HALEY ALDRICH

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REMEDIAL ACTION PLAN
WEST PROPERTY - TASS 2 SITE
10505 NORTH PORTLAND ROAD
PORTLAND, OREGON

by
Haley & Aldrich, Inc.
Portland, Oregon

for
City of Portland, Bureau of Environmental Services, TASS Program, and Brownfield Program
Portland, Oregon

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HALEY & ALDRICH, INC.
505 W. RIVERSIDE AVE,
SUITE 450"
SPOKANE, WA 99201
509.960.7447

SIGNATURE PAGE FOR

REPORT ON

REMEDIAL ACTION PLAN
WEST PROPERTY - TASS 2 SITE
10505 NORTH PORTLAND ROAD
PORTLAND, OREGON

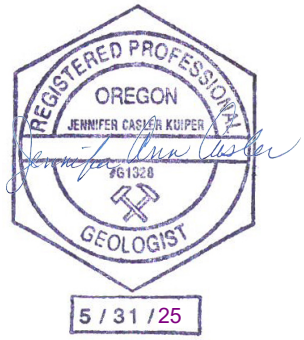
PREPARED FOR

CITY OF PORTLAND, BUREAU OF ENVIRONMENTAL SERVICES, TASS PROGRAM, AND BROWNFIELD PROGRAM
PORTLAND, OREGON

PREPARED BY:

Colby R. Hunt
Client Leader/Senior Associate
Haley & Aldrich, Inc.

REVIEWED AND APPROVED BY:



Jennifer A. Casler, R.G.
Client Leader/Senior Associate
Haley & Aldrich, Inc.

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List of Abbreviations

Abbreviation	Definition
BES	Bureau of Environmental Services (City of Portland)
bgs	below ground surface
CMMP	Contaminated Media Management Plan
DEQ	Department of Environmental Quality (State of Oregon)
ECSI	Environmental Cleanup Site Information
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
NPDES	National Pollution Discharge Elimination System
ODOT	Oregon Department of Transportation
PFB	Portland Fire Bureau
PNG	PNG Environmental, Inc.
RA	risk assessment
RAP	remedial action plan
RBC	risk-based concentration
RV	recreational vehicle
SL	screening level
SSSHP	Site-Specific Safety and Health Plan
TASS	Temporary Alternative Shelter Site

1. Introduction

Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this Remedial Action Plan (RAP) that presents the planned remedial measures for the West Property - Temporary Alternative Shelter Site (TASS) 2 development (TASS 2 site) in Portland, Oregon (Figure 1). The planned remedial measures include: (1) constructing a protective cap consisting of a minimum of 8 inches of imported aggregate base rock underlying a minimum of 4 inches of asphalt paving to prevent contact with surface soil at the TASS 2 site; (2) installing utility conduit plugs and passively vented utility boxes; and (3) conducting periodic methane monitoring to confirm that methane is not accumulating at unacceptable levels and to ensure that corrective actions are taken to prevent the accumulation of elevated concentrations of methane in structures and enclosed spaces at the TASS 2 site. This RAP has been prepared for the TASS program within the City of Portland (City) Mayor's office. The City Brownfield Program is providing U.S. Environmental Protection Agency (EPA) grant funding for this project. These services are being provided through the City Bureau of Environmental Services (BES) Coordinated Site Assessment programs environmental on-call contract #31001878 with Haley & Aldrich. The remedial measures presented in this report are considered interim protective measures and do not represent a final remedy for the TASS 2 site.

The TASS 2 site is located at 10505 North Portland Road in Portland, Oregon (Figure 1) and is located on the east portion of Multnomah County tax lot 1N1E05B-01000 (tax lot 1000). Tax lot 1000 was previously referred to as the Former North Larsen Property and is currently referred to as the West Property because tax lot 1000 is situated west of the City Columbia Boulevard Wastewater Treatment Plant (WWTP), and the future long-term use for this property is for the expansion of the WWTP. The TASS 2 site includes the current planned footprint of the proposed TASS 2 facility, which is an approximately 6-acre portion of the 22.5-acre West Property. The TASS 2 site is shown relative to surrounding features on the Project Locus (Figure 1). A BES site plan is included in Appendix A.

1.1 PURPOSE

This RAP was prepared in response to an Oregon Department of Environmental Quality (DEQ) request for a RAP describing the planned remedial measures at the TASS 2 site. The planned remedial measures are intended for protection of temporary TASS 2 site use and do not constitute a final remedy at the TASS 2 site. The final remedy at the TASS 2 site will be implemented during future redevelopment of the entirety of the West Property with an expansion of the Columbia Boulevard Wastewater Treatment Plan. This RAP was prepared in general accordance with Oregon Administrative Rule 340-122-030 through 340-122-110, and describes the procedures for implementing the protective cap and methane mitigation measures prior to installation of TASS 2 facilities. This RAP also describes the procedures for inspecting and maintaining the protective cap and for conducting methane monitoring while TASS 2 is in operation. Construction drawings for the TASS 2 facility and elements of the protective cap are shown in the development review set (plan set) prepared for the TASS 2 facility by Sosyal Architecture and Community Development, LLC. (Appendix B). This RAP applies to only the 6-acre TASS 2 facility development area shown on the plan set and does not apply to other portions of the West Property.

Haley & Aldrich prepared a Contaminated Media Management Plan (CMMP) and a Risk Assessment (RA) for the TASS 2 site in June 2024 and August 2024, respectively (Haley & Aldrich, 2024a and Haley & Aldrich, 2024b). The CMMP was developed for the City of Portland for use during implementation of the remedial measures during redevelopment of the TASS 2 site. The CMMP provides guidelines for the

identification, handling, and management of contaminated soil that will be encountered during earthwork at the TASS 2 site, including grading and excavations for utilities and fence posts. The CMMP should be reviewed and understood by the construction contractor and all other personnel involved in construction activities at the TASS 2 site. A copy of the CMMP is provided in Appendix C.

1.2 DOCUMENT ORGANIZATION

This RAP is organized into the following sections.

- Section 2, TASS 2 Site Description and Background, provides a summary of the TASS 2 site setting and investigation activities performed at the TASS 2 site, and presents the goals, objectives, and strategy for remediation at the TASS 2 site as described in this RAP. Section 2 also describes current TASS 2 site conditions and the planned redevelopment of the TASS 2 site.
- Section 3, Remedial Measures Objectives and Strategy, provides a description of the objectives and strategy for implementation of the remedial measures as part of construction of the TASS 2 site.
- Section 4, Implementation of Remedial Measures, describes worker safety, TASS 2 site security, and erosion and sediment control measures for implementation of the remedial measures. Section 4 also describes the configuration and sequence for implementation of the remedial measures, characterization methods for clean import fill that will be part of the protective cap, contaminated media management during implementation of the remedial measures, field documentation, and report preparation to describe implantation of the remedial measures.
- Section 5, Inspection and Maintenance Plan, describes the party responsible for inspecting and maintaining the protective cap and for conducting methane monitoring, the inspection and monitoring schedule and scope, the maintenance that may be performed in response to inspections, and inspection and maintenance reporting requirements.
- Section 6, Schedule, describes the anticipated schedule for construction of the protective cap and for conducting periodic methane monitoring.
- References lists the documents used in preparation of this RAP.

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2. TASS 2 Site Description and Background

Summaries of the TASS 2 site setting, previous investigations, remedial measures goals and objectives, current TASS 2 site conditions, and the proposed redevelopment are presented in the following sections.

2.1 TASS 2 SITE SETTING

The TASS 2 site encompasses approximately 6 acres on the southeast portion of the West Property, which consists of Multnomah County tax lot 1N1E05B-01000. The TASS 2 site is bound to the north by vacant portions of the West Property, beyond which is the Columbia Slough, to the east by N Portland Road, to the south by an unnamed road, and to the west by vacant portions of the West Property. The TASS 2 site is currently vacant with sparse vegetation. More significant vegetation including mature trees is found on the south bank of the Columbia Slough, outside of the TASS 2 site footprint. Access to the TASS 2 site is through an unnamed road along the southern boundary of the TASS 2 site. The approximate limits of the TASS 2 site and surrounding area are shown on the BES site plan included in Appendix A.

Based on information obtained from the DEQ, the West Property, which includes the TASS 2 site, operated as an industrial site since at least the 1940s, including use as a shingle mill, a boat manufacture and repair facility, for materials storage, welding, diesel engine repair and rebuilding, and as a tank-truck washing facility. The West Property is currently vacant. The Columbia Slough adjoins the northern boundary of the West Property. The West Property was originally listed on the DEQ Environmental Cleanup Site Information (ECSI) database (ECSI No. 0186) because of the presence or suspected presence of metals, polychlorinated biphenyls, and petroleum hydrocarbons and associated constituents in soil and/or groundwater. Contamination present on the TASS 2 site resulted from historical practices that included discharge of wastewaters to on-site ponds, product spillage, leaking underground storage tanks, contaminated stormwater runoff, as well as contaminants released to an on-site drywell.

Historically, groundwater contamination from a solvent plume migrated to the West Property from the adjacent South Larsen site (ECSI No. 3337). BES installed several monitoring wells and conducted several monitoring events to investigate groundwater contamination migrating from the South Larsen site. Groundwater was encountered in the monitoring well located closest to the unnamed road separating the two sites at depths of between 35 to 60 feet below ground surface (bgs).

