ft / Elev 1042.1 ft
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, trace fine gravel, very dense.
2.5	X	D&M	SB39-S1	100	50/6"			
4.5								1057.1
5.0	X	D&M	SB39-S2	50	14	ML		**GRAVELLY SILT**, gray, some fine gravel, little fine-grained sand, trace wood waste, stiff, moist.
7.0								1054.6
7.5	X	D&M		0	10			**MUNICIPAL SOLID WASTE**, very loose to loose. @ 7.5 feet: No recovery, waste in cuttings.
10.0	X	D&M	SB39-S3	10	4			@ 10.0 feet: Wood, soil/decomposable (20% by volume), plastic, glass, very loose.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-39

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, very loose to loose. *(continued)*
		D&M	SB39-S4	10	13			@ 12.5 feet: Soil/decomposable (40% by volume), wood, plastic, loose.
15.0								
		D&M		0	15			@ 15 feet: No recovery, waste in cuttings.
								17.0 1044.6
17.5								**GRAVELLY SAND**, gray, fine- to medium-grained, some fine to medium gravel, little fractured cobbles, moist.
		D&M	SB39-S5	50	81	SP		
20.0								▽ @ 19.5 feet: Becomes wet.
		D&M		60	62			
								21.5 1040.1
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-39(Page 2 of 2)

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BORING NUMBER SB-40

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/23/09 COMPLETED 2/23/09
GROUND ELEVATION 1060.15 ft HOLE SIZE 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
▽ AT TIME OF DRILLING 19.5 ft / Elev 1040.7 ft
LOGGED BY C. Lee CHECKED BY
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE**, trace fine gravel, moist.
2.5	X	D&M	SB40-S1	80	49			
						ML		3.5 / 1056.7 **GRAVELLY SILT**, gray, some fine gravel, few cobbles, little fine to medium sand, hard, moist.
5.0								4.5 / 1055.7 **MUNICIPAL SOLID WASTE**, very dense to loose.
	X	D&M		0	50/4"			@ 5.0 feet: No recovery, waste in cuttings.
7.5	X	D&M		0	50/5"			@ 7.5 feet: No recovery, waste in cuttings, steel can blocking sampler.
10.0	X	D&M	SB40-S2	10	13			@ 10.0 feet: Metal, wood, soil/decomposable (20% by volume), loose.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-40

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, very dense to loose. *(continued)*
		D&M	SB40-S3	33	8			@ 12.5 feet: Wood, soil/decomposable (40% by volume), plastic, glass, loose.
								14.5 1045.7
15.0								**SANDY SILT**, gray, some fine-grained sand, medium stiff, moist.
		D&M	SB40-S4	50	9	ML		
17.5								
								18.0 1042.2
		D&M	SB40-S5	100	27			**SANDY GRAVEL**, gray, fine to medium, some fine to medium sand, little silt, medium dense, moist.
20.0						GW		▽ @ 19.5 feet: Becomes wet.
		D&M		70	24			
								21.5 1038.7
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-40(Page 2 of 2)

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BORING NUMBER SB-41

CLIENT City of Yakima
PROJECT NAME Former City of Yakima Landfill
PROJECT NUMBER 001.0221.00004
PROJECT LOCATION Yakima, Washington
DATE STARTED 2/23/09 **COMPLETED** 2/23/09
GROUND ELEVATION 1064.60 ft **HOLE SIZE** 8.5" Diameter
DRILLING DRILLING CONTRACTOR Cascade Drilling
GROUND WATER LEVELS:
DRILLING DRILLING METHOD Hollow Stem Auger
AT TIME OF DRILLING Dry
LOGGED BY C. Lee **CHECKED BY**
AT END OF ---
NOTES
AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0.0								**WOOD WASTE.**
								1.5 — 1063.1
								SILTY SAND, gray, fine-grained, some fines, little fine gravel, medium dense, moist.
2.5								
		D&M	SB41-S1	66	20			
						SM		
5.0								
		D&M	SB41-S2	33	22			
								7.0 — 1057.6
7.5								**MUNICIPAL SOLID WASTE**, medium dense to loose.
		D&M		0	13			@ 7.5 feet: No recovery, waste in cuttings.
10.0								
		D&M		0	17			@ 10.0 feet: No recovery, waste in cuttings, gas venting from auger stem.
12.5								

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

(Continued Next Page)

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BORING NUMBER SB-41

CLIENT City of Yakima **PROJECT NAME** Former City of Yakima Landfill

PROJECT NUMBER 001.0221.00004 **PROJECT LOCATION** Yakima, Washington

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	BLOW COUNTS PER FOOT (N VALUE)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
12.5								**MUNICIPAL SOLID WASTE**, medium dense to loose. *(continued)*
		D&M	SB41-S3	20	6			@ 12.5 feet: soil/decomposable (40% by volume), wood, plastic, loose.
15.0								
		D&M		0	13			
17.5								
		D&M		0	15			@ 17.5 feet: No recovery, drilling action indicated municipal solid waste, loose.
								19.5 1045.1
20.0								**SILTY SAND**, gray, fine-grained, some fines, little fine to medium gravel, dense, moist.
		D&M	SB41-S4	30	55	SM		
								21.5 1043.1
								Boring completed at 21.5 feet.

REMARKS

SS = Samples collected by using an 18-inch-long, 3.0-inch outside diameter Dames & Moore split-barrel sampler driven by a 300 lb. autohammer with a 24-inch drop.

▽ Water level at time of drilling.

SLR GENERAL YAKIMA SOIL BORINGS.GPJ GINT US.GDT 3/20/09

Figure E-41 (Page 2 of 2)

FPP-B01

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description	Groundwater
0	FPP-B01 -S(0.5-1)	d3		0		GP-GM	Gray, sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (loose, dry) **(FILL)**	
5				0		GP	Mottled, gray to brown, coarse GRAVEL with sand and cobbles (no odor, no sheen) (loose, dry)	
10	FPP-B01 -S(12-13)	d3		0		SP-SM	Brown, very gravelly medium to coarse SAND with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	▽ 15.0 ft ATD 13.0 ft During Groundwater Sample Collection
15								
20								
25								

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 06/18/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466690.12
East: 1640805.96

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B01

Figure
E-42

FPP-B02

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ / △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0	FPP-B02 -S(1-2)	d3		0		GP-GM	Dark brown, very sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (loose, dry) **(FILL)**	
						GP	Mottled gray to brown coarse GRAVEL with sand and cobbles (no odor, no sheen) (loose, dry)	
5				0				
10								
15	FPP-B02 -S(14-15.5)	d3		0		SP-SM	Dark gray to brown, gravelly fine to coarse SAND with silt (slight petroleum-like odor, no sheen) (loose, damp) **(ALLUVIUM)**	▼ 15.0 ft During Groundwater Sample Collection
						GP-GM	-grades sandy GRAVEL with silt (no odor, no sheen) (loose, wet)	
20								
25								

Boring Completed 06/19/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466656.47
East: 1640829.33

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B02

Figure
E-43

FPP-B03

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0	FPP-B03 -S(0.5-2)	d3		0		GP	Brown, sandy fine to coarse GRAVEL (no odor, no sheen) (loose, dry) **(FILL)**	
5				0.6		GP	Brown to gray, sandy, fine to coarse GRAVEL (no odor, no sheen) (loose, dry)	
10								
15	FPP-B03 -S(13-14)	d3		0.4				▽ 15.0 ft ATD 13.0 ft During Groundwater Sample Collection
20								
25								

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/18/13
Total Depth of Boring = 15.0 ft.

Point located at State Plane Coordinates:
North: 466624.01
East: 1640833.71

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B03

Figure
E-44

FPP-B04

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (medium dense, damp) **(FILL)**
				0.1		GP	Gray to green sandy GRAVEL (no odor, no sheen) (medium dense, dry)
5						PC	Crushed concrete (loose, dry)
				0		GP	Gray to green, sandy GRAVEL (petroleum-like odor, no sheen) (medium dense, dry)
10	FPP-B04 -S(11-12)	d3		0		SP	Dark gray to green very gravelly fine to coarse SAND (petroleum-like odor, sheen) (loose, dry)
				0			-Green soil staining
							-grades sandy GRAVEL (petroleum-like odor, sheen) (loose, dry)
15						SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
							-grades to very sandy GRAVEL with native wood debris (roots, bark)
20	FPP-B04 -S(21-22)	d3		0		GP-GM	Dark brown, woody, very sandy GRAVEL with silt (no odor, no sheen) (loose, wet)
						WD	Brown native woody debris(roots, bark) (no odor, no sheen) (loose, wet)
25							

Groundwater: ▼ 13.0 ft ATDng Groundwater Sample Collection

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/18/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466815.05
East: 1641066.03

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B04

Figure
E-45

FPP-B05

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						SP-SM	Brown, gravelly, fine to medium SAND with silt (no odor, no sheen) (loose, damp)
						GP	**(FILL)**
							Blue-gray, sandy GRAVEL (petroleum-like odor, no sheen) (loose, dry)
5				0			
10				0		SP	Dark gray, fine to coarse SAND with gravel (petroleum-like odor, sheen) (loose, damp) **(ALLUVIUM)**
15	FPP-B05 -S(15-16.5)	d3		1.7			-green to yellow oily substance in core tube between 15 and 17 ft
20						GP-GM	Dark gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet)
25	FPP-B05 -S(22.5-24)	d3		0.5			

Groundwater: 13.0 ft During Groundwater Sample Collection; 15.5 ft ATD

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 06/19/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466791.56
East: 1641118.69

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B05

Figure
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FPP-B06

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲ | △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0				0		GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry) **(FILL)**	
5				0		SM	Brown, silty fine to medium SAND with gravel (no odor, no sheen) (medium dense, dry)	
10				0		SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	▽ 10.0 ft ATD During Groundwater Sample Collection
							-depth of lathe pit to north of boring is 13.3 feet	
15	FPP-B06 -S(15-16)	d3		0			-grades very sandy GRAVEL with silt (loose, wet) (no odor,no sheen)	
20								
25								

Boring Completed 06/18/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466743.99
East: 1641075.37

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B06

Figure
E-47

FPP-B07

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0	FPP-B07 -S(0.5-1.5)			0.5		SP	Green to gray gravelly fine to coarse SAND (petroleum-like odor, no sheen) -green staining (loose, dry)
						WD	**(FILL)** Brown WOODWASTE material (no odor, no sheen) (loose, wet)
5				0			
10						SP-SM	Dark gray, gravelly fine SAND with silt (slight petroleum-like odor, no sheen) (medium dense, wet) **(ALLUVIUM)**
15	FPP-B07 -S(15-16)			0.3			-grades dark gray, gravelly fine to medium SAND with silt (medium dense, wet)
20							
25							

Groundwater: ▼ 13.0 ft During Groundwater Sample Collection

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/19/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466954.12
East: 1641303.35

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B07

Figure
E-48

FPP-B08

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0				0		GP	Brown, sandy GRAVEL (no odor, no sheen) (loose, damp) **(FILL)**	
5	FPP-B08 -S(5-6.5)	d3		0.2		WD	Brown WOODWASTE material (no odor, no sheen) (loose, wet)	
						SP-SM	Brown, silty fine SAND with gravel (no odor, no sheen) (loose, damp)	
10				0.2				▼ 13.0 ft During Groundwater Sample Collection
15						ML	Gray, sandy SILT with gravel (no odor, no sheen) (medium stiff, damp)	
				0		SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	
20								
25								

Boring Completed 06/18/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466739.19
East: 1641203.73

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B08

Figure
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FPP-B09

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SP-SM	Brown, gravelly fine to medium SAND with silt (slight petroleum-like odor, no sheen) (loose, damp) **(FILL)**	
10	FPP-B09 -S(12-13)			0.3		GP-GM	Brown, sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (medium dense, damp)	▼ 14.0 ft During Groundwater Sample Collection
15						SP-SM	Dark gray, gravelly fine to coarse SAND with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	
20						SP	Dark gray, fine to coarse SAND with gravel (no odor, no sheen) (loose, wet)	
25								

Moisture Content (%) (Plastic Limit — Liquid Limit) 0 0 0 0
▲ SPT N-Value ▲ △ Non-Standard N-Value △ 0 0 0 0
× Fines Content (%) × 0 0 0 0

Boring Completed 06/19/13
Total Depth of Boring = 23.0 ft.