2.2 PREVIOUS INVESTIGATIONS

Numerous previous environmental investigations have been conducted on the West Property; however, this RAP discusses only the activities and results of investigations conducted within the boundary and perimeter of the planned development of the protective cap for the TASS 2 site. Previous environmental investigations conducted at the TASS 2 site consist of a Phase II Environmental Site Assessment (ESA) conducted by PNG Environmental, Inc. (PNG) in November 1999 (PNG, 1999), a Phase II ESA conducted by Kleinfelder, Inc. in May 2000 (Kleinfelder, 2000), soil sampling activities conducted by BES in October and November 2023, and a soil gas investigation conducted by Haley & Aldrich in 2024 (Haley & Aldrich, 2024c). These investigations were summarized in detail in the 2024 RA. Pertinent information from these investigations is summarized in the following sections.

2.2.1 Subsurface Conditions

Subsurface conditions encountered at the TASS 2 site during previous investigations consisted of clayey to silty fill soils with varying amounts of debris (concrete, wood, plastic, brick, piping, and rebar). Abundant large concrete and asphalt debris (up to 3 feet in diameter) was encountered in a majority of the test pits excavated at the TASS 2 site by Kleinfelder, Inc. in May 2000 (Kleinfelder, 2000). This debris was encountered generally between 6 to 14 feet bgs. The fill soils appeared to extend to a depth of at least 21 feet bgs in some areas of the TASS 2 site.

2.2.2 Hydrogeologic Conditions

Former groundwater monitoring wells MW-1, MW-3, and MW-4 were installed at the TASS 2 site in May 1999 and were decommissioned in 2016. Static groundwater measurements from former on-site groundwater monitoring wells MW-1, MW-3, and MW-4 generally ranged from approximately 18 feet bgs to 21 feet bgs. Apparent perched groundwater was encountered at a depth of 10.7 feet bgs in monitoring well MW-3, formerly located near the center of the TASS 2 site. The depth to groundwater in monitoring well MW-2, formerly located off site near the northeast portion of the TASS 2 site and the closest monitoring well to the future locations of the septic tanks, ranged between 20 and 21 feet bgs. Based on the maximum depth of planned excavations of 18 feet bgs and the depth to static groundwater beneath the TASS 2 site, groundwater is not anticipated to be encountered during ground disturbance activities.

2.2.3 Contaminant Distribution and Exposure Risk for the TASS 2 Site

The analytical results from soil, groundwater, and soil gas samples collected from the TASS 2 site indicate that:

- Contaminants were not detected in soil samples at concentrations greater than DEQ *Soil Ingestion, Dermal contact, and Inhalation* risk-based concentrations (RBCs) for construction worker and excavation worker receptors, and contaminants were not detected in groundwater samples at concentrations greater than DEQ *Groundwater in Excavation* for construction and excavation worker receptors; therefore, contaminants in soil and groundwater do not appear to present a risk to future construction and excavation workers.
- Except for polycyclic aromatic hydrocarbons and arsenic, contaminants were not detected in soil samples at concentrations greater than DEQ *Soil Ingestion, Dermal contact, and Inhalation* RBCs for residential receptors.
- Based on the measured depths to groundwater beneath the TASS 2 site, groundwater is not expected to be encountered during TASS 2 site redevelopment.
- Contaminants were not detected in groundwater samples at concentrations greater than DEQ *Volatilization to Outdoor Air* for residential receptors. At the request of DEQ, soil vapor sampling was performed within the TASS 2 site footprint in April 2024 to evaluate whether volatilization poses a risk to future TASS 2 occupants. The soil vapor sampling confirmed that volatilization of volatile organic compounds does not pose a risk to future TASS 2 occupants.
- Contaminants were detected in some soil samples at concentrations greater than DEQ ecological RBCs for freshwater sediment. Appropriate efforts will be made to prevent stormwater flow to catch basins and surface water bodies during and following construction.

- Methane was detected in the subsurface at concentrations up to 50 percent. The source(s) of methane beneath the TASS 2 site may be subsurface organic material, petroleum hydrocarbons in the subsurface, or a combination of the two. Methane is a non-toxic compound but can pose a fire or explosion risk if allowed to accumulate inside of structures or subsurface features (e.g., utility conduits or vaults) and can act as a simple asphyxiant.

A detailed comparison of previous soil, groundwater, and soil gas sample analytical results to applicable cleanup levels is presented in Haley & Aldrich's Risk Assessment for the TASS 2 site (Haley & Aldrich, 2024b).

2.3 REMEDIAL MEASURES GOALS, OBJECTIVES, AND STRATEGY

The primary goals of remedial measures at the TASS 2 site are to (1) eliminate the unacceptable risk to public health and the environment resulting from exposure to contaminants of concern in soil at the TASS 2 site, and (2) prevent the accumulation of elevated concentrations of methane in structures and enclosed spaces. The specific objectives for the remedial measures are to:

- Eliminate human exposure to contaminated soil through the ingestion, dermal contact, and inhalation exposure pathway;
- Minimize direct contact that may result in ingestion and inhalation of contaminated soil by future construction and/or excavation workers;
- Minimize potential impacts to groundwater, surface water, and/or sediment from infiltration and/or surface water runoff; and
- Develop plans for management of contaminated soil that will be encountered during implementation of the remedial measures to ensure that isolation of contaminants from human contact is maintained.

The following protective measures will be implemented during the RA to meet the remedial goals and objectives.

- Place a demarcation layer consisting of geotextile fabric at the base of the protective cap. This layer will be used to demark the separation between contaminated soil and overlying clean cap.
- Construct a 1-foot-thick protective cap consisting of 8 inches of imported (clean) aggregate base rock underlying a minimum of 4 inches of asphalt paving.
- Develop and implement an Inspection and Maintenance Plan that describes activities to be performed to implement and operate the remedial strategy.
- Manage stormwater discharging from the TASS 2 site to prevent impacts to adjoining properties and the Columbia Slough.

2.4 PROPOSED REDEVELOPMENT

Preliminary plans indicate that the TASS 2 site will consist of recreational vehicle (RV) storage areas; car parking areas; mobile manufactured housing pods; tents for common areas including kitchen areas, trash areas, picnic areas, and gathering areas; and sewage and stormwater infrastructure. Except for stormwater swales north of the TASS 2 site and a small, forested area along the east boundary of the TASS 2 site, the entirety of the TASS 2 site will be paved following the completion of construction activities. Sewage infrastructure will consist of a series of subsurface sewage treatment tanks connected

to above-ground holding tanks that will be periodically pumped out and the sewage properly disposed of at the Clean Water Services facility located at 2550 SW Hillsboro Highway in Hillsboro, Oregon, or other permitted location.

Surface grading will slope the TASS 2 site slightly downward to the north, so that sheet flow at the TASS 2 site will flow toward a curb along the northern edge of the pavement near the north boundary of the TASS 2 site. Sheet flow will flow through curb openings to lined stormwater swales along the northern boundary of the TASS 2 site. The lined stormwater swales will discharge to an oil/water separator, which will ultimately discharge to the City of Portland storm sewer system. Development plans are included in Appendix B.

Ground-disturbing activities will generally be limited to surface grading of imported gravel fill, installation of subsurface utility lines, subsurface wastewater and stormwater infrastructure, fencing, and surface improvements on top of the protective cap (walkways, parking areas, common areas, etc.). Excavations of up to 9 feet bgs will be required to install septic treatment tanks north of the TASS 2 site. Excavations outside of the TASS 2 footprint for utility connections may extend up to 18 feet bgs. Deeper excavations will be conducted during periods of dry weather to minimize sheet flow from the TASS 2 site entering the excavations.

Prior to installation of TASS 2 facilities, the entirety of the TASS 2 site except for the lined stormwater swales and a small, forested area near the south boundary of the TASS 2 site will be capped with a minimum of 8 inches of imported aggregate base rock fill underlying a minimum of 4 inches of asphalt paving. A demarcation layer consisting of geotextile fabric will be installed prior to the placement of the aggregate base rock and asphalt cap. The planned project will prevent direct contact of underlying soil by future TASS 2 site occupants and eliminate exposure to the generally low concentrations of contaminants in soil. In addition to this RAP, the TASS 2 development will be conducted in accordance with the CMMP for the TASS 2 development.

3. Implementation Strategy

The implementation strategy for the remedial measures to be implemented as part of construction of TASS 2 includes the following measures that meet the remedial measures objectives:

- Placement of a demarcation geotextile at the base of the protective cap to serve as an indicator to workers and TASS 2 occupants of potential contaminated soil beneath the protective cap;
- Placement of 8 inches of imported (clean) aggregate base rock fill underlying a minimum of 4 inches of asphalt paving as necessary to achieve the design grades and form a protective hardscape cover;
- Implementation of the CMMP during construction of the protective cap and the TASS 2 facility;
- Installation of utility conduit plugs and passively vented utility boxes to prevent the accumulation of methane at concentrations that may pose a risk to TASS 2 occupants or workers;
- Development and implementation of an Inspection and Maintenance Plan describing the activities that will be taken to ensure that the remedial measures continue to meet the implementation objectives while the TASS 2 site is occupied; and
- Implementation of a methane monitoring program to confirm that methane is not accumulating at unacceptable levels.