Point located at State Plane Coordinates:
North: 466628.15
East: 1641025.81

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B09

Figure
E-50

FPP-B10

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP	Gray pea GRAVEL (no odor, no sheen) (loose, damp)
						GP-GM	**(FILL)** Mottled, gray to brown sandy coarse GRAVEL with silt and cobbles (no odor, no sheen) (loose, dry)
5				0			
10	FPP-B10 -S(10-11)	d3		0		SP	Blue-gray, fine to medium SAND with gravel (petroleum-like odor, slight sheen) (loose, damp)
15	FPP-B10 -S(15-16)	d3		0		SP-SM	Dark gray, gravelly fine to coarse SAND with silt (no odor, no sheen) (loose, wet)
						ML	Gray, sandy SILT with woody debris (no odor, no sheen) (medium stiff, wet)
						SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, wet)
						CL	**(ALLUVIUM)** Brown, sandy CLAY (no odor, no sheen) (stiff, wet)
20							
25							

Groundwater: ▽ 15.0 ft ATD 5 ft During Groundwater Sample Collection

Boring Completed 06/18/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466592.82
East: 1640969.10

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B10

Figure
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FPP-B11

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0						SP	Brown, gravelly, fine to coarse SAND (no odor, no sheen) (loose, dry) **(FILL)**
5						SP	Gray to brown, mottled, gravelly, fine to coarse SAND with cobbles (no odor, no sheen) (loose, dry)
						GP	Blue-gray GRAVEL with sand (no odor, no sheen) (loose, dry)
				0		SP SP SP-SM	Gray to brown, mottled, gravelly, fine to coarse SAND with cobbles (petroleum-like odor, no sheen) (medium dense, dry) -black staining -grades with silt
10						SP-SM	Gray, gravelly fine to coarse SAND with silt (no odor, no sheen) (medium dense, damp)
				0			
15						SP SM	Brown, gravelly fine to coarse SAND (no odor, no sheen) (dense, damp) -grades silty
	FPP-B11 -S(18-19)			0		SP	Dark gray, gravelly fine to coarse SAND (very slight petroleum-like odor, no sheen) (loose, wet) **(ALLUVIUM)**
20	FPP-B11 -S(22-23)			0		SP-SM	Brown, gravelly fine to coarse SAND with silt (no odor, no sheen) (loose, wet)
25							

Groundwater: ▼ 14.0 ft During Groundwater Sample Collection; ▽ 17.5 ft ATD

Boring Completed 06/18/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466613.31
East: 1641046.66

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B11

Figure
E-52

FPP-B12

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/18/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SP-SM	Brown, fine to medium SAND with gravel, with silt (no odor, no sheen) (loose, damp) **(FILL)**	
5						GP-GM	Brown, very sandy GRAVEL with silt (no odor, no sheen) (loose, damp)	
	FPP-B12 -S(6-7)			0		SP-SM	Gray, gravelly fine to coarse SAND with silt (no odor, no sheen) (loose, damp)	
10								8.5 ft During Groundwater Sample Collection

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 06/18/13
Total Depth of Boring = 10.0 ft.

Point located at State Plane Coordinates:
North: 466624.35
East: 1641156.67

15
20
25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B12

Figure
E-53

FPP-B13

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/17/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SP-SM	Brown, very gravelly fine to medium SAND with silt (no odor, no sheen) (loose, damp) **(FILL)**	
5	FPP-B13 -S(5.5-6.5)			0		GP-GM	Mottled, gray to brown, sandy, coarse GRAVEL with silt and cobbles (no odor, no sheen) (loose, dry)	
						SP-SM	Gray, gravelly, fine to coarse SAND with silt (no odor, no sheen) (loose, wet)	▼ 9.0 ft During Groundwater Sample Collection
10						GP-GM	Mottled, gray to brown, sandy, coarse GRAVEL with silt and cobbles (no odor, no sheen) (loose, dry)	
	FPP-B13 -S(12.5-14)			0		GM	Gray, sandy, silty GRAVEL (no odor, no sheen) (loose, wet)	▽ 14.5 ft ATD
15						CL	Dark gray, sandy CLAY (no odor, no sheen) (stiff, damp) **(ALLUVIUM)**	
						SP-SM	Dark gray, gravelly fine to coarse SAND with silt (no odor, no sheen) (loose, wet)	
20								
25								

Boring Completed 06/17/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466498.65
East: 1641113.39

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B13

Figure
E-54

FPP-B14

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/17/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0				0		GP	Brown, sandy GRAVEL with woodwaste (no odor, no sheen) (loose, dry) **(FILL)**	
5				0		SM	Black, silty fine SAND (no odor, no sheen) (dense, damp)	▼
						GP	Light-gray, fine to coarse sandy GRAVEL (no odor, no sheen) (medium dense, dry)	
10						GP	Mottled gray to brown sandy coarse GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
15	FPP-B14 -S(14-15)			0.3		GP	Blue-gray, sandy GRAVEL (no odor, no sheen) (medium dense, dry)	
						SM	Dark gray, silty SAND (slight petroleum-like odor, no sheen) (medium dense, dry)	
						GP	Mottled gray to brown sandy coarse GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
20	FPP-B14 -S(18.5-19.5)			0		SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, damp)	
						CL	**(ALLUVIUM)** Dark gray, silty CLAY with trace woodwaste and organics (no odor, no sheen) (medium stiff, damp)	▽
25								

Boring Completed 06/17/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466411.53
East: 1640990.27

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

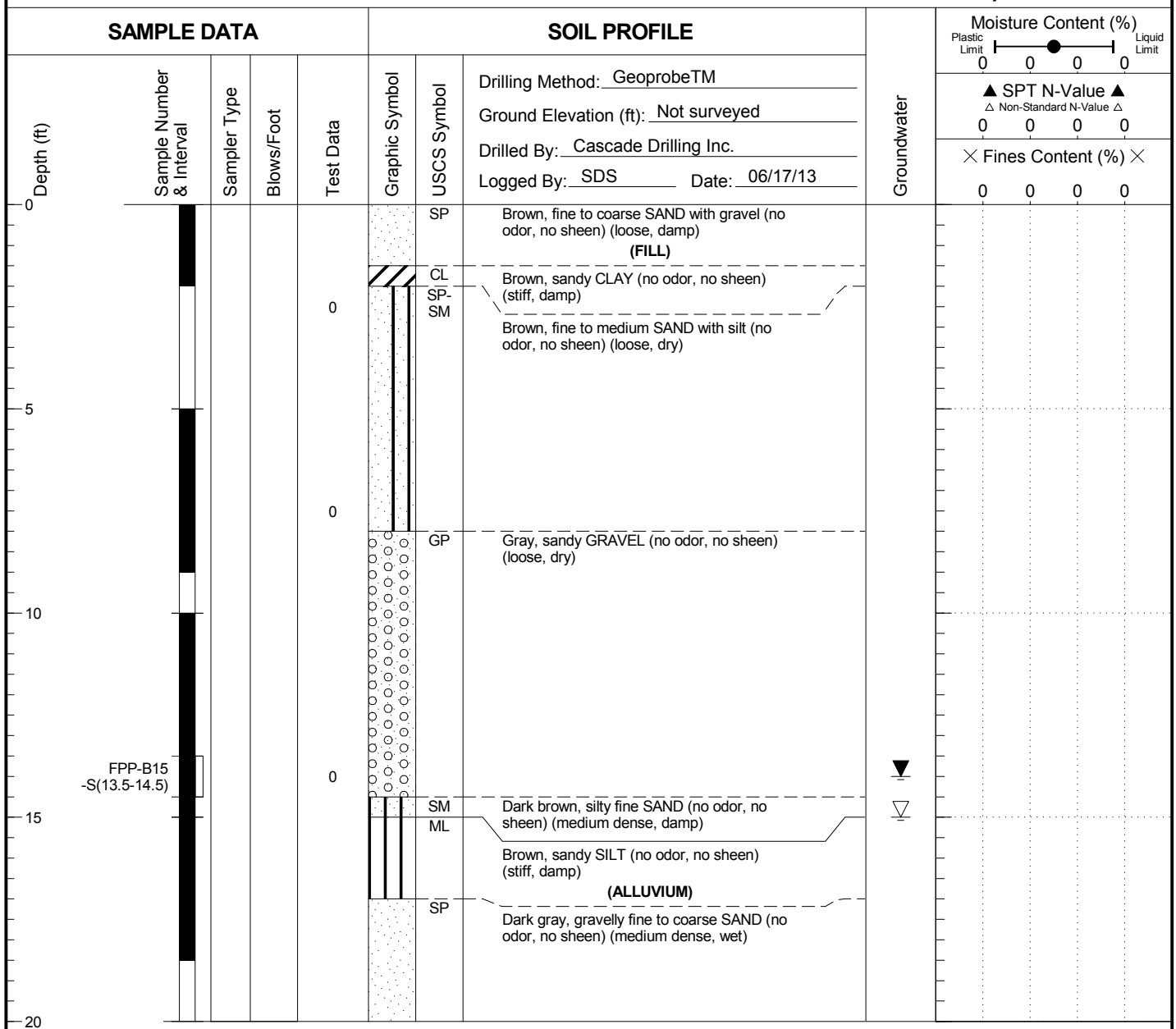
Yakima Mill Site
Yakima, WA

Log of Boring FPP-B14

Figure
E-55

FPP-B15

LAI Project No: 1148007.010



Boring Completed 06/17/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466441.36
East: 1641092.05

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B15

Figure
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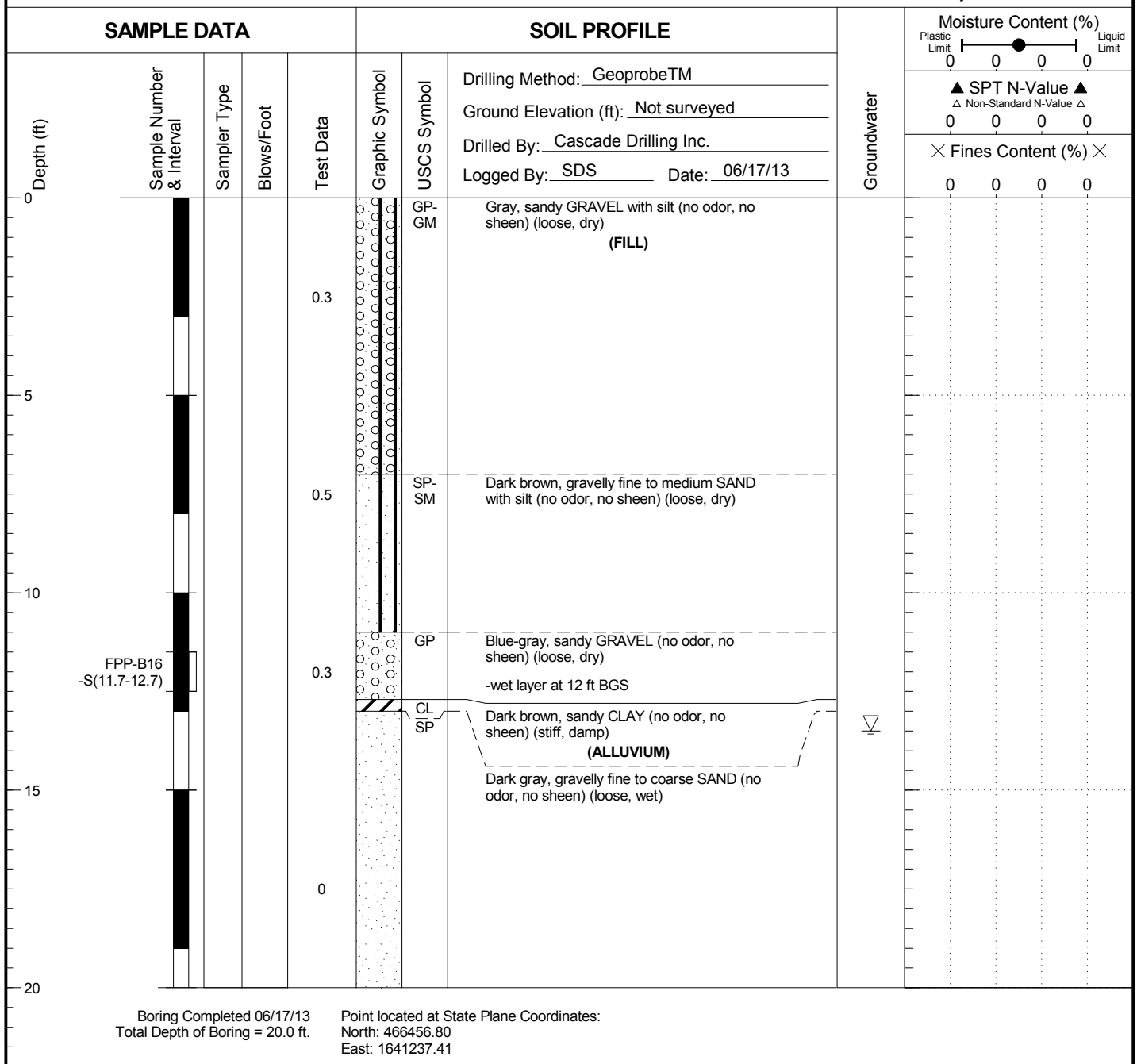
FPP-B16