4. Implementation of Remedial Measures

This section provides information related to the implementation of the remedial measures including requirements for worker safety, TASS 2 site security, and erosion and sediment control; the configuration and installation of the protective cap; the configuration and installation of utility conduit plugs and passively vented utility boxes; characterization of imported fill material; management of contaminated media encountered during construction activities for TASS 2; and field documentation and construction completion report documentation.

4.1 WORKER SAFETY

The 2024 RA for the TASS 2 site determined that contaminants are not present in soil at the TASS 2 site at concentrations greater than DEQ RBCs (DEQ, 2023) for construction and excavation workers. However, Oregon Occupational Safety and Health Administration regulations require that construction and excavation workers are notified prior to construction of the presence of contaminated soil, health effects of overexposure to hazardous substances present in the contaminated soil, and measures that will be taken to minimize exposure to workers. Worker safety requirements are described in Section 6 of the CMMP (Appendix C). The City or the contractor should prepare a Health and Safety Plan (HASP) for construction of the TASS 2 site before construction activities commence.

4.2 SITE SECURITY

Following completion of the construction activities, permanent fencing will be installed as shown on Appendix B Sheet No. A02. The permanent fencing will prevent unauthorized access to TASS 2 and prevent occupants of TASS 2 from accessing other portions of the West Property. Additionally, the TASS 2 site will be monitored 24 hours each day, seven days a week, and 365 days a year, during which TASS 2 personnel will patrol the TASS 2 site perimeter every hour to ensure there is no access to the slough or surrounding areas.

4.3 EROSION AND SEDIMENT CONTROL

Erosion and sediment control will be conducted in accordance with the BES' general National Pollutant Discharge Elimination System (NPDES) 1200-CA permit (Permit No. NGEN12CA-ORRCA0002). Sediment fencing will be installed to control off-site migration of contaminated soil at the perimeter of the work area, and best management practices will be implemented to prevent sediment-laden surface water runoff into Columbia Slough. The Columbia Slough is located approximately 200 feet north of the TASS 2 site and erosional impacts are not anticipated. Stabilized construction entrances will be installed at construction access points to minimize track-out onto N Portland Road. Care will be taken to minimize the amount of contaminated soil tracked onto stabilized construction entrances. Street sweepers will be used to capture any soil tracked out onto roadways.

4.4 PROTECTIVE CAP CONFIGURATION

The protective cap will be composed of three elements: a demarcation geotextile fabric, a minimum of eight inches of aggregate base rock, and a minimum of 4 inches of asphalt pavement. A profile of the protective cap is presented on Sheet C02 in Appendix B. These elements will be installed prior to construction of TASS 2 facilities, which will include RV storage areas; car parking areas; mobile

manufactured housing units; Conex boxes or temporary structures for common areas including kitchen areas, trash areas, picnic areas, and gathering areas; and sewage and stormwater infrastructure. Except for stormwater swales and a small, vegetated area along the eastern boundary, the entirety of the TASS 2 site will be paved following the completion of construction activities. Sewage infrastructure will likely consist of five subsurface sewage treatment tanks connected to aboveground holding tanks that will be periodically pumped out and the sewage properly disposed of off site. Surface grading will slope the TASS 2 site slightly downward to the north, so that surface water at the TASS 2 site will flow to the north toward a curb along the northern edge of the pavement near the north boundary of the TASS 2 site. Stormwater will flow through curb openings to lined stormwater swales along the northern boundary of the TASS 2 site. The lined stormwater swales will discharge to an oil/water separator, which will ultimately discharge to the City storm sewer system. Development plans for TASS 2 are included in Attachment B.

Ground-disturbing activities will generally be limited to surface grading, grading of imported gravel fill, installation of subsurface utility lines, subsurface wastewater and stormwater infrastructure, fencing, and surface improvements (walkways, parking areas, common areas, etc.). Excavations deeper than 18 feet bgs are not anticipated on the TASS 2 site. Construction of the facilities as described above and shown in the plan set will meet DEQ requirements for the protective cap.

4.5 INSTALLATION OF REMEDIAL MEASURES

Installation of the remedial measures will be performed by the construction contractor generally following the sequence outlined below:

- A pre-construction meeting will be conducted to coordinate construction efforts and review the site-specific HASP.
- Temporary security fencing and temporary erosion and sediment controls will be installed.
- Surface grading and utility installation will be completed.
- Utility conduit plugs consisting of Polywater AFT Foam Sealant will be installed in utility conduits at the point where the conduits enter utility boxes, transformers, or other aboveground utility features. Diagrams showing the utility conduit plugs and a product specification sheet for Polywater AFT Foam Sealant are included in Appendix D.
- Utility excavations will be backfilled with imported crushed rock and/or excavated TASS 2 site soil.
- Passive ventilation consisting of small holes will be present on the lid of an irrigation box, which will be the only sub-surface utility box at the TASS 2 site.
- A demarcation layer consisting of geotextile fabric will be placed across the TASS 2 site. The geotextile will have a minimum overlap of 6 inches. The geotextile fabric will include either GEOTEX 200ST or StratTex SW-200. Product specification sheets for GEOTEX 200ST and StratTex SW-200 are included in Appendix E. These geotextile fabrics are black, woven geotextile fabrics between 20 and 40 mils thick.
- A minimum of 8 inches of aggregate base rock material consisting of either Knife River Corporation 3/4-inch minus Oregon Department of Transportation (ODOT) base rock or Knife River Corporation 1 1/2-inch minus ODOT base rock will be placed across the TASS 2 site. Statistical analysis of the base rock material is provided in Appendix E. The base rock will be placed in an 8-inch lift and compacted with a sheep-foot roller and a drum roller to 95 percent

compaction based on a standard proctor or 92 percent compaction based on a modified proctor. The 8-inch lift will be proof rolled for compaction. The 8-inch lift is expected to be relatively uniform, within the range of typical construction tolerances, and compaction testing will be conducted in accordance with the recommendations of the geotechnical engineer for the TASS 2 project.

- A minimum of 4 inches of asphalt paving will be placed across the TASS 2 site. The thicknesses of asphalt and concrete pavement will be verified by field measurement.
- Following utility installation and installation of the protective cap, temporary structures and facilities associated with TASS 2 will be installed at the TASS 2 site.

4.6 CMMP IMPLEMENTATION

Relevant components of the CMMP to be implemented during construction of the protective cap at the TASS 2 site are described as follows:

Section 5 of the CMMP includes a summary of TASS 2 site history, site geology and hydrogeology, and a summary of previous environmental investigations conducted at the TASS 2 site. It is anticipated that potentially contaminated soil will be encountered during construction of the TASS 2 site, specifically during surface grading and excavation for subsurface utilities and fence posts. Therefore, the information presented in Section 5 of the CMMP is relevant for construction of the protective cap. This information is summarized in Section 2 of this RAP. All soil encountered during TASS 2 site development is assumed to contain contaminants above DEQ Clean Fill screening values and therefore will be managed as contaminated unless otherwise approved by DEQ.

Section 6 of the CMMP describes health and safety concerns related to impacted media at the TASS 2 site. Construction and excavation workers will encounter impacted soil during construction of the protective cap; therefore, the information presented in Section 6 of the CMMP is relevant for construction of the protective cap. Sections of the CMMP relevant for managing worker health and safety concerns during construction of the TASS 2 site and protective cap are referenced in Section 4.1 of this RAP.

Section 7 of the CMMP describes procedures for the identification and management of contaminated soil, contamination control, requirements for characterization of imported fill material, and documentation requirements. It is anticipated that potentially contaminated soil will be encountered during construction of the protective cap, that material will be imported, and the documentation of construction activities will be required; therefore, the information presented in Section 7 of the CMMP is relevant for construction of the protective cap. Sections of the CMMP relevant for identification and management of contaminated soil during construction of the protective cap are referenced in Sections 4.6.2 through 4.6.4 of this RAP.

4.6.1 Key Personnel Roles and Responsibilities

The key personnel and roles and responsibilities for implementation of the RA are summarized below:

City of Portland Project Contact
Ms. Taryn Meyer, Hydrogeologist
Bureau of Environmental Services
1120 SW 5th Avenue, Suite 613
Portland, Oregon 97204
503.823.8155
taryn.meyer@portlandoregon.gov

Ms. Meyer will have the role of primary City contact during implementation of the RA. Ms. Meyer has overall responsibility for project performance and meeting regulatory requirements.

Haley & Aldrich Project Manager
Mr. Colby Hunt
6420 S Macadam, Suite 100
Portland, Oregon 97239
971.327.9103
chunt@haleyaldrich.com

Mr. Hunt will have the role of Environmental Consultant during implementation of the RA. The Environmental Consultant in collaboration with the contractor has responsibility for implementation of the CMMP. The Environmental Consultant is responsible for oversight during installation of the protective cap, response if notified of suspected contamination beyond that described in Section 2.2 or Appendix A of the CMMP is encountered, sampling and analysis (if conducted) evaluation of disposal requirements and options for contaminated soil management, and response to other environmental issues that may develop.

General Contractor Project Manager
Mr. Luis Lopez
Fulcrum Construction
971.201.6843
Luis.l@fulcrumpdx.com

Mr. Lopez will oversee construction of the TASS 2 site including adherence to the CMMP, construction site-specific safety and health plan (SSSHP), and construction-related components of the RAP.