LAI Project No: 1148007.010



Boring Completed 06/17/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466456.80
East: 1641237.41

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

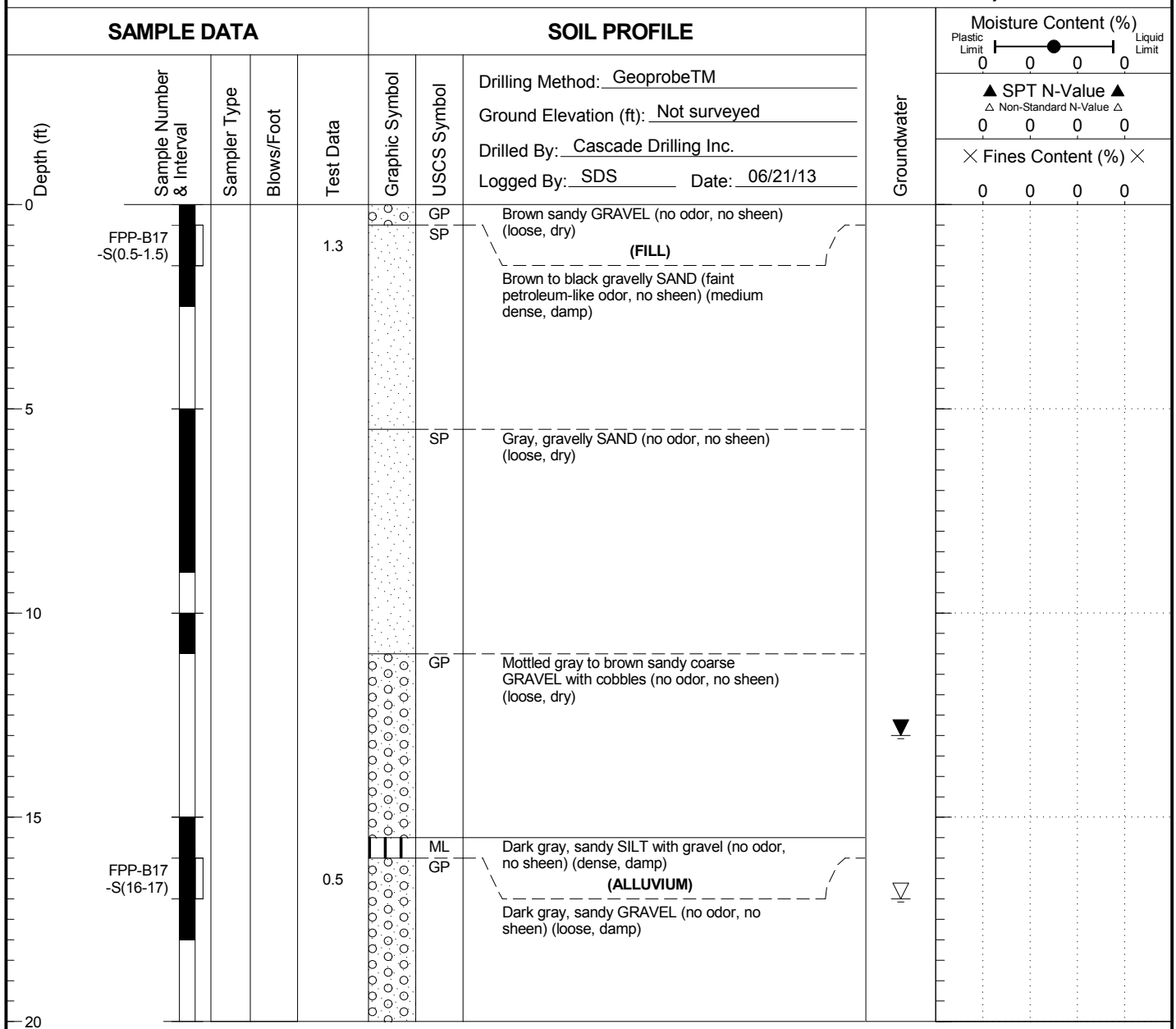
Yakima Mill Site
Yakima, WA

Log of Boring FPP-B16

Figure
E-57

FPP-B17

LAI Project No: 1148007.010



Boring Completed 06/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466889.42
East: 1641135.63

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B17

Figure
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FPP-B18

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0						WD	Brown WOODWASTE material (no odor, no sheen) (loose, dry)
						GP-GM	**(FILL)**
						SM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, dry)
				0			Brown silty SAND with woodwaste debris (<10%) (no odor, no sheen) (loose, dry)
5				0			
10						SP	Gray, gravelly SAND (no odor, no sheen) (loose, dry)
							-grades brown, with a slight petroleum-like odor
						GP	Gray sandy GRAVEL (no odor, no sheen) (loose, dry)
15							
	FPP-B18 -S(16.5-17.5)			0		GM	Dark gray, silty, sandy GRAVEL (slight petroleum-like odor, no sheen) (loose, wet) **(ALLUVIUM)**
20							
25							

Groundwater ▽

Boring Completed 06/19/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466867.16
East: 1641359.46

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B18

Figure
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FPP-B19

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/19/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater	Moisture Content (%) Plastic Limit / Liquid Limit	SPT N-Value / Non-Standard N-Value	Fines Content (%)
0						WD	Brown WOODWASTE material (no odor, no sheen) (loose, damp) **(FILL)**		0 0 0 0	0 0 0 0	0 0 0 0
				0		SP	Brown, silty fine to coarse SAND with gravel (no odor, no sheen) (loose, damp) -unit interspersed with 3 minor (<2 inch) lenses of woodwaste material between 5 and 8 feet				
5				0							
10	FPP-B19 -S(11-12)			0				▽			
				0			-green water in soil at top of water table (acrid odor, no sheen)	▼			
15						SP	Gray, fine to coarse SAND with gravel (no odor, no sheen) (loose, wet) **(ALLUVIUM)**				
				0							
20											
25											

Boring Completed 06/19/13
Total Depth of Boring = 19.0 ft.

Point located at State Plane Coordinates:
North: 466837.10
East: 1641072.86

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B19

Figure
E-60

FPP-B20

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0				0		GP-GM	Brown, sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (loose, dry) **(FILL)**	
						SM	Gray, very silty SAND with gravel (no odor, no sheen) (loose, damp)	
5				0		WD	Brown WOODWASTE material with minor dark brown silty fine SAND (no odor, no sheen) (loose, damp)	▼
10						SM	Dark brown, silty fine SAND (no odor, no sheen) (loose, damp)	▽
						WD	Brown WOODWASTE with minor brown, sandy organic clay (no odor, no sheen) (medium dense, wet)	
15				0		SP	Dark gray, gravelly fine to coarse SAND (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	
20								
25								

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466333.65
East: 1641193.23

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B20

Figure
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FPP-B21

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SM	Brown, silty fine SAND with gravel (no odor, no sheen) (dense, damp) **(FILL)**	
				0		GP	Blue-gray, sandy GRAVEL (no odor, no sheen) (loose, dry)	
5								
				0		GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (dense, damp) **(ALLUVIUM)**	
10				0				
	FPP-B21 -S(13-14)			0			-grades loose, wet	▽
15								
20								
25								

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466266.22
East: 1640821.41

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B21

Figure
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FPP-B22

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Groundwater
0						SP-SM	
						WD	
						SP-SM	
				0.8			
5							
						GP	
				0.8			
10							
	FPP-B22 -S(12.5-13.5)			1			▽
15							
20							
25							

Brown, fine to medium SAND with silt (no odor, no sheen) (medium dense, damp)

(FILL)

Dark brown WOODWASTE (slight petroleum-like odor, no sheen) (loose, damp)

Brown, fine to medium SAND with silt (no odor, no sheen) (medium dense, damp)

Gray to brown mottled, sandy GRAVEL with cobbles (slight petroleum-like odor, no sheen) (loose, dry)

-dark stained area (petroleum-like odor, light sheen)

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 15.0 ft.

Point located at State Plane Coordinates:
North: 466106.00
East: 1640878.58

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B22

Figure
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FPP-B23

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Groundwater
0				0		GP-GM	
5				0		GP	
10	FPP-B23 -S(11.5-12.5)			0		SP-SM	▽
15							
20							
25							

GP-GM: Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry) **(FILL)**

GP: Gray to brown mottled sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)

SP-SM: Brown, gravelly SAND with silt (no odor, no sheen) (loose, wet)

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 15.0 ft.

Point located at State Plane Coordinates:
North: 465822.60
East: 1640968.44

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B23

Figure
E-64

FPP-B24

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description	Groundwater
0				0.2		SM	Brown, silty fine to medium SAND with gravel (no odor, no sheen) (loose, damp) **(FILL)**	
5				0.8		GP-GM	Dark gray, sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (medium dense, damp)	
10						CL	Brown, organic-rich sandy CLAY with trace wood debris (no odor, no sheen) (stiff, damp)	▼
						GP-GM	**(ALLUVIUM)** Dark gray, sandy GRAVEL with silt (slight petroleum-like odor, no sheen) (medium dense, wet)	
15	FPP-B24 -S(15-16.5)	d3		0.6				▽
20								
25								

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466346.22
East: 1641173.07

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B24

Figure
E-65

FPP-B25

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/21/13

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △ 0 0 0 0
× Fines Content (%) × 0 0 0 0

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP	Gray to brown mottled, very sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry) **(FILL)**
5				0.1		GP	Gray to brown mottled, very sandy GRAVEL with cobbles (slight petroleum-like odor, no sheen) (loose, dry)
10						SP	Brown, gravelly, fine to medium SAND (no odor, no sheen) (medium dense, dry)
				0.0		GP	Gray to brown mottled, sandy GRAVEL with cobbles (no odor, no sheen) (medium dense, dry)
15	FPP-B25 -S(15-16)	d3				SP-SM	Brown, gravelly, fine to medium SAND with silt (no odor, no sheen) (medium dense, damp)
						GP	Gray, sandy GRAVEL (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
20							
25							

Groundwater: ▼ 14.5 ft During Groundwater Sample Collection; ▽ 17.0 ft ATD

Boring Completed 08/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466827.49
East: 1641033.50

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B25

Figure
E-66

FPP-B26

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/21/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry) **(FILL)**
5				0.2		SP	Dark gray, fine to medium SAND with gravel (no odor, no sheen) (loose, damp)
10				0.3		SP	Dark gray, fine to medium SAND with gravel (grades very gravelly fine to medium SAND) (no odor, no sheen) (loose, damp)
15	FPP-B26 -S(15-16)	d3					
20						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
25							

Groundwater: ▽ 16.5 ft ATD During Groundwater Sample Collection

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466765.50
East: 1641024.38

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

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Yakima Mill Site
Yakima, WA

Log of Boring FPP-B26

Figure
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FPP-B27

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/21/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						SM	Brown, silty, fine to medium SAND with gravel (no odor, no sheen) (loose, damp) **(FILL)**
						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, damp)
5	FPP-B27 -S(5-6)	d3		0.0		GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
10						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (dense, wet)
15				0.0		GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) - gravel ranges up to cobbles (~3 inches) (medium dense, wet)
20							
25							

Groundwater: ▼ 13.0 ft During Groundwater Sample Collection; 5.0 ft ATD

Boring Completed 08/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466717.49
East: 1641125.16

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B27

Figure
E-68

FPP-B28

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/23/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						SM	Brown, silty, fine to medium SAND with gravel (no odor, no sheen) (loose, damp) **(FILL)**
						GP	Gray to brown mottled, sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)
5				0.0		GP	Gray to brown mottled, sandy GRAVEL with cobbles (slight petroleum-like odor, no sheen) (loose, dry)
10						GP	Gray to brown mottled, sandy GRAVEL with cobbles (slight petroleum-like odor, no sheen) (loose, dry)
				0.1		SM	Brown, silty fine to medium SAND with gravel (slight petroleum-like odor, no sheen) (loose, damp)
15	FPP-B28 -S(15-16)	d3				GP-GM	Gray, sandy GRAVEL with silt (strong petroleum-like odor, slight sheen) (loose, wet) **(ALLUVIUM)**
				1.6 0.1			
20							
25							

Groundwater: ▼ 15.0 ft During Groundwater Sample Collection

Boring Completed 08/23/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466852.86
East: 1641207.79

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B28

Figure
E-69

FPP-B29

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SM	Brown, silty, fine to coarse SAND with gravel (no odor, no sheen) (loose, damp) **(FILL)**	
5						SP	Gray, fine to coarse SAND with gravel (no odor, no sheen) (loose, damp)	
						GP	Gray to brown mottled, sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
10						GP	Gray, sandy GRAVEL (pea gravel) (very slight petroleum-like odor, some sheen) (loose, dry)	▽ 10.0 ft ATD
15				0.0				
20								
25								

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/22/13
Total Depth of Boring = 15.0 ft.

Point located at State Plane Coordinates:
North: 466869.04
East: 1641291.97

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B29

Figure
E-70

FPP-B29a

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Profile	Groundwater
0				1.4		SM	Dark, brown silty fine to coarse SAND with gravel (strong burnt odor, no sheen) (loose, damp) **(FILL)**	
5				0.0		GP	Gray to brown mottled, sandy GRAVEL with cobbles (no odor, no sheen) (loose, damp)	
10				0.0				
15	FPP-B29a -S(15-16)	d3				GP	Brown, sandy GRAVEL (petroleum-like odor, sheen) (loose, damp)	
						ML	**(ALLUVIUM)** -brown, viscous free-product at 16 ft BGS	
20				0.0			Gray, sandy SILT (petroleum-like odor, no sheen) (medium stiff, damp)	▽ 20.5 ft ATD
						SM	Dark brown, silty, fine SAND with gravel (strong petroleum-like odor, heavy sheen) (medium dense, wet)	
25				1.0				

Boring Completed 08/22/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466870.76
East: 1641281.74

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B29a

Figure
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FPP-B29b

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/23/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0						WD	Brown WOODWASTE material (no odor, no sheen) (loose, dry) **(FILL)**
						GP	Brown to gray mottled sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)
5				0.0			
10				0.9			
15	FPP-B29b -S(15-16)	d3				GP	Dark brown, sandy GRAVEL (strong petroleum-like odor, sheen) (loose, wet) **(ALLUVIUM)**
						ML	-viscous, brown, free-product at 16 ft BGS
				1.3			Gray, sandy SILT (strong petroleum-like odor, sheen) (medium dense, wet)
20				0.8			
25							

Groundwater: ▽ 15.5 ft ATD during Groundwater Sample Collection

Boring Completed 08/23/13
Total Depth of Boring = 25.0 ft.

Point located at State Plane Coordinates:
North: 466862.97
East: 1641319.02

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B29b

Figure
E-72

FPP-B29c

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/23/13

Moisture Content (%) — Plastic Limit / Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SM	Brown, silty fine to medium SAND (no odor, no sheen) (loose, damp)	Groundwater Not Encountered
						PC	**(FILL)**	
						GP-GM	Concrete	
							Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, damp)	
5						GP	Greenish-gray, sandy GRAVEL (petroleum-like odor, no sheen) (loose, damp)	
				0.0				
10						GP	Gray to brown mottled, sandy GRAVEL with cobbles (slight petroleum-like odor, no sheen) (loose, dry)	
				0.0				
15	FPP-B29c -S(15-16)	d3				SM	Gray sandy SILT (strong petroleum-like odor, sheen) (medium stiff, damp) **(ALLUVIUM)**	
				0.2				
20								
25								

Boring Completed 08/23/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466901.67
East: 1641249.56

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B29c

Figure
E-73

FPP-B30

LAI Project No: 1148007.010

SAMPLE DATA				SOIL PROFILE				
Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Drilling Method: GeoprobeTM Ground Elevation (ft): Not surveyed Drilled By: Cascade Drilling Inc. Logged By: SDS Date: 08/22/13	Groundwater
0				0.0		GP-GM	Dark gray, sandy GRAVEL with silt (no odor, no sheen) (loose, damp) **(FILL)**	Groundwater Not Encountered
						GP	Mottled gray and light gray, sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
5						SM	Gray, silty fine to coarse SAND with gravel (no odor, no sheen) (loose, dry)	
						GP	Gray to brown mottled sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
10						GP	Dark gray, sandy GRAVEL (no odor, no sheen) (loose, dry)	
						GP	Gray to brown mottled sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
	FPP-B30 -S(14-15)	d3				CL	Dark brown, silty CLAY (no odor, no sheen) (stiff, damp) **(ALLUVIUM)**	
15								
20								
25								

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/22/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466758.21
East: 1641336.69

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B30

Figure
E-74

FPP-B31

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						SM	Brown, silty, fine to medium SAND with gravel (slight petroleum-like odor, no sheen) (loose, damp)
						WD	**(FILL)**
						GP	Brown WOODWASTE material (100%) (no odor, no sheen) (loose, damp)
							Gray, sandy GRAVEL with crushed cobbles (no odor, no sheen) (loose, dry)
5						SM	Dark brown, silty, fine to medium SAND (petroleum-like odor, no sheen) (loose, damp)
				6.1		SM	Gray, silty fine SAND (slight petroleum-like odor, no sheen) (medium dense, damp)
10				9.0			
15	FPP-B31 -S(15-16)	d3		0.0			
						GP	Gray, sandy GRAVEL (slight odor, no sheen) (dense, damp)
							(ALLUVIUM)
						SM	Gray, silty fine SAND with gravel (no odor, no sheen) (loose, wet)
20				0.0			
25							

Groundwater: ▽ 17.0 ft ATD 15.0 ft During Groundwater Sample Collection

Boring Completed 08/22/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466635.82
East: 1641409.93

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B31

Figure
E-75

FPP-B32

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP	Brown, sandy GRAVEL (no odor, no sheen) (loose, dry) **(FILL)**
5						GP	Brown, sandy GRAVEL (no odor, no sheen) (loose, dry)
						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, damp)
10						GP	Brown, sandy GRAVEL (no odor, no sheen) (medium dense, dry)
						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (medium dense, damp)
15	FPP-B32 -S(15-16)	d3				GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (medium dense, damp) **(ALLUVIUM)**
						ML	Black SILT with trace sand and gravel (no odor, no sheen) (dense, damp)
20							
25							

Groundwater: ▽ 16.5 ft ATD

Boring Completed 08/22/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466590.63
East: 1640876.66

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B32

Figure
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FPP-B33

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description
0						GP	Brown, sandy GRAVEL (no odor, no sheen) (loose, dry) **(FILL)**
5						GP	Gray GRAVEL with cobbles and trace sand (no odor, no sheen) (loose, dry)
10	FPP-B33 -S(10-11)	d3		0.0		GP	Brown, sandy GRAVEL (no odor, no sheen) (loose, dry) **(ALLUVIUM)**
15						ML	Gray, sandy SILT with gravel (no odor, no sheen) (dense, wet)
20							
25							

Groundwater: ▼ 15.0 ft During Groundwater Sample Collection

Boring Completed 08/22/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466447.12
East: 1640923.26

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B33

Figure
E-77

FPP-B34

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 08/22/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						GP	Brown to gray mottled, sandy GRAVEL with cobbles (no odor, no sheen) (dense, dry) **(FILL)**	
5						GP	Brown to gray mottled, sandy GRAVEL with cobbles (no odor, no sheen) (dense, dry)	
10						GP	Gray to brown mottled, sandy GRAVEL with cobbles (no odor, no sheen) (medium dense, dry)	
15	FPP-B34 -S(15-16)	d3				GP	Brown, fine to coarse, sandy GRAVEL with cobbles (no odor, no sheen) (loose, damp)	▽ 16.0 ft ATD
						GP	**(ALLUVIUM)** Brown to gray mottled, sandy GRAVEL with cobbles (no odor, no sheen) (medium dense, wet)	
20								
25								

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 08/22/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466760.33
East: 1641143.44

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring FPP-B34

Figure
E-78

TP-B01

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/21/13

Moisture Content (%) — Plastic Limit / Liquid Limit
▲ SPT N-Value ▲ △ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0	TP-B01 -S(1-2)	d3		0.0		GP-GM / SM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry) **(FILL)**
				0.0			Brown, silty fine SAND with gravel (no odor, no sheen) (loose, damp)
5	TP-B01 -S(6.5-7.5)	d3		0.0		GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, damp)
						SP-SM	Brown, gravelly, fine to medium SAND with silt (no odor, no sheen) (loose, wet)
10						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
						SP-SM	Brown, gravelly, fine to coarse SAND with silt (no odor, no sheen) (loose, wet)
15						GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, wet)
				0.0			
20							
25							

Groundwater: ▼ 15.0 ft During Groundwater Sample Collection ft ATD

Boring Completed 06/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467011.16
East: 1640728.63

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B01

Figure
E-79

TP-B02

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0				0.0		GP	Brown, coarse GRAVEL (no odor, no sheen) (loose, dry) **(FILL)**	
5				0.0		GP-GM	Brown, sandy GRAVEL with silt (no odor, no sheen) (loose, dry)	
10				0.0		GP-GM	Mottled brown to gray, sandy GRAVEL with silt and cobbles (no odor, no sheen) (loose, dry)	
15	TP-B02 -S(13-14)	d3		0.0				14.0 ft ATD
20								
25								

Moisture Content (%) — Plastic Limit | Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 15.0 ft.

Point located at State Plane Coordinates:
North: 466986.52
East: 1640754.28

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B02

Figure
E-80

TP-B03

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SP-SM / SP	Brown, fine SAND with silt, with gravel (no odor, no sheen) (loose, dry) **(FILL)**	
				0.0		GP-GM	Brown, very gravelly, fine to medium SAND (no odor, no sheen) (medium dense, dry)	
5				0.0			Mottled brown to gray, sandy GRAVEL with silt and cobbles (no odor, no sheen) (loose, dry)	
10				0.0		SP-SM	Brown, gravelly, fine SAND with silt (no odor, no sheen) (loose, dry)	
						GP	Mottled brown to gray, sandy GRAVEL with cobbles (no odor, no sheen) (loose, dry)	
15	TP-B03 -S(15-16)	d3		0.0			(slight petroleum-like odor, no sheen)	▽ 16.0 ft ATD
				0.0		GP-GM	Brown, very sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	
20								
25								

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467008.70
East: 1640776.40

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B03

Figure
E-81

TP-B04

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0	TP-B04 -S(2-3)	d3		3.0		SP	Brown, fine to medium SAND with gravel (no odor, no sheen) (loose, dry)	
						SM	**(FILL)**	
							Black, stained, silty fine to medium SAND with gravel (strong petroleum-like odor, heavy sheen) (medium dense, damp)	
5								Groundwater Not Encountered
10								
15								
20								
25								

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 5.0 ft.