Oregon Department of Environmental Quality (DEQ) Project Manager
Ms. Sarah Greenfield
Oregon Department of Environmental Quality 700 Multnomah Street, Suite 600
Portland, Oregon
503.229.5245
Sarah.Greenfield@deq.oregon.gov

Ms. Greenfield is responsible for environmental regulatory oversight during implementation of this RAP and CMMP.

4.6.2 Contaminated Soil Identification

Contaminated soil will be encountered during excavation activities related to construction of the protective cap. Identification of contaminated soil will be conducted in accordance with Section 7.2 of the CMMP. Further, field screening will be conducted during construction to assess the presence of unanticipated contamination which could require additional sampling or management measures in accordance with the CMMP.

4.6.3 Contaminated Soil Management

Management of contaminated soil will be conducted in accordance with Section 7 of the CMMP.

4.6.4 Contamination Control

All appropriate means and methods to prevent off-site migration of contaminated soils through airborne dust, track out, and/or stormwater runoff during construction of the protective cap must be conducted in accordance with Section 7 of the CMMP. City of Portland stormwater conveyance system structures proximate to the TASS 2 site discharge to the Columbia Slough. Sediment and erosion control elements will be in accordance with BES' general NPDES 1200-CA permit to prevent contaminated soil and potentially impacted stormwater from entering the City of Portland stormwater conveyance system and/or the Columbia Slough.

4.6.5 Imported Material

All fill material imported to the site shall consist of either a manufactured rock product (e.g., 0.75-inch-minus crushed rock from a permitted rock quarry) or must be free of contaminants at concentrations exceeding DEQ's Clean Fill screening levels (SLs). It is the contractor's responsibility to ensure all imported fill material meets these criteria and provide BES with the imported origin information and accompanying documentation demonstrating the material meets DEQ Clean Fill SLs, if not using a manufactured rock product. If a non-manufactured rock material is used, test results demonstrating that the material meets DEQ Clean Fill SLs must be reviewed and approved by DEQ prior to being brought onsite. In addition, if evidence of contamination is observed in imported fill material, the contractor should reject the imported backfill and identify an alternate rock source. Material imported as structural backfill should be evaluated and approved by the geotechnical engineer before placement on the site.

4.7 FIELD DOCUMENTATION AND IMPLEMENTATION REPORT

Field reports documenting the construction of the protective cap will be prepared. The field reports will describe observations of excavation and soil management activities, sampling and analytical methods (as appropriate), and communications with involved parties and regulatory agencies. The field reports will also document the placement and construction of the protective cap including the final grading, placement of demarcation material and minimum overlaps, overlying gravel base fill thickness, final paving extent, and other remedial features.

A Construction Completion Report describing the implementation of the protective cap will be prepared following construction activities. The report will include photographs of construction activities, a summary of construction activities, as-built construction drawings and waste disposal receipts. The report also will describe deviations from this RAP, if any.

5. Inspection and Maintenance Plan

This section describes the approach for inspection and maintenance of the protective cap, which was designed to ensure that the protective cap continues to meet implementation objectives. The approach for inspection and maintenance describes the responsible party for performing inspections and maintenance and its qualifications; the schedule and scope for inspections; and maintenance and reporting requirements.

5.1 RESPONSIBLE PARTY

Inspections and maintenance will be performed by the City of Portland or its designee. Personnel performing inspection and maintenance will be familiar with the construction elements of the protective cap and the implementation objectives. Personnel also will be generally familiar with measurement methods used for civil engineering and the regulatory framework under which the protective cap has been implemented.

5.2 MONITORING AND INSPECTION SCHEDULE AND SCOPE

5.2.1 Methane Monitoring

Methane monitoring will be conducted inside of TASS 2 temporary structures including Conex-box common spaces (i.e., kitchen, two hygiene stations, and an office), in onsite transformers, and in any subsurface utility vaults (e.g., irrigation boxes), beneath select pods and RVs, and in ambient air. The City will also attempt to conduct monthly monitoring of select sleeping pods to the extent feasible, and if monthly monitoring is not feasible, these pods will be monitored opportunistically whenever possible, including immediately following and prior to occupancy, will not be limited to the standard monthly monitoring schedule, and will include confirmation that the air gaps beneath the pods are not obstructed. A Landtec GEM 2000 (or similar device) will be used to measure percent by volume (pbv) of carbon dioxide, oxygen, and methane at each monitoring location. Barometric pressure will also be recorded at each monitoring location. The monitoring device will be calibrated prior to each monitoring event using the manufacturers' recommended procedures. Methane monitoring will be conducted in accordance with the *Operating Procedure – West Property TASS 2 Methane Monitoring*, included in Appendix F. Measurements obtained during each methane monitoring event will be recorded on a Methane Monitoring Data Sheet included in Appendix F.

The City will conduct at least three weekly methane monitoring events after TASS 2 temporary structures are installed and prior to occupancy by TASS 2 residents and/or workers. If methane is detected during any of the three pre-occupancy methane monitoring events, modifications will be made prior to TASS 2 occupancy such that methane levels are maintained below detectable levels prior to occupancy.

Following occupancy, the City will conduct an initial post-occupancy methane monitoring event. If methane is detected during the initial post-occupancy monitoring event, the response actions outlined in Table 1 of Section 5.3.1 of the RAP will be taken until methane is below detection and routine monitoring will continue to occur weekly until at least three events confirm that methane levels remain below detection. If methane is not detected during the initial post-occupancy monitoring event or following three consecutive weekly monitoring events, methane monitoring will be conducted monthly. If methane is not detected during three consecutive monthly monitoring events, the frequency of methane monitoring will be reduced to quarterly. If the presence of methane is confirmed during any

sampling event consistent with the response actions identified in Table 1 of Section 5.3.1 of the RAP, routine weekly monitoring will resume until at least three events confirm that corrective actions were effective and methane levels remain below detection.

All subsurface utilities have ventilation measures as a means to prevent methane accumulation. In addition to the methane monitoring procedures described in Appendix F, if subsurface utilities need to be accessed, methane monitoring will occur prior to accessing these subsurface utilities. Because sewage in septic tanks generates methane independently of other potential subsurface sources of methane, active septic tanks will not be monitored for methane.

Following occupancy, response actions will follow Table 1 of Section 5.3.1 of the RAP.

5.2.2 Cap Inspections

Cap inspections and cap inspection reporting will be conducted by the Coordinated Site Assessment (CSA) Team and their consultants. The first cap inspection event will occur no more than six months after completion of the protective cap or following the start of the rainy season to evaluate grading and to make any modifications, if required. Following the initial cap inspection, cap inspections will be performed semiannually after construction of the protective cap has been completed until occupancy of the TASS 2 site is terminated. Informal visual cap inspections of the protective cap will also occur routinely as a part of facility operations. Informal visual cap inspections will be performed by TASS 2 staff familiar with inspection requirements.

DEQ will be notified a minimum of seven days prior to the cap inspection date and provided an opportunity to participate. The scope of work for cap inspections will include the following activities:

- Visual observations for evidence of degradation, settlement, or penetration of the protective cap such that the potential exists for TASS 2 occupants or staff to become exposed to underlying contaminated soil.
- Visual inspection of stormwater-control system features for evidence of degradation or blockage that may result in erosion or undermining of the protective cap; visual inspection of stormwater overland flow pathways for evidence of blockage as a result of traffic, falling debris, or other occurrences; and visual inspection of surfaces for evidence of improper grading that may cause stormwater to not flow toward control system features.
- The results of formal and informal inspections requiring follow-up maintenance will be reported to City staff operating TASS 2 within 24 hours, including photographs of any issues of potential concern observed during the inspections. Any significant loss or damage to materials comprising the protective cap will be reported to DEQ by the City within 24 hours of receiving the report.
- Inspection of fencing surrounding the TASS 2 development to confirm that access to adjacent areas of the West Property where residual contamination remains is prevented.

5.3 RESPONSE ACTIONS

5.3.1 Methane Response

The City will conduct the following response actions if methane is detected in any common space or sleeping pod at the below-referenced concentrations:

Table 1. Response Actions			
Methane Trigger Concentration (pbv)	**Response When Trigger is Exceeded**		
	Duration Trigger is Exceeded		
	Less than 24 Hours	**24 to 72 Hours**	**Greater than 72 Hours**
Less than 0.5	Ventilate the space to clear the space of methane, evaluate for the source of methane, and monitor the space at three-hour intervals until methane is below detection.	Notify DEQ of conditions if presence of methane is confirmed. Ventilate the space to clear the space of methane, evaluate for the source of methane, and monitor the space at three-hour intervals until methane is below detection.	
0.5 to 1.25	Notify DEQ of conditions if presence of methane is confirmed. Ventilate the space to clear the space of methane, evaluate for the source of methane, and monitor the space at three-hour intervals until methane is below detection.	Maintain communication with DEQ and continue mitigation measures and monitoring at three-hour intervals. Work in consultation with DEQ to evaluate possible contingency actions if methane continues to be detected at concentrations between 0.5 and 1.25 pbv 24 or more hours after the initial detection.	
Greater than 1.25	Notify the Portland Fire Bureau (PFB) and DEQ of the conditions and conduct an orderly evacuation of the space, if the measurement is obtained from a common space or sleeping pod. Ventilate the space to clear the space of methane, evaluate for the source of methane, and monitor the space at three-hour intervals until methane is below detection.	Maintain communication with DEQ and PFB and continue mitigation measures and monitoring at three-hour intervals. Work in consultation with DEQ to evaluate possibly contingency actions if methane continues to be detected at concentrations greater than 1.25 pbv 24 to 72 hours after the initial detection.	Maintain communication with DEQ and PFB and continue mitigation measures and monitoring at three-hour intervals. Work in consultation with DEQ to evaluate possibly contingency actions if methane continues to be detected at concentrations greater than 1.25 pbv 72 hours after the initial detection.