Point located at State Plane Coordinates:
North: 467000.66
East: 1640827.96

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B04

Figure
E-82

TP-B04a

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Moisture Content (%) — Plastic Limit | Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						SM	Brown, silty, fine to medium SAND with gravel (strong petroleum-like odor, sheen) (loose, dry)	Groundwater Not Encountered
						SM	**(FILL)**	
						GM	Black, stained, very silty fine SAND (strong petroleum-like odor, sheen) (medium dense, damp)	
5							Gray, silty, sandy GRAVEL (slight petroleum-like odor, no sheen) (loose, dry)	
10								

Boring Completed 06/20/13
Total Depth of Boring = 10.0 ft.

Point located at State Plane Coordinates:
North: 466997.01
East: 1640835.67

15
20
25

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B04a

Figure
E-83

TP-B04b

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Groundwater
0						SM	
						GP	
5				0.0		SP	
10	TP-B04b -S(11.5-13)	d3		0.0 0.0			
15							15.0 ft ATD 13.0 ft During Groundwater Sample Collection
				0.0			
20							
25							

Brown, silty, fine to medium SAND with gravel (no odor, no sheen) (loose, dry)
(FILL)

Gray, sandy GRAVEL (no odor, no sheen) (loose, dry)

Brown, gravelly, fine to medium SAND (no odor, no sheen) (loose, dry)

-grades loose, wet

Moisture Content (%)
Plastic Limit — Liquid Limit
0 0 0 0

▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0

× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466994.14
East: 1640844.13

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B04b

Figure
E-84

TP-B05

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, dry) **(FILL)**
						WD	Brown WOODWASTE with minor dark brown silty fine sand (no odor, no sheen) (loose, damp)
5						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, dry)
						WD	Brown WOODWASTE with minor dark brown silty fine sand (no odor, no sheen) (loose, damp)
10							
15							
20						GM	Brown, silty GRAVEL with sand (no odor, no sheen) (loose, wet) **(ALLUVIUM)**
25							

Groundwater: ▽ 15.0 ft ATD

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467037.90
East: 1640884.36

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B05

Figure
E-85

TP-B06

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/20/13

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						WD	Brown WOODWASTE with minor dark brown silty fine sand (no odor, no sheen) (loose, damp)	
						SP-SM	**(FILL)**	
				0.0		SP	Dark brown, silty, fine SAND with brown woodwaste material (no odor, no sheen) (loose, dry)	
							Dark gray, fine SAND with gravel (no odor, no sheen) (medium dense, damp)	
5						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp)	
				0.0				
10				0.0				
	TP-B06 -S(13.5-14.5)	d3		0.0		SP	Dark gray, fine SAND with gravel (no odor, no sheen) (loose, damp)	12.0 ft During Groundwater Sample Collection
15							-grades loose, wet	14.5 ft ATD
				0.0			-grades very gravelly	
20								
25								

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Boring Completed 06/20/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 466984.73
East: 1640948.23

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B06

Figure
E-86

TP-B07

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/21/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description	Groundwater
0						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp) **(FILL)**	
				0.1		SP-SM	Gray, fine to coarse SAND with silt (no odor, no sheen) (loose, dry)	
5						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp)	
				0				
10								
	TP-B07 -S(13.5-14.5)	d3		1.9		ML	Gray, sandy SILT (no odor, no sheen) (medium stiff, damp) **(ALLUVIUM)**	▽ 15.0 ft ATD
15						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet)	
20								
25								

Boring Completed 06/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467026.47
East: 1641109.16

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B07

Figure
E-87

TP-B08

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/21/13

Moisture Content (%) — Plastic Limit 0 0 0 0 Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
0 0 0 0
× Fines Content (%) ×
0 0 0 0

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Soil Description
0						WD	Dark brown WOODWASTE with minor brown sandy gravel (no odor, no sheen) (loose, dry)
						GP	**(FILL)**
				0.5			Brown, sandy GRAVEL (no odor, no sheen) (dense, dry)
5	TP-B08 -S(7-8)	d3		0.3		WD	Brown WOODWASTE with minor dark brown silty fine sand (no odor, no sheen) (medium dense, damp)
10						GP	Brown, very sandy GRAVEL (no odor, no sheen) (medium dense, damp)
						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp)
15						ML	Gray SILT with minor woodwaste material (no odor, no sheen) (loose, wet)
	TP-B08 -S(16.5-18)	d3		0.1		GP	Gray, sandy GRAVEL (no odor, no sheen) (loose, wet)
20							**(ALLUVIUM)**
25							

Groundwater: ▼ 14.0 ft During Groundwater Sample Collection

Boring Completed 06/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467068.34
East: 1641118.15

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B08

Figure
E-88

TP-B09

LAI Project No: 1148007.010

SAMPLE DATA | **SOIL PROFILE**

Drilling Method: GeoprobeTM
Ground Elevation (ft): Not surveyed
Drilled By: Cascade Drilling Inc.
Logged By: SDS Date: 06/21/13

Moisture Content (%) — Plastic Limit — Liquid Limit
▲ SPT N-Value ▲
△ Non-Standard N-Value △
× Fines Content (%) ×

Depth (ft)	Sample Number & Interval	Sampler Type	Blows/Foot	Test Data	Graphic Symbol	USCS Symbol	Description	Groundwater
0						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp) **(FILL)**	
						GP-GM	Mottled brown to gray, sandy GRAVEL with silt and cobbles (no odor, no sheen) (loose, damp)	
5	TP-B09 -S(6-7)	d3		0.1		SP-SM	Brown, gravelly, fine SAND with silt (no odor, no sheen) (medium dense, damp)	
						WD	Brown WOODWASTE (no odor, no sheen) (loose, damp)	
10	TP-B09 -S(13-14)	d3		1.5		ML	Gray, sandy SILT (no odor, no sheen) (medium stiff, damp)	▼ 14.0 ft During Groundwater Sample Collection
						GP-GM	Gray, sandy GRAVEL with silt (no odor, no sheen) (loose, wet) **(ALLUVIUM)**	
15						SP-SM	-grades gray, gravelly, fine to coarse SAND with silt	
20								
25								

Boring Completed 06/21/13
Total Depth of Boring = 20.0 ft.

Point located at State Plane Coordinates:
North: 467040.47
East: 1641155.91

Notes:
1. Stratigraphic contacts are based on field interpretations and are approximate.
2. Reference to the text of this report is necessary for a proper understanding of subsurface conditions.
3. Refer to "Soil Classification System and Key" figure for explanation of graphics and symbols.

1148007.01 3/10/15 N:\PROJECTS\1148007.010.GPJ SOIL BORING LOG WITH GRAPH

LANDAU ASSOCIATES

Yakima Mill Site
Yakima, WA

Log of Boring TP-B09

Figure
E-89

ATTACHMENT 1

Terrestrial Ecological Evaluation Information

TECHNICAL MEMORANDUM

TO: Jeffrey Fellows; Landau Associates, Inc.

FROM: Rone Brewer; Sound Ecological Endeavors; LLC

DATE April 3, 2015

RE: PROBLEM FORMULATION AND TERRESTRIAL ECOLOGICAL EVALUATION CLOSED CITY OF YAKIMA LANDFILL YAKIMA, WASHINGTON

INTRODUCTION

In accordance with Model Toxics Control Act (MTCA), for soil contamination, the potential impact of hazardous substances on terrestrial ecological receptors must be evaluated under Washington Administrative Code (WAC) 173-340-7490 through 173-340-7494. Specifically, either an exclusion must be established for the site under WAC 173-340-7491 or a terrestrial ecological evaluation must be conducted under WAC 173-340-7492 or 173-340-7493 for characterization of existing or potential threats to terrestrial plants and animals exposed to hazardous substances in soil, and if needed, establish site-specific cleanup standards for the protection of terrestrial plants and animals. These procedures are not intended to be used to evaluate potential threats to ecological receptors in sediments, surface water, or wetlands. This technical memorandum presents a problem formulation and terrestrial ecological evaluation for the City of Yakima (City) Closed Landfill located at the east end of East "E" Street in Yakima, Washington. (Figures 1 and 2).

Site History and Description

The 35-acre landfill area (Site) is delineated by the extent of municipal solid waste (MSW) at the southern edge of the former overall 240-acre mill operation area (Figure 1). The Site is situated at an elevation of approximately 1,070 feet (ft) above mean sea level (MSL), sloping slightly to the east and southeast. The mill was originally developed in 1903 and 1904 by the Cascade Lumber Company with the Site area originally developed as one of several log ponds associated with Mill operations that occupied much of the northeast and southeast portions of the Mill. The Cascade Lumber Company merged with Boise Payette Lumber Company between 1957 and 1958 to form Boise Cascade. Prior to the construction of Interstate 82 (I-82) in the 1960s and early 1970s, the eastern portion of the Mill

operations extended to the banks of the Yakima River. Most Mill operations and structures were located to the north and northwest of the Site. Boise Cascade closed the mill operations in 2006 and the majority of the former mill buildings and ancillary structures have now been demolished; however, many foundations and subsurface trenches/structures remain. Active railroad tracks extend generally east to west through the southern portion of the Mill and near the northern boundary of the Site.

The City's MSW landfill operated in the 1960s and 70s, with wastes deposited into the former log pond excavation (City of Yakima 1996). The landfill was not lined prior to waste deposition, was closed in 1973 (Ecology 1996), and the operations and closure are unlikely to have implemented minimum functional standards (MFS) for solid waste management (Chapter 173-301 WAC) which were promulgated in 1972 and updated in 1988. Closure of the site included covering the MSW with available onsite materials, primarily including native soils and woody debris from Mill operations.

Upon closure of the Mill in 2006 and up until May 2010, Yakima Resources used the property for temporary log storage over a large area of the Site and log chipping operations along the northwestern edge of the Site. Since May 2010, the only activities that have occurred at the mill have been the demolition of historical buildings and removal of equipment. Yakima Resources continues to process former building construction materials (e.g., concrete, etc.) at areas north of the railroad tracks and of the Site. Recycling and processing of wood debris that remain on the mill area is also being conducted.

The Site is currently limited to the approximately 33 acre areal extent (approximately 440,000 cubic yards) of MSW. The MSW is as thick as 15 ft, but averages about 10 ft in thickness, and is overlain by up to approximately 10 ft of native soil and woody debris fill. Very sparse vegetation has started to reclaim some areas of the Site (See photographs in Attachment 1).

PROBLEM FORMULATION

Problem formulation is the process of describing the Site and its ecology, with an emphasis on identification of important ecological receptors or functions that are present, may be exposed to Site-related contamination, and are likely to require assessment for potential effects due to site-related contamination. In this manner, problem formulation leads to a scientific/management decision point regarding the need for and scope of any potentially-required further ecological assessment. Geology, climate, and site use history dictate the regional and Site ecology. Site ecology, in turn, defines the ecological receptors present and their potential contaminant exposure pathways.

Geology

Conditions immediately surrounding the Site are dominated by Yakima River erosion and (alluvial) deposition including diverse mixtures of silts, sands, and gravels (SLR 2009, 2010). Generally, the alluvium is underlain by clayey shale and sandstone (Ellensburg Formation) capped with cemented gravel approximately 44 ft below ground surface (BGS; Landau Associates 1998). The Site surface has been altered over time and now is relatively level and covered predominantly by a mixture of wood debris (fill) from historical log storage operations, mixed with limited amounts of native alluvial soil (silt, sand, gravel, and cobble). In some areas woody fill material extend to depths of 24.5 ft BGS. The woody fill and limited native soils generally overly the MSW within the Site boundaries. Underlying the fill and MSW is sand and sandy-cobbly gravel.

Climate

The climate of the Yakima region ranges from cool and moist in the Cascade Mountains to warm and dry in the Columbia Plateau. Annual precipitation near the Cascade crest ranges from 80 to 140 inches, promoting annual flows in the Site-adjacent Yakima River. Lower elevations in the eastern part of the Columbia Plateau may receive 10 inches of precipitation or less. Summer temperatures average 55º F in the mountains and 82º F in the valleys. Winter temperatures generally are moderate, controlled by predominant westerly winds and related coastal maritime influence. Average maximum and minimum winter temperatures range from 25º to 40º F and 15º to 25ºF, respectively (Yakima Sub-Basin Fish and Wildlife Planning Board, 2004).