5.3.2 Cap Maintenance

Cap maintenance will be performed based on the results of cap inspections and as soon as practicable, but no later than 10 business days. Cap maintenance activities may include repairs to correct:

- Degradation, settlement, or penetration of the protective cap. Maintenance in response to these conditions may include sealing or repairing cracks, placement of new base rock and/or replacement of asphalt pavement.
- Blockage or damage to stormwater-control features. Maintenance in response to these conditions may include removing debris and/or modifying grading.

All cap maintenance will be performed as necessary to meet performance standards for the protective cap. If maintenance requires excavation of materials from beneath the demarcation geotextile, the repair contractor will be informed of the presence of hazardous materials, and the excavated soil will be managed in accordance with the CMMP. Maintenance activities that require breaching or otherwise damaging the protective cap will be performed in collaboration with DEQ.

5.4 REPORTING

If methane is not detected at concentrations greater than 0.5 pbv during planned methane monitoring events, the methane monitoring results for that period will be presented to DEQ in the semi-annual cap inspection reports discussed below. If methane is detected at concentrations greater than 0.5 pbv in structures or enclosed spaces during planned methane monitoring events, a report summarizing the results of the methane monitoring event and completed response actions will be presented to DEQ no later than 30 days of the completion of response actions.

The results of semiannual cap inspections and maintenance activities that require breaching or otherwise damaging the temporary protective cap will be described in reports submitted by the City to DEQ no later than 30 days after the activities have been completed. The reports will include descriptions and photographs showing the condition of the protective cap, inspection and maintenance forms, and a description of any modifications to the protective cap.

Methane monitoring and semiannual cap inspections and cap maintenance activities will be documented using the forms included in Appendix F.

6. Schedule

It is anticipated that implementation of the remedial measures at the TASS 2 site will begin on immediately upon DEQ's authorization to proceed and will be completed in approximately 60 days. The Construction Completion Report will be submitted to DEQ within 60 days of completion of construction activities.

References

1. Haley & Aldrich, Inc. (Haley & Aldrich), 2024a. Contaminated Media Management Plan, Former North Larsen Property, 10505 North Portland Road, Portland, Oregon. Dated 12 June 2024.

2. Haley & Aldrich, 2024b. Risk Assessment, Former North Larsen Property, 10505 North Portland Road, Portland, Oregon. Dated 6 August 2024.

3. Haley & Aldrich, 2024c. Soil Vapor Investigation, West Property – TASS 2 Site, 10505 North Portland Road, Portland, Oregon. Dated 10 July 2024.

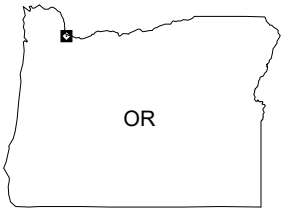
4. Kleinfelder, Inc., 2000. Limited Site Investigation and Groundwater Monitoring, Backfilled Retention Ponds, 10505 North Portland Road, Portland Oregon. 6 July 2000.

5. PNG Environmental, Inc., 1999. Phase II Environmental Investigation, Larsen Property, 10505 North Portland Road, Portland, Oregon. Dated 12 November 1999.

6. Oregon Department of Environmental Quality (DEQ), 2019. Clean Fill Determinations. 21 February 2019.

7. DEQ, 2023. Risk-Based Concentrations for Individual Chemicals. Revised August 2023.

FIGURE



MAP SOURCE: ESRI
SITE COORDINATES: 45°35'59"N, 122°43'22"W

HALEY ALDRICH

CONTAMINATED MEDIA MANAGEMENT PLAN
WEST PROPERTY - TASS 2 SITE
10505 N PORTLAND ROAD
PORTLAND, OREGON 97203

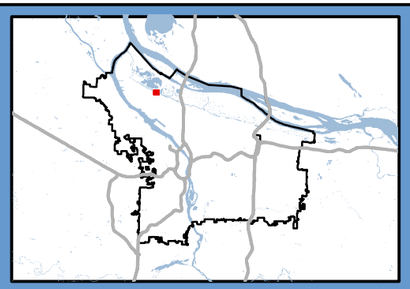
VICINITY MAP

APPROXIMATE SCALE: 1 IN = 2000 FT
DECEMBER 2023

FIGURE 1

GIS: \\haleyaldrich.com\share\CF\Projects\0209772\GIS\209772_COP_WEST_PARCEL.aprx - ayabu - 11/16/2023 11:32 AM

APPENDIX A
City of Portland Bureau of Environmental Services
Figure titled “West Property RV Shelter Soil Sampling Locations



West Property
TASS 2 Site

10505 N Portland Rd

Soil Sampling Locations

Map Symbols

- BES Sample Points
- PNG Sample Points
- Kleinfelder Sample Points
- BES Test Pit Sites
- Vegetated
- Project
- Pipe Line

0 37.5 75 150 Feet

N
W E
S

Map Created by: JonahY

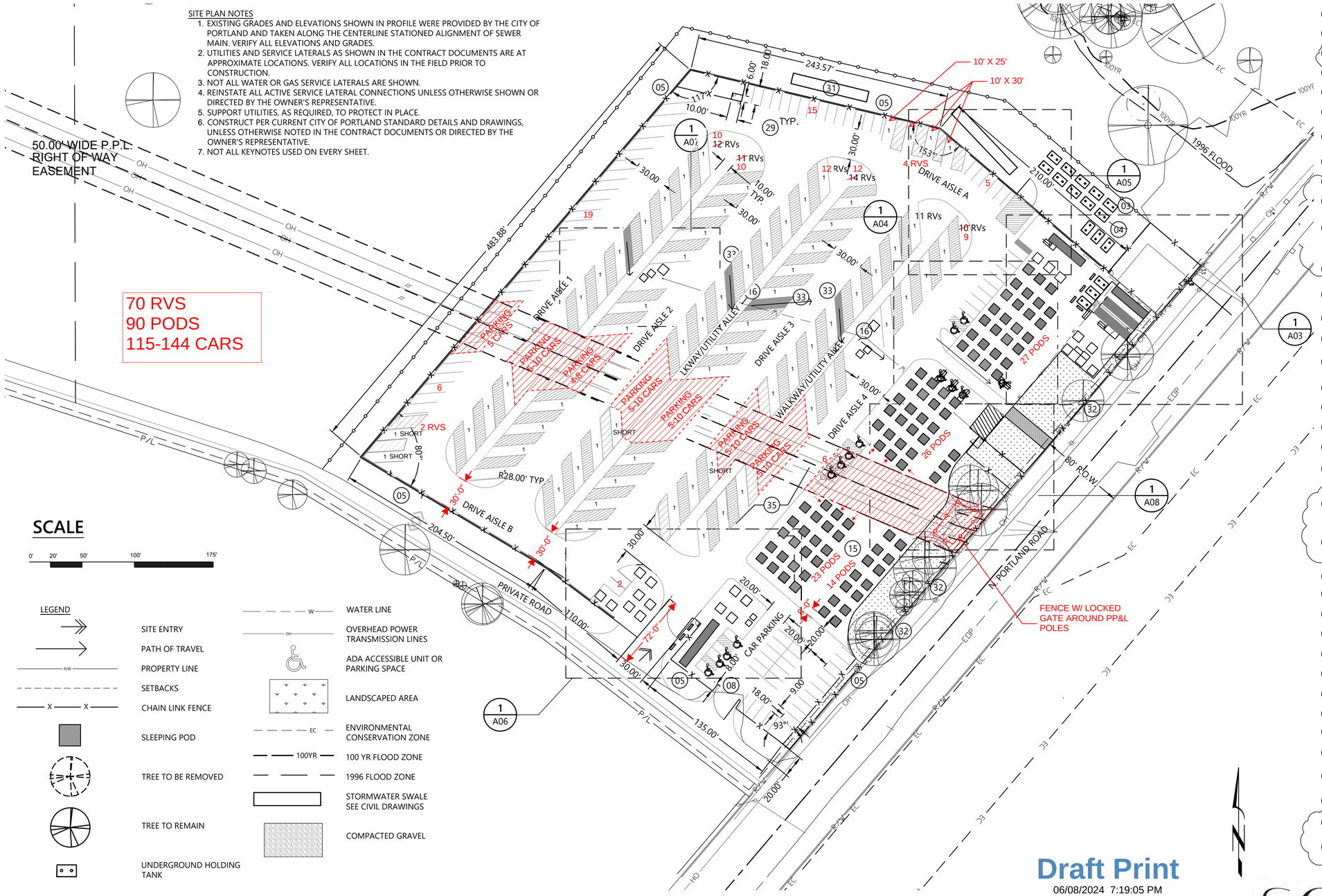
June 2024

Map Produced in ArcMap

APPENDIX B
Development Plans and Septic System Plans

SITE PLAN NOTES

1. EXISTING GRADES AND ELEVATIONS SHOWN IN PROFILE WERE PROVIDED BY THE CITY OF PORTLAND AND TAKEN ALONG THE CENTERLINE STATIONED ALIGNMENT OF SEWER MAIN. VERIFY ALL ELEVATIONS AND GRADES.
2. UTILITIES AND SERVICE LATERALS AS SHOWN IN THE CONTRACT DOCUMENTS ARE AT APPROXIMATE LOCATIONS. VERIFY ALL LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.
3. NOT ALL WATER OR GAS SERVICE LATERALS ARE SHOWN.
4. REINSTATE ALL ACTIVE SERVICE LATERAL CONNECTIONS UNLESS OTHERWISE SHOWN OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
5. SUPPORT UTILITIES, AS REQUIRED, TO PROTECT IN PLACE.
6. CONSTRUCT PER CURRENT CITY OF PORTLAND STANDARD DETAILS AND DRAWINGS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
7. NOT ALL KEYNOTES USED ON EVERY SHEET.