A sharp precipitation gradient exists in the Yakima basin, decreasing in an easterly/southeasterly direction. Cooling of moist maritime air passing over the Cascades results in 100 inches or more of precipitation near the crest, to 48 inches 10 miles east of the crest, and 8-10 inches within 20 miles. About half the annual precipitation occurs during November through January. Snowfall in the valleys ranges from 20 to 25 inches and from 75 inches at 2,500 feet to over 500 inches at the summit of the Cascades. Virtually all of the streams in the basin originate at higher elevations where annual precipitation is 30 inches or more and along with mountain snowpack provides most of the water for agricultural irrigation and streamflow (Yakima Sub-Basin Fish and Wildlife Planning Board, 2004).

Previous Investigations

Since 1998, multiple investigations have been conducted of MSW, groundwater, landfill gas (LFG), and soil conditions at or in the vicinity of the Site, including a determination of the extent of MSW, which defines the Site boundaries. These investigations were summarized by Landau Associates (2015) in the Remedial Investigation Work Plan for the Closed City of Yakima Landfill Site. The TEE focuses on terrestrial ecological exposures to site-related contaminants in soil. Soil sample locations included as part of this evaluation are shown on Figure 2.

The MSW was found to average 10 ft thick, but is up to 15 ft thick in some places. The extent of MSW is shown on Figure 2, (Ecology 2014, SLR 2009, 2010). Between 1 ft and 9 ft of sandy silt and/or silty gravel was found to be present overlying the MSW. This silt and gravel is overlain by 1 ft to 10 ft of mill-related woody debris (bark chips, wood chips, sawdust, etc.). The average thickness of soil and wood debris is 10 ft overlying the MSW.

Unacceptable concentrations of methane were detected in LFG samples in some locations overlying the MSW. Soils overlying the MSW, but under the woody debris, were sampled and analyzed for petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs). The analytical results for the soil samples pertinent to the TEE are provided in Table 1. Sample locations with no data listed in Table 1 had soil samples collected from depths deeper than 15 ft bgs, which is below the depth of concern for terrestrial ecological risks because it prohibits exposure to contaminated soil. Relatively few Site-related contaminants were detected (i.e., Contaminants of Interest [COIs]), primarily related to pesticides and petroleum.

Past, Current, and Future Land Use

Past and current land use of the Site has been as a 20 ft deep (or deeper) industrial log mill pond, then a MSW landfill. The proposed future land use is expected to remain commercial/industrial.

Within the TEE process, for industrial or commercial properties, current and future exposure to site-related contaminants need only be evaluated for terrestrial wildlife protection. Plants and soil biota need not be considered unless:

(i) The species is protected under the federal Endangered Species Act; or

(ii) The soil contamination is located on an area of an industrial or commercial property where vegetation must be maintained to comply with local government land use regulations.

Neither of these criteria are met at the Site. Therefore, the TEE will focus on terrestrial wildlife protection.

Regional & Site Terrestrial Ecology

Yakima lies within the Columbia Plateau shrub-steppe habitat which includes semi-arid vegetation communities generally consisting of one or more layers of perennial grasses with a discontinuous layer of shrubs (e.g. sagebrush). Some of the many regional species of wildlife requiring shrub-steppe habitat include greater sage-grouse, sage sparrows, sage thrashers, and pygmy rabbits. A host of other birds, mammals, reptiles, and insects are found primarily in shrub-steppe communities

Very sparse terrestrial habitat is present east of the site, across Interestate-82; but the interstate creates a barrier such that the river and its associated habitat are not contiguous with the Site. Commercial land use and urban housing is present, and therefore no significant terrestrial habitat exists, south, west, or north of the Site.

As can be seen in the photographs in Attachment 1 and on Figure 2, essentially no wildlife habitat is present on or surrounding the Site. Further, the disturbed wood debris surface is not conducive to small mammals or natural soil invertebrate populations. Riparian vegetation has developed at the eastern property boundary along an irrigation canal, an entirely artificial watercourse. This vegetated area along the canal is less than 1.5 acres. Critical areas including wetlands and streams have been found to be absent from the Site (Ecological Land Services, 2010). Further, no sensitive terrestrial environments (i.e. areas of particular ecological value, natural areas, critical habitat, etc.) exist on or near the Site.

Terrestrial Ecological Exposure to Contaminants of Interest

Generally, terrestrial ecological receptors may be exposed to COIs in shallow soil via direct contact, uptake by roots from soil, ingestion of soil, ingestion of plants growing in contaminated soil, and ingestion of prey that are exposed to contaminated soil. However, given the lack of habitat on the Site and woody debris covering the Site, the numbers and types of ecological receptors exposed to site-related COIs is extremely limited and exposure will be transient for animals passing across the Site.

TERRESTRIAL ECOLOGICAL EVALUATION

A Site-specific TEE includes three potential processes. First a site is examined for exclusion from further assessment, then either a simplified or a site-specific evaluation is conducted depending on site conditions. The first step is examining the criteria for exclusion.

Exclusion Assessment

The MTCA, at WAC 173-340-7491, provides the four exclusion criteria, any one of which can be met in order for the Site to be excluded from further terrestrial ecological assessment. The Site clearly does not meet the second, third, or fourth criteria because physical barriers to exposure are not present across the entire Site, there is more than 1.5 acres of undeveloped land (as defined in WAC 173-340-7491[1][c][iii]) on the Site, and some of the COIs detected within soil do not have background concentrations. The last possible exclusion is if all soil contamination is, or will be, located below a specific (15 ft BGS) or conditional (e.g. 6 ft BGS minimum) point of compliance. But site-related COIs, primarily petroleum related compounds and organochlorine pesticides were detected (albeit, at very low concentrations) in soils shallower than 6 ft, therefore, this exclusion also does not simply apply. The only way an exclusion may apply at the Site is if a barrier were to be placed between the soil contamination and the surface such that ecological exposure is eliminated, and an institutional control was implemented to assure the barrier remained in place.

Given that exclusion from further assessment currently does not apply, then a decision is necessary regarding the need for a simplified or site-specific ecological evaluation. Because the site is not on or adjacent to current or planned native habitat, is not used by threatened, endangered, state priority or state sensitive species, the site does not contain 10 acres of native vegetation, and does not present a risk to wildlife populations (final decision to be approved by Ecology), the Site qualifies for a simplified terrestrial evaluation.

Simplified Evaluation

The simplified evaluation focuses on 1) terrestrial ecological exposure potential, 2) known and likely exposure pathways, or 3) the presence of specific priority contaminants listed by Ecology (MTCA Table 749-2) at concentrations below table-listed “acceptable” concentrations. The site is too large to meet the quantitative threshold required in the exposure potential assessment that would allow ending further evaluation of the Site. However, if the site simply were smaller, it would meet the threshold, so

some discussion with Ecology may be warranted to evaluate the applicability of a determination of deminimis exposure potential at the Site.

The exposure pathway analysis allows the ecological evaluation to be ended if there are no exposure pathways for ecological receptors for priority chemicals of ecological concern listed in Table 749-2 at or above the concentrations provided. For commercial/industrial sites such as the Site, only exposures to wildlife (i.e., not soil biota or plants) are of concern. Given the site conditions presented earlier in the problem formulation, there is some slight potential for the exposure of wildlife to near-surface soil underlying the woody debris fill and thus, it cannot be said, as required for ending further evaluation, that "no" potential for an exposure pathway exists. However, because of the woody debris fill overlying soil in nearly all areas of the Site, the potential for terrestrial wildlife exposure to Site-related soil contamination is deemed extremely low, particularly given the lack of vegetation on the Site and planned future commercial/industrial land use.

For the contaminants analysis, all Table 749-2 listed priority contaminants detected in Site soil at depths less than 15 ft bgs (Table 1) are at concentrations below the provided acceptable concentrations. However, there were two Table 749-2 listed contaminants (silver and bis-2-ethylhexylphthalate) detected in Site soil, for which Table 749-2 does not provide acceptable concentrations. In this situation, according to WAC 173-340-7492(2)(c)(ii), toxicity data based on appropriate bioassays may be used to evaluate whether these detected COIs without listed acceptable concentrations, are present at toxic concentrations and/or are likely to bioaccumulate. While site-specific bioassays were not conducted, similarly-derived lowest ecological screening benchmarks for wildlife exposures from soil contamination were sought from common and readily-available ecological risk assessment literature. The identified ranges of concentrations in soil potentially toxic to wildlife were 4.2 to 15 mg/kg for silver and 0.1 to 0.95 mg/kg for bis-2-ethylhexylphthalate (Oak Ridge Operations Office, Risk Assessment Information System [OROO, 2015]). Neither contaminant was identified as having a particular potential to bioaccumulate.

Silver was detected on Site at 3.5 mg/kg, which is below the available ORO soil risk-based screening concentrations and is therefore, deemed unlikely to result in ecological risks at the site. Bis-2-ethylhexylphthalate was detected at 110 mg/kg and 820 mg/kg in two locations, at 13.5 ft bgs. These bis-2-ethylhexylphthalate concentrations are above the available soil screening concentration, suggesting that if adequate exposure to contaminated soil occurs at these locations and depths, terrestrial wildlife may be at risk. However, assuming the conditional point of compliance is 6 ft bgs as allowed within the simplified evaluation, then no sample location within this depth range has been shown to have concentrations of bis-2-ethylhexylphthalate above the identified ecological risk-based screening concentration. One chemical, detected at only two locations, below the 6 ft bgs conditional point of

compliance, combined with future commercial/industrial land use, woody-debris fill over the contaminated soil, and institutional controls to assure the potential for wildlife exposure continues to be limited above a conditional subsurface point of compliance, combined adequately reduce the potential for unacceptable exposure, meeting the TEE simplified evaluation criteria for no further evaluation.

CONCLUSION

The MTCA TEE exclusion assessment criteria could not be met. However, using Table 749-2 with incorporation of readily-available and commonly used ecological risk-based screening concentrations for silver and bis-2-ethylhexylphthalate, and implementation of 6 ft (minimum) bgs conditional point of compliance, which requires institutional controls to assure the minimized potential for ecological exposure to Site-related contaminants, Site conditions met the TEE simplified evaluation procedure criteria for no further evaluation.