SCALE

0' 20' 50' 100' 175'

LEGEND

- SITE ENTRY
- PATH OF TRAVEL
- PROPERTY LINE
- SETBACKS
- CHAIN LINK FENCE
- SLEEPING POD
- TREE TO BE REMOVED
- TREE TO REMAIN
- UNDERGROUND HOLDING TANK
- WATER LINE
- OVERHEAD POWER TRANSMISSION LINES
- ADA ACCESSIBLE UNIT OR PARKING SPACE
- LANDSCAPED AREA
- ENVIRONMENTAL CONSERVATION ZONE
- 100 YR FLOOD ZONE
- 1996 FLOOD ZONE
- STORMWATER SWALE SEE CIVIL DRAWINGS
- COMPACTED GRAVEL

CONSTRUCTION KEYNOTES

01 KILL EXISTING HYDRANT (BY PORTLAND WATER BUREAU)
02 EXISTING SLAB ON GRADE
03 SEDIMENT CONTROL FENCING. SEE ENGINEERING DRAWINGS.
04 UNDERGROUND WASTE WATER HOLDING TANKS
05 NEW 7' H CHAIN LINK PERIMETER FENCE WITH PRIVACY SLATS
06 EXISTING UTILITY POLES FOR TRANSMISSION LINES
07 NEW 7'H CHAIN LINK FENCE WITH 24' WIDE VEHICLE AND 4' WIDE MAN GATE, W/ PRIVACY SLATS.
08 NEW CHAIN LINK FENCE WITH PRIVACY SLATS AND NEW 24' WIDE VEHICLE GATE
09 NEW SLIDING CHAIN LINK GATE
10 NEW 8' X 8' POD FOR TRASH ENCLOSURES. STRUCTURE TYPE 3.
11 NEW 8' X 40' CONEX STRUCTURES FOR HYGIENE (LAUNDRY, SHOWER, RESTROOMS,) FOOD PREPARATION KITCHEN (NO COOKING OR OPEN FLAMES,) OFFICES, MEETING ROOMS, AND FIRST AID STATION. CONEX UNITS BY OTHERS UNDER SEPARATE BUILDING PERMIT. STRUCTURE TYPE 2
12 NEW 8'X52' CONEX CONTAINER FOR STORAGE. STRUCTURE TYPE 4
13 FENCED OUTDOOR AREA. PROVIDE 6' H CHAIN LINK INTERIOR FENCE AND 4' W MAN GATES, NO PRIVACY SLATS. SEE ENLARGED PLANS FOR DETAILS
14 TREES AND SHRUBS TO BE REMOVED. SEE TREE PLAN.
15 NEW 8'W X 8'D X 8'H PRE APPROVED SLEEPING PODS BY OTHERS. STRUCTURE TYPE 1
16 NEW WATER SPIGOT WITH DOUBLE MANIFOLD. MOUNTED ON 3' H PRESSURE TREATED WOOD POST
17 NEW PORTABLE TOILETS AND PORTABLE HAND WASH STATION
18 NEW 20' WIDE VEHICLE GATE.
19 KILL EXISTING TWO WATER SERVICES (BY PORTLAND WATER BUREAU)
20 NEW FIRE HYDRANT 18' SOUTH OF EXISTING HYDRANT BY PORTLAND WATER BUREAU
21 INSTALL 6" X 2" TAPPED CAP AND 2" BLOW-OFF ASSEMBLY W/ 3 SQ. FT. THRUST BLOCK. BY PORTLAND WATER BUREAU
22 INSTALL NEW 2" METER (2" SERVICE) 2' SOUTH OF NEW HYDRANT BY PORTLAND WATER BUREAU. CONTRACTOR TO CONNECT TO THE SHORT STUB AT THE BACK OF THE METER
23 RPBA TO BE INSTALLED IMMEDIATELY AFTER THE WATER METER. RPBA TO BE INSTALLED AT 12" ABOVE CONCRETE PAD IN APPROVED OUTDOOR ENCLOSURE. EXPOSED PIPING MUST BE INSULATED WITH CLOSED CELL FOAM PIPE INSULATION
24 NEW 8'W X 8'D X 8'H PRE APPROVED PODS/OFFICES BY OTHERS. STRUCTURE TYPE 1
25 NEW 20' WIDE VEHICLE GATE WITH LOCK
26 NEW 7' CHAIN LINK FENCE, NO PRIVACY SLATS
27 NEW 4' WIDE MAN GATE WITH LOCK
28 NEW PREFABRICATED DECK AND RAMP BY OTHERS. MAX HEIGHT 10"
29 PARKING AND LANE STRIPING. USE PAINT PRE-APPROVED BY PBOT
30 NEW PLANTER BOXES BY OTHERS
31 STORMWATER SWALE. SEE CIVIL DRAWINGS.
32 TREE TO REMAIN. SEE TREE PLAN.
33 PBOT STANDARD GREEN PEDESTRIAN WALKWAY PAINT AND PEDESTRIAN SYMBOL
34 NEW 48" WIDE MAN GATE WITH LOCK FROM OUTSIDE. PROVIDE FREE EGRESS AND PANIC BAR ON INSIDE FOR EMERGENCY EXIT.
35 ASPHALT PAVING. SEE CIVIL ENGINEERING PLANS.
36 TREE PROTECTION FENCING 6' H CHAIN LINK.
37 EXISTING FENCE TO BE USED FOR TREE PROTECTION. MOVING OR ALTERING FENCE DURING CONSTRUCTION IS PROHIBITED.

Draft Print
06/08/2024 7:19:05 PM

1 SITE PLAN OVERALL - AREA OF WORK
SCALE: 1:50

SOSYAL
ARCHITECTURE & COMMUNITY DEVELOPMENT LLC

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: _2023-11-15 MFDR000304 10505 N Portland Rd TOPO;COP SITE 2 -SITE PLAN 1.31.24
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY CHECKED BY
FINAL MAP DATA
DRAWING NAME: COP TASS 2 - DEVELOPMENT REVIEW SET 2.15.24.dwg

DESIGNED BY
DRAWN BY LB
CHECKED BY B.SY
BES DESIGN LEAD

DATE APPROVED
ENGR. SUPV.
ENGR. DIV. MGR.
CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

Preliminary
06/08/2024 3:13:23 PM

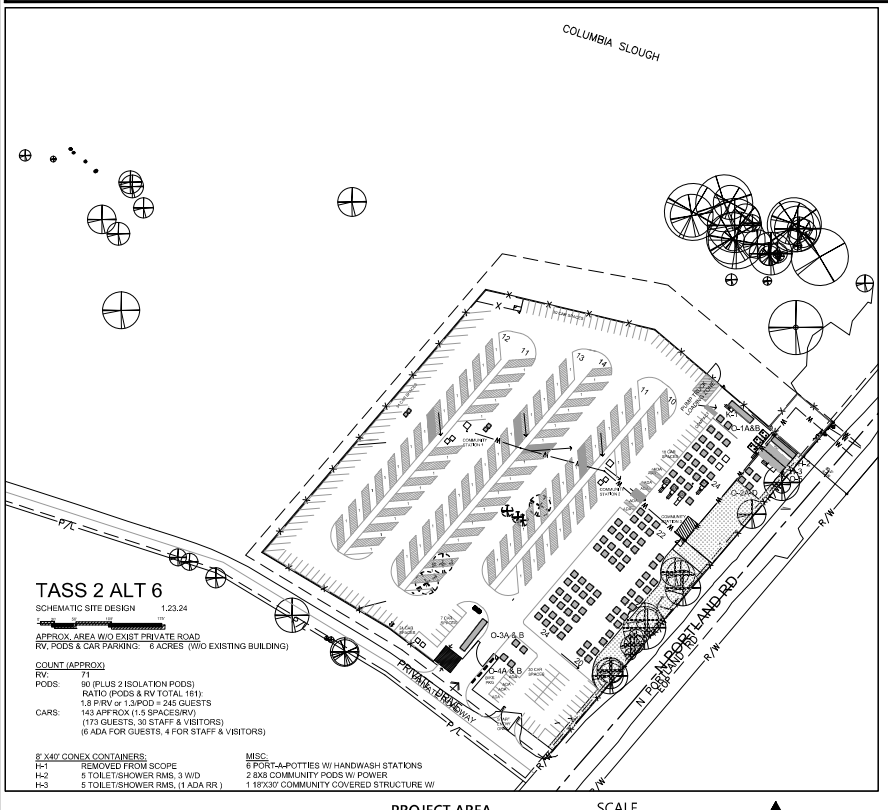
CITY OF PORTLAND
TEMPORARY ALTERNATIVE SHELTER SITE 2

SITE PLAN AREA OF WORK
10505 N PORTLAND ROAD
PORTLAND, OR 97209

1/4 SECTION 1924, 1925
JOB NO. 23003.01
SHEET NO. A02
3 OF 10

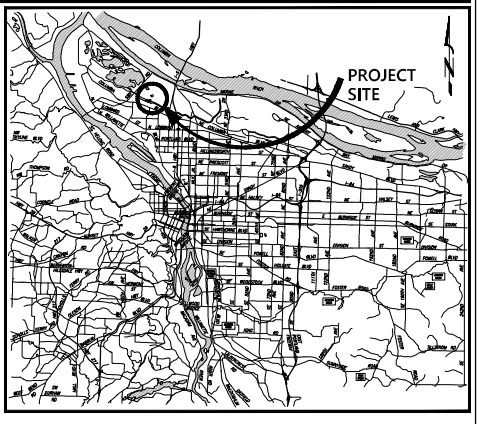
6/13/2024 1:58:41 PM TESLINDA

TEMPORARY ALTERNATE SHELTER - SITE 2



SHEET INDEX:

SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
01	G01	COVER SHEET
02	G02	LEGEND, ABBREVIATIONS, & CONSTRUCTION NOTES
03	C01	EXISTING CONDITIONS AND DEMOLITION
04	C02	SITE PLAN
05	C03	OVERALL GRADING PLAN
06	C04	GRADING PLAN - NORTH
07	C05	GRADING PLAN - SOUTH
08	C06	SWALE GRADING PLAN - 1
09	C07	CIVIL DETAILS - 1
10	C08	CIVIL DETAILS - 2
11	CE01	ESC PLAN
12	CE02	ESC DETAILS



PORTLAND, OREGON
VICINITY MAP
NOT TO SCALE

NOTICE TO EXCAVATORS:
ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.
Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL GAS	
M-F 7am-6pm	503-226-4211 Ext.4313
AFTER HOURS	503-226-4211
PGE	503-464-7777
CENTURYLINK	1-800-573-1311
CITY BUREAU OF MAINTENANCE	503-823-1700
CITY WATER	503-823-4874
VERIZON	1-800-483-1000

DESIGN CRITERIA AND ASSUMPTIONS:

1. NO EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS WERE TAKEN DURING THE DESIGN OF THIS PROJECT.
2. WATER QUALITY TREATMENT AND DETENTION ARE NOT REQUIRED FOR THIS PROJECT PER THE CURRENT STORMWATER MANAGEMENT MANUAL.
3. NO ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY.
4. DESIGN IS BASED ON THE HYDRAULIC MODELING REPORT DATED <MONTH> <YEAR>.
5. ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY. NO WORK ALLOWED EXCEPT WHAT IS AUTHORIZED.
6. STORMWATER FACILITIES SIZED BASED ON STORMWATER MANAGEMENT MANUAL REQUIREMENTS AND DESIGN EXCEPTIONS.
7. STORMWATER NARRATIVE: SUMMARIZE ANY OF THE DESIGN ASSUMPTIONS AND SERVICE LEVELS IN THIS SECTION. IF THERE IS A DESIGN REPORT, PLEASE REFERENCE IT HERE. FOR STORMWATER FACILITIES, DOCUMENT THE CATCHMENT AREA AND RUNOFF COEFFICIENTS AND/OR PEAK FLOW RATES (FOR MANUFACTURED TREATMENT) IF LESS THAN 5 FACILITIES OR CAPTURED IN ONE STATEMENT.

DESIGN EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS THAT WERE TAKEN DURING THE DESIGN OF THIS PROJECT:

WHERE PROPOSED 8-INCH OR 10-INCH DIAMETER SEWER MAINS ARE BEING CONSTRUCTED INSTEAD OF 12-INCH DIAMETER SEWER MAINS. FUTURE CONDITION DESIGN FLOWS ARE CONVEYED WITHOUT SURCHARGE AND A LARGER PIPE IS NOT NECESSARY.

NOT ALL TERMINAL CLEANOUTS USED ON 8-INCH DIAMETER PIPE MEET THE SEWER DESIGN MANUAL REQUIREMENTS OF 100 FEET OF PIPE OR LESS.

THIS PROJECT USES A FLAT TOP MAINTENANCE HOLE INSTEAD OF STANDARD MAINTENANCE HOLE WITH A CONE.

INSIDE DROP ASSEMBLIES LARGER THAN 12 INCHES (SHEETS CXX & CXX) DUE TO MAINTENANCE HOLE DEPTHS GREATHER THAN 20 FEET.

GENERAL NOTES:

1. EXISTING GRADES AND ELEVATIONS SHOWN IN PROFILE WERE PROVIDED BY THE CITY OF PORTLAND AND TAKEN ALONG THE CENTERLINE STATIONED ALIGNMENT OF SEWER MAIN. VERIFY ALL ELEVATIONS AND GRADES.
2. UTILITIES AND SERVICE LATERALS AS SHOWN IN THE CONTRACT DOCUMENTS ARE AT APPROXIMATE LOCATIONS. VERIFY ALL LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.
3. NOT ALL WATER OR GAS SERVICE LATERALS ARE SHOWN.
4. SEWER SERVICE LATERALS SHALL CONNECT TO A SEWER MAIN AND EXTEND TO THE CURB LINE UNLESS OTHERWISE SHOWN OR DIRECTED BY OWNER'S REPRESENTATIVE.
5. REINSTATE ALL ACTIVE SERVICE LATERAL CONNECTIONS UNLESS OTHERWISE SHOWN OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
6. SEWER LATERALS SHALL BE 6-INCH ASTM D3034 PVC, SDR-35 AT 2% SLOPE (MINIMUM) UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS OR APPROVED BY THE OWNER'S REPRESENTATIVE.
7. RECONNECT EXISTING INLET OR CATCH BASIN LEADS AS SHOWN IN THE CONTRACT DOCUMENTS. UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. SUPPORT UTILITIES, AS REQUIRED, TO PROTECT IN PLACE.
9. CONSTRUCT PER CURRENT CITY OF PORTLAND STANDARD DETAILS AND DRAWINGS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
10. ALL INLET PIPING SHALL BE EITHER ASTM F714 DR 26 HDPE OR ASTM D3034 PVC SDR-35. FOR G-1 INLETS INSTALL 10-INCH DIAMETER PIPE AND FOR G-2 INLETS INSTALL 12-INCH DIAMETER PIPE.

CITY OF PORTLAND VERTICAL DATUM AND OCRS83.PORTLANDIF

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_G01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

APPD(S) USER: 0493 017 XbaseOf493 017 Site Plan0493 017 Site Plan UPDATE
ROTATION ANGLE: ######
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_G01.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

MINGUS MAPPS
COMMISSIONER

PAUL SUTO, P.E.
CHIEF ENGINEER

APPROVAL

ENVIRONMENTAL SERVICES CHIEF ENGINEER
REG. PROF. ENGR. NO. 82245

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
OREGON
JULY 12, 2005
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

COVER SHEET

UTM ZONE(S): 1924, 1925
JOB NO.: Exxxxx
SHEET NO.: G01
01 OF 12

LEGEND:

EXISTING	PROPOSED
ROAD SIGN	CLEANOUT
CLEANOUT	INLET
FIELD INLET	G2 INLET
MAINTENANCE HOLE	BEEHIVE
CULVERT INLET	FIELD INLET
CULVERT OUTLET	MAINTENANCE HOLE
BOLLARD	PERMANENT PLUG
POLE ANCHOR	TEMPORARY PLUG
POLE WITH STREET LIGHT	BOREHOLE
STREET LIGHT	BIO-BAG
BUSH	INLET PROTECTION
DECIDUOUS TREE	PROTECT TREE
CONIFEROUS TREE	REMOVE TREE
STUMP	CHAIN LINK FFENCE
FIRE HYDRANT	COMBINED SEWER MAIN
WATER METER	CONDUIT
WATER VALVE	CURB
EDGE OF GRAVEL	FENCE
EDGE OF PAVEMENT	INLET PIPE
EDGE OF WATER	MAJOR CONTOUR LINE
ENVIRONMENTAL CONSERVATION	MINOR CONTOUR LINE
ENVIRONMENTAL PROTECTION	PERMANENT DISTURBANCE LIMITS
ENVIRONMENTAL TRANSITION	TEMPORARY DISTURBANCE LIMITS
FENCE	PLUGGED LATERAL
GAS LINE	PROJECT SITE BOUNDARY
GUARD RAIL	PRIVATE SEWER LATERAL
MAJOR CONTOUR LINE	PRIVATE SEWER MAIN
MINOR CONTOUR LINE	PROPERTY LINE
OVERHEAD LINE	RIGHT-OF-WAY
PROPERTY LINE	SANITARY SEWER MAIN
RIGHT-OF-WAY	SAW CUT
STORM SEWER MAIN	SEWER SERVICE LATERAL
TOE OF SLOPE	SILT FENCE
TOP OF SLOPE	STORM DITCH
WATER LINE	