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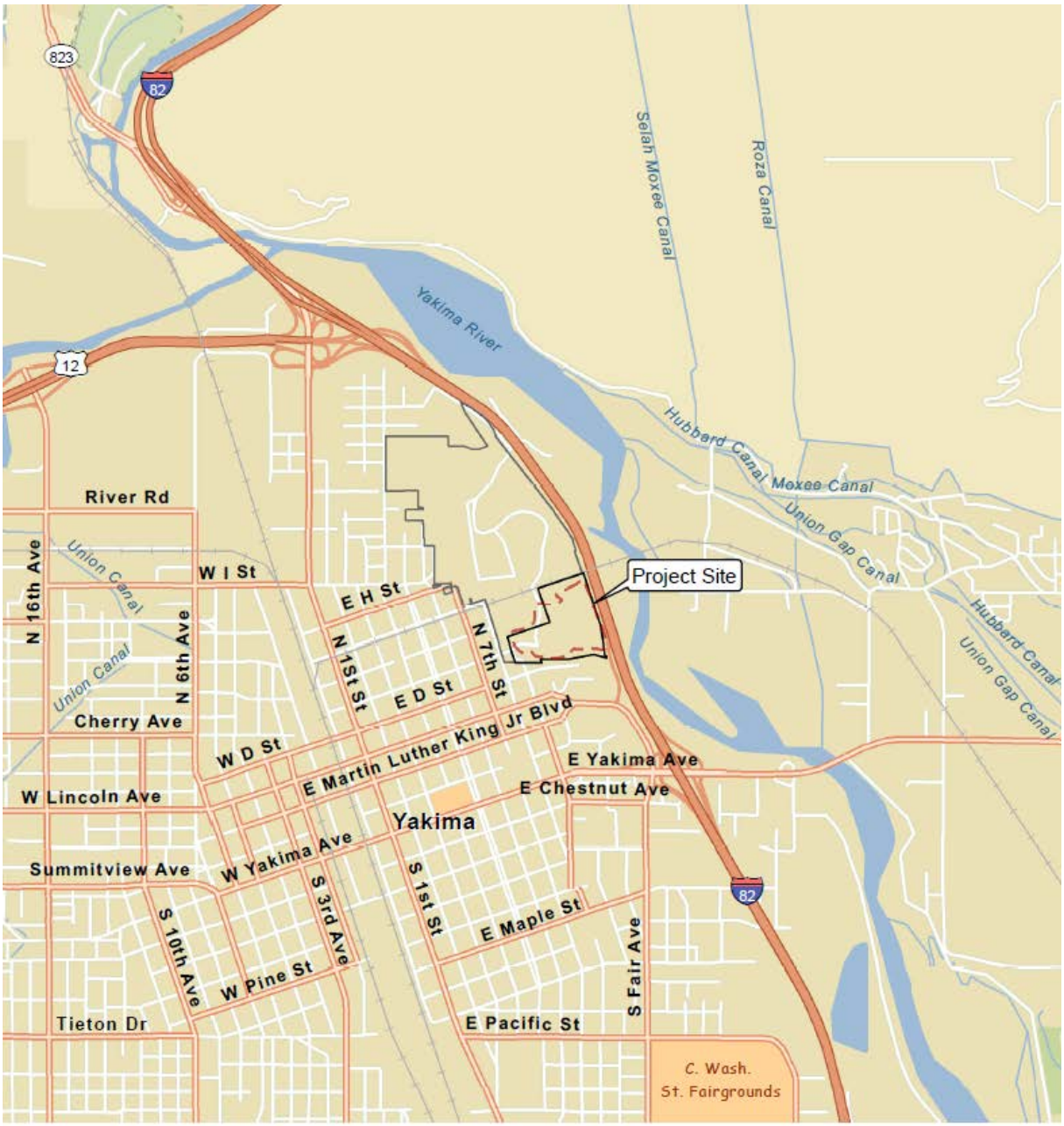

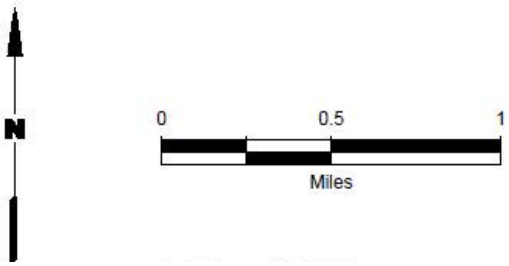

Terrestrial Ecological Evaluation Closed City of Yakima Landfill Yakima, Washington Lat. 46.61300°, Long. -120.49370°	Site Location	**Figure** **1**

Sound Ecological Endeavors, LLC; R. Brewer; 04/03/2015 3:55 PM

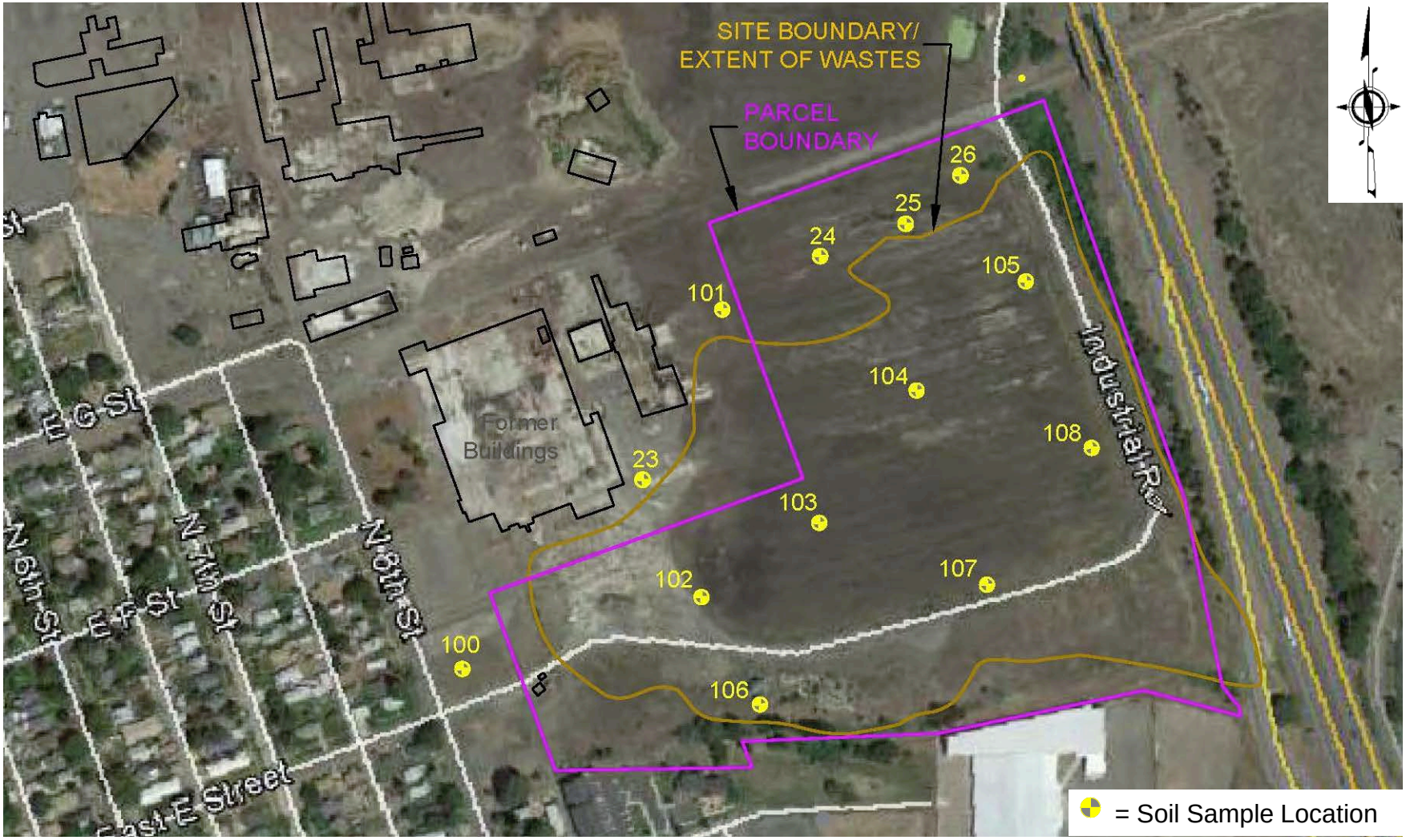

Figure 2	Closed City of Yakima Landfill Yakima, Washington Lat. 46.61300°, Long. -120.49370° Approximate Scale: 1” = 300’	Site Boundary, Extent of Waste, and Sample Locations (yellow)	**Figure 2**

Sound Ecological Endeavors, LLC; R. Brewer; 04/03/2015 4:12 PM

TABLE 1
Upgradient and On-Site Soil Analaytical Data
Shallower Than Fifteen Feet Below the Ground Surface
Terrestrial Ecological Evaluation
Closed City of Yakima Landfill
Yakima, Washington

Analyte	Table 749-2 Industrial Screening Level Concentration	MW-100 (13.5-14) EV14090067-02 9/11/2014	MW-102 (4-5) EV14090051-01 9/8/2014	MW-104 (2.5-3) EV14090022-03 9/3/2014	MW-105 (2.5-3.5) EV14090022-01 9/2/2014	MW-106 (2.5-3.5) EV14090051-05 9/9/2014	MW-106 (13.5-14.5) EV14090067-01 9/10/2014	MW-107 (2.5-3.5) EV14090051-03 9/9/2014	MW-108 (2.5-3.5) EV14090040-01 9/4/2014	GP-24 (12.5-13.0) EV14100222-02 10/30/2014	GP-26 (7.5-8.5) EV14100222-01 10/29/2014
TOTAL PETROLEUM HYDROCARBONS (mg/kg) HCID											
Gas Range	12000	20 U	20 U	20 U	20 U	**>20**	20 U	20 U	20 U	20	20U
Diesel Range	13500	50 U	50 U	50 U	50 U	**>50**	50 U	50 U	50 U	50	50U
Oil Range	--	100 U	**>100**	**>100**	**>100**	**>100**	100 U	**>100**	**>100**	>**100**	100U
NWTPH-Dx (mg/kg)											
Diesel Range (w/SGC)	13500		25 U	25 U	25 U	**87** J		**250**	25 U	**140**	--
Diesel Range (wo/SGC)	13500		25 U	46 U	25 U	**150** J		**300**	25 U	**160**	--
Oil Range (w/SGC)	--		**260**	**300**	**380**	**380**		**820**	**130**	**280**	--
Oil Range (wo/SGC)	--		**330**	**450**	**510**	**560**		**990**	**160**	**300**	--
NWTPH-Gx (mg/kg)											
Gasoline Range	--		--	--	--	**35**		--	--		--
TOTAL METALS (mg/kg) Methods EPA-6020/EPA-7471											
Arsenic	20	**1.4**	**1.9**	**2.2**	**3.6**	**2.6**	**2.1**	**1.7**	**3.5**	**2**	**2.3**
Barium	1320	**58**	**82**	**91**	**140**	**100**	**94**	**88**	**140**	**140**	**170**
Cadmium	36	0.50 U	0.50 U	0.25 U	**1.3**	0.50 U	**1.1**	0.50 U	0.50 U	0.5U	0.5U
Chromium	135	**23**	**7.9**	**12**	**24**	**13**	**16**	**8.9**	**17**	**17**	**24**
Iron	--	**25,000**	**17,000**	**20,000**	**35,000**	**25,000**	**24,000**	**27,000**	**28,000**	**25000**	**30000**
Lead	220	**2.9**	**39**	**56**	**190**	**51**	**11**	**68**	**26**	**9.1**	**17**
Manganese	23500	**380**	**200**	**330**	**330**	**520**	**210**	**470**	**570**	**280**	**340**
Mercury	9	0.020 U	**0.060**	**0.090**	**0.18**	**0.11**	**0.035**	**0.038**	**0.12**	**0.077**	**0.12**
Selenium	0.8	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5U	5.3U
Silver	No Value Provided	0.50 U	0.50 U	**3.5**	0.28 U	0.50 U	0.50 U	0.50 U	0.50 U	0.5U	0.5U
PESTICIDES (mg/kg) Method EPA-8081											
alpha-BHC	10	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
beta-BHC	10	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
delta-BHC	10	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
gamma-BHC	10	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Heptachlor	0.6	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Aldrin	0.17	0.0026 U	--	--	--	--	**0.0094**	--	--	0.0032U	0.004U
Heptachlor Epoxide	0.6	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Chlordane	7	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Endosulfan I	No Value Provided	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
4,4'-DDE	1	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	**0.0059**
Dieldrin	0.17	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.0058U
Endrin	0.4	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
4,4'-DDD	1	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	**0.045**
Endosulfan II	No Value Provided	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
4,4'-DDT	1	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Endrin Aldehyde	0.4	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Endosulfan Sulfate	--	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	**0.0053**
Methoxychlor	--	0.0026 U	--	--	--	--	0.0032 U	--	--	0.0032U	0.004U
Toxaphene	No Value Provided	0.13 U	--	--	--	--	0.16 U	--	--	0.16U	0.2U
PCBs (mg/kg) Method EPA-8082											
PCB-1016	2	0.0052 U	--	--	--	--	0.0064 U	--	--	0.013U	0.016U
PCB-1221	2	0.011 U	--	--	--	--	0.013 U	--	--	0.025U	0.032U
PCB-1232	2	0.0052 U	--	--	--	--	0.0064 U	--	--	0.013U	0.016U
PCB-1242	2	0.0052 U	--	--	--	--	**0.028**	--	--	0.013U	0.016U
PCB-1248	2	0.0052 U	--	--	--	--	0.0064 U	--	--	0.013U	0.016U
PCB-1254	2	0.0052 U	--	--	--	--	0.0064 U	--	--	0.013U	0.016U
PCB-1260	2	0.0052 U	--	--	--	--	0.0064 U	--	--	0.013U	0.016U
VOCs (µg/kg) Method EPA-8260											
1,1,1,2-Tetrachloroethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,1,1-Trichloroethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,1,2,2-Tetrachloroethane	--	0.89 U	--	--	--	--	0.92 U	--	--	1.1U	1.6U
1,1,2-Trichloroethane	--	0.86 U	--	--	--	--	0.89 U	--	--	1U	1.5U
1,1-Dichloroethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,1-Dichloroethene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,1-Dichloropropene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2,3-Trichlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2,3-Trichloropropane	--	0.94 U	--	--	--	--	0.97 U	--	--	1.1U	1.6U
1,2,4-Trichlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2,4-Trimethylbenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2-Dibromo 3-Chloropropane	--	50 U	--	--	--	--	50 U	--	--	50U	50U
1,2-Dibromoethane	--	5.0 U	--	--	--	--	5.0 U	--	--	5U	5U
1,2-Dichlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2-Dichloroethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,2-Dichloropropane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,3 Dichlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,3,5-Trimethylbenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,3-Dichloropropane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
1,4-Dichlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
2,2-Dichloropropane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
2-Butanone	--	50 U	--	--	--	--	50 U	--	--	50U	50U
2-Chlorotoluene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
2-Hexanone	--	50 U	--	--	--	--	50 U	--	--	50U	50U
4-Chlorotoluene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
4-Methyl-2-Pentanone	--	50 U	--	--	--	--	50 U	--	--	50U	50U
Acetone	--	50 U	--	--	--	--	50 U	--	--	130	**250**
Acrylonitrile	--	50 U	--	--	--	--	50 U	--	--	50U	50U

TABLE 1
Upgradient and On-Site Soil Analaytical Data
Shallower Than Fifteen Feet Below the Ground Surface
Terrestrial Ecological Evaluation
Closed City of Yakima Landfill
Yakima, Washington

Analyte	Table 749-2 Industrial Screening Level Concentration	MW-100 (13.5-14) EV14090067-02 9/11/2014	MW-102 (4-5) EV14090051-01 9/8/2014	MW-104 (2.5-3) EV14090022-03 9/3/2014	MW-105 (2.5-3.5) EV14090022-01 9/2/2014	MW-106 (2.5-3.5) EV14090051-05 9/9/2014	MW-106 (13.5-14.5) EV14090067-01 9/10/2014	MW-107 (2.5-3.5) EV14090051-03 9/9/2014	MW-108 (2.5-3.5) EV14090040-01 9/4/2014	GP-24 (12.5-13.0) EV14100222-02 10/30/2014	GP-26 (7.5-8.5) EV14100222-01 10/29/2014
Benzene	--	5.0 U	--	--	--	--	5.0 U	--	--	5U	5U
Bromobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Bromochloromethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Bromodichloromethane	--	0.81 U	--	--	--	--	0.84 U	--	--	0.96U	1.4U
Bromoform	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Bromomethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Carbon Disulfide	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Carbon Tetrachloride	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Chlorobenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Chloroethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Chloroform	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Chloromethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Cis-1,2-Dichloroethene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Cis-1,3-Dichloropropene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Dibromochloromethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Dibromomethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Dichlorodifluoromethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Ethylbenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Hexachlorobutadiene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Isopropylbenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
m,p-Xylene	--	20 U	--	--	--	--	20 U	--	--	20U	20U
Methyl T-Butyl Ether	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Methylene Chloride	--	20 U	--	--	--	--	20 U	--	--	20U	20U
N-Butylbenzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
N-Propyl Benzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
o-Xylene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
P-Isopropyltoluene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
S-Butyl Benzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Styrene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
T-Butyl Benzene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Tetrachloroethylene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Toluene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Trans-1,2-Dichloroethene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Trans-1,3-Dichloropropene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Trichloroethene	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Trichlorofluoromethane	--	10 U	--	--	--	--	10 U	--	--	10U	10U
Vinyl Chloride	--	0.033 U	--	--	--	--	0.034 U	--	--	0.04U	0.058U
SVOCs (ug/kg) Method EPA-8270											
1,2,4-Trichlorobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	110U
1,2-Dichlorobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
1,3-Dichlorobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
1,4-Dichlorobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2,3,4,6-Tetrachlorophenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2,4,5-Trichlorophenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2,4,6-Trichlorophenol	--	38 U	--	--	--	--	43 U	--	--	50U	62U
2,4-Dichlorophenol	--	240 U	--	--	--	--	260 U	--	--	310U	380U
2,4-Dimethylphenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2,4-Dinitrophenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2,4-Dinitrotoluene	--	21 U	--	--	--	--	23 U	--	--	27U	34U
2,6-Dichlorophenol	--	250 U	--	--	--	--	250 U	--	--	250U	290U
2,6-Dinitrotoluene	--	36 U	--	--	--	--	40 U	--	--	47U	58U
2-Chloronaphthalene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2-Chlorophenol	--	250 U	--	--	--	--	250 U	--	--	250U	250U
2-Methylnaphthalene	--	250 U	--	--	--	--	250 U	--	--	250U	250U
2-Methylphenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2-Nitroaniline	--	100 U	--	--	--	--	100 U	--	--	100U	100U
2-Nitrophenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
3&4-Methylphenol	--	100 U	--	--	--	--	100 U	--	--	100U	**170**
3,3-Dichlorobenzidine	--	170 U	--	--	--	--	180 U	--	--	220U	270U
3-Nitroaniline	--	1000 U	--	--	--	--	1000 U	--	--	1000U	1000
4,6-Dinitro-2-Methylphenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
4-Bromophenyl-Phenylether	--	100 U	--	--	--	--	100 U	--	--	100U	100U
4-Chloro-3-Methylphenol	--	500 U	--	--	--	--	500 U	--	--	500U	500U
4-Chloroaniline	--	1000 U	--	--	--	--	1000 U	--	--	1000U	1000U
4-Chlorophenyl-Phenylether	--	100 U	--	--	--	--	100 U	--	--	100U	100U
4-Nitroaniline	--	250 U	--	--	--	--	250 U	--	--	250U	250U
4-Nitrophenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Aniline	--	45 U	--	--	--	--	50 U	--	--	59U	72U
Azobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Benzo[G,H,I]Perylene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Benzoic Acid	--	1000 U	--	--	--	--	1000 U	--	--	1000	1100
Benzyl Alcohol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Bis(2-Chloroethoxy)Methane	--	250 U	--	--	--	--	250 U	--	--	250U	250U
Bis(2-Chloroethyl)Ether	--	93 U	--	--	--	--	100 U	--	--	120U	150U
Bis(2-Chloroisopropyl)Ether	--	250 U	--	--	--	--	250 U	--	--	250U	250U
Bis(2-Ethylhexyl)Phthalate	No Value Provided	**110**	--	--	--	--	**820**	--	--	100U	100U
Butylbenzylphthalate	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Carbazole	--	250 U	--	--	--	--	250 U	--	--	250U	250U
Dibenzofuran	--	100 U	--	--	--	--	100 U	--	--	100U	100U

TABLE 1
Upgradient and On-Site Soil Analaytical Data
Shallower Than Fifteen Feet Below the Ground Surface
Terrestrial Ecological Evaluation
Closed City of Yakima Landfill
Yakima, Washington

Analyte	Table 749-2 Industrial Screening Level Concentration	MW-100 (13.5-14) EV14090067-02 9/11/2014	MW-102 (4-5) EV14090051-01 9/8/2014	MW-104 (2.5-3) EV14090022-03 9/3/2014	MW-105 (2.5-3.5) EV14090022-01 9/2/2014	MW-106 (2.5-3.5) EV14090051-05 9/9/2014	MW-106 (13.5-14.5) EV14090067-01 9/10/2014	MW-107 (2.5-3.5) EV14090051-03 9/9/2014	MW-108 (2.5-3.5) EV14090040-01 9/4/2014	GP-24 (12.5-13.0) EV14100222-02 10/30/2014	GP-26 (7.5-8.5) EV14100222-01 10/29/2014
Diethylphthalate	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Dimethylphthalate	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Di-N-Butylphthalate	200	100 U	--	--	--	--	100 U	--	--	100U	100U
Di-N-Octylphthalate		100 U	--	--	--	--	100 U	--	--	100U	100U
Hexachlorobenzene	31	100 U	--	--	--	--	100 U	--	--	100U	100U
Hexachlorobutadiene	--	500 U	--	--	--	--	500 U	--	--	500U	500U
Hexachlorocyclopentadiene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Hexachloroethane	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Isophorone	--	100 U	--	--	--	--	100 U	--	--	100U	110U
Nitrobenzene	--	100 U	--	--	--	--	100 U	--	--	100U	100U
N-Nitrosodimethylamine	--	26 U	--	--	--	--	29 U	--	--	34U	42U
N-Nitroso-Di-N-Propylamine	--	90 U	--	--	--	--	100 U	--	--	120U	150U
N-Nitrosodiphenylamine	--	100 U	--	--	--	--	**110**	--	--	100U	100U
Phenol	--	100 U	--	--	--	--	100 U	--	--	100U	100U
Pyridine	--	200 U	--	--	--	--	200 U	--	--	200U	200U
SVOCs (µg/kg) Method EPA-8270 SIM											
1-Methylnaphthalene	--	20 U	20 U	20 U	20 U	20 U	**61**	20 U	20 U	20U	20U
2-Methylnaphthalene	--	20 U	**26**	20 U	20 U	20 U	**95**	20 U	20 U	20U	**22**
Acenaphthene	No Value Provided	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20U	20U
Acenaphthylene	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20U	20U
Anthracene	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20U	20U
Benzo[a]Anthracene	--	20 U	20 U	**21**	**99**	20 U	20 U	20 U	**52**	20U	**29**
Benzo[a]Pyrene	300	20 U	20 U	**22**	**71**	20 U	20 U	20 U	20 U	20U	20U
Benzo[b]Fluoranthene	--	20 U	20 U	**30**	**110**	**21**	20 U	20 U	20 U	20U	**37**
Benzo[g,h,i]Perylene	--	20 U	20 U	**25**	**64**	20 U	20 U	20 U	20 U	20U	**43**
Benzo[k]Fluoranthene	--	20 U	20 U	20 U	**31**	20 U	20 U	20 U	20 U	20U	20U
Chrysene	--	20 U	20 U	20 U	**63**	20 U	20 U	20 U	20 U	20U	20U
Dibenz[a,h]Anthracene	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20U	20U
Fluoranthene	--	20 U	**31**	**170**	**240**	20 U	**28**	20 U	**23**	20U	**120**
Fluorene	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20U	20U
Indeno[1,2,3-cd]Pyrene	--	20 U	20 U	20 U	**38**	20 U	20 U	20 U	20 U	20U	20U
Naphthalene	--	20 U	**36**	20 U	20 U	20 U	20 U	20 U	20 U	20U	**120**
Pentachlorophenol	--	48 U	54 U	63 U	69 U	53 U	55 U	57 U	65 U	67U	79U
Phenanthrene	--	20 U	**23**	**28**	**78**	**21**	**29**	20 U	20 U	20U	**100**
Pyrene	--	20 U	**33**	**45**	**120**	20 U	**24**	20 U	20 U	20U	**93**

U = Indicates the compound was not detected at the reported concentration.
J = Indicates the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
UJ = The analyte was not detected in the sample; the reported sample reporting limit is an estimate.
PCBs = polychlorinated biphenyls SGC = silica gel cleanup.
SVOCs = semivolatile organic compounds VOCs = volatile organic compounds
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
Bold = Detected compound.
-- = Not listed in Table 749-2
Shading = No Comparison Value Available

ATTACHMENT 1

Representative Site Photos

Terrestrial Ecological Evaluation

Closed City of Yakima Landfill

Photograph 1: On-Site Condition.

Photograph 2: Condition Along Irrigation Canal; < 1.5 Acres Along Northeastern Side of Site at Base of I-82 Right-of-Way.