STORM SEWER MAIN	
MATTING	
AGGREGATE	
SEEDING AREA	
NATIVE PLANTING	

ABBREVIATIONS:

AC.	ACRE
AC	ASPHALTIC CONCRETE
AGGR	AGGREGATE
APPROX	APPROXIMATE
ASPH	ASPHALT
BES	BUREAU OF ENVIRONMENTAL SERVICES
BOTT	BOTTOM
BDRY	BOUNDARY
BR	BRIDGE
BKFL	BACKFILL
BLK	BLOCK
BLDG	BUILDING
CIP	CAST IRON PIPE
CL	CENTERLINE
CLSM	CONCRETE LOW STRENGTH MIX
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT OR COUNTY
COMP	COMPACTED
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT
CORR	
CP	CONTROL POINT
CSP	CONCRETE SEWER PIPE
CULV	CULVERT
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EL, ELEV	ELEVATION
EXIST, EXTG, EX.	EXISTING
FDTN	FOUNDATION
FL	FLOW LINE
FT	FOOT OR FEET
GEN	GENERAL
GPM	GALLONS PER MINUTE
GR	GUARDRAIL
HDPE	HIGH-DENSITY POLYETHYLENE
HMAC	HOT-MIXED ASPHALT CONCRETE
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
IN.	INCHES
J	JUNCTION BOX
JCT	JUNCTION
LB	POUND
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MIN	MINIMUM
MSTF	MANUFACTURED STORMWATER TREATMENT FACILITY
N	NORTH
NE	NORTHEAST
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
PE	PROFESSIONAL ENGINEER
PED	PEDESTRIAN
PERM	PERMANENT
PGE	PORTLAND GENERAL ELECTRIC
PP	POWER POLE
PROF	PROFILE
PVMT	PAVEMENT
R	RADIUS
REQ'D	REQUIRED
RT	RIGHT
S	SOUTH, SLOPE OR SEWER
SALV	SALVAGE
SE	SOUTHEAST
SED	SEDIMENTATION
SF, SQ FT	SQUARE FEET
SHT	SHEET
SL	STREET LIGHT OR SLOPE
STA	STATION
STD	STANDARD
SU	SUMP
SW	SOUTHWEST
TEMP	TEMPORARY
TOPO	TOPOGRAPHY
TYP	TYPICAL
VAR	VARIES OR VARIABLE
W	WEST, WIDTH OR WATER
WM	WATER METER
WV	WATER VALVE
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
6. REMOVE VEGETATION.
7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
9. CONSTRUCT 24-FT OF LOW PROFILE MOUNTABLE CURB AT WASTE WATER HOLDING TANK ACCESS ENTRANCE PER STD. DWG. P-540
10. CONSTRUCT CURB OUTLET
11. CONSTRUCT PAVEMENT SECTION WITH 4" ASPHALT OVER 8" AGGREGATE BASE ROCK
12. CONSTRUCT WALKWAY/UTILITY ALLEY
13. CONSTRUCT FULLY LINED STORMWATER SWALE, SEE SHEET C06
14. CONSTRUCT FULLY LINED STORMWATER SWALE, SEE SHEET C06
15. DITCH INLET PER DETAIL P-212, SEE SHEET C08
16. STORM DRAIN MAINTENANCE HOLE PER DETAIL P-151, SEE SHEET C08
17. SEDIMENTATION MAINTENANCE HOLE PER DETAIL P-161, SEE SHEET C08
18. GATE VALVE
19. CONNECT TO EXISTING MAINTENANCE HOLE AAG066
20. PROVIDE 1 FT BENCH BEYOND PAVEMENT AND SLOPE DOWN AT 3:1 TO MATCH EXISTING GRADE
21. PROVIDE 2 FT KNOCKOUT IN CURB FOR DRAINAGE OUTFALL TO SWALE
22. INSTALL CLASS 50 RIPRAP CHANNEL TO SWALE
23. CONSTRUCT LINED GRASSY SWALE PER DETAIL ON SHEET C08
24. PORTLAND WATER BUREAU TO KILL EXISTING METER SERVICE
25. SAWCUT AND REMOVE EXISTING ASPHALT AT DRIVEWAY ENTRANCE. EXTEND 1-FT MINIMUM INTO EXISTING ASPHALT ROAD
26. SEE ARCHITECTURAL PLANS FOR NEW WATER LINE SERVICES, INCLUDING HYDRANT, METERS, BACKFLOW PREVENTION AND ROUTING.
27. CONNECT TO EXISTING MH (ASG066). CONTRACTOR TO FIELD LOCATE EXISTING MANHOLE LOCATION, CONFIRM EXISTING INVERT INFORMATION, RAISE MANHOLE TO FINISH GRADE.
28. CONSTRUCT DITCH INLET. TEE INTO EXISTING 8" STORM LINE WITH 8-INCH PVC PIPE. SLOPE =1.0% MIN.
29. ADJUST EXISTING INLET AS NECESSARY TO MATCH FINISH GRADE.
30. INSTALL A FLOW-SPREADING DEVICE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6-FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50-FT

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_G02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_G02.dwg

DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 2005
Steve Hansen
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

LEGEND, ABBREVIATIONS, & CONSTRUCTION NOTES

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	G02
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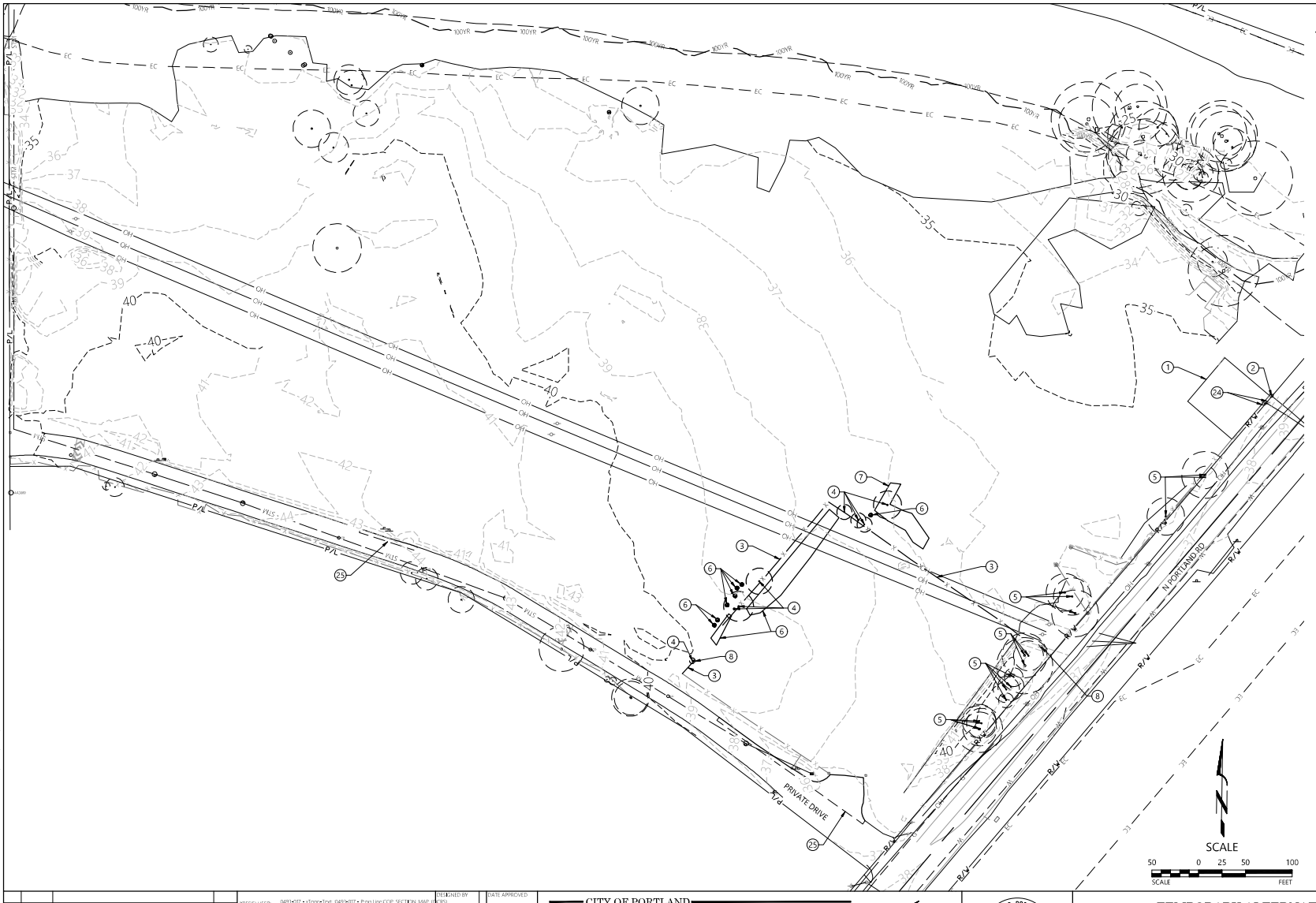

CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
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7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
24. PORTLAND WATER BUREAU TO KILL EXISTING METER SERVICE
25. SAWCUT AND REMOVE EXISTING ASPHALT AT DRIVEWAY ENTRANCE. EXTEND 1-FT MINIMUM INTO EXISTING ASPHALT ROAD

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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DESIGNED BY | DRAWN BY | CHECKED BY | RES DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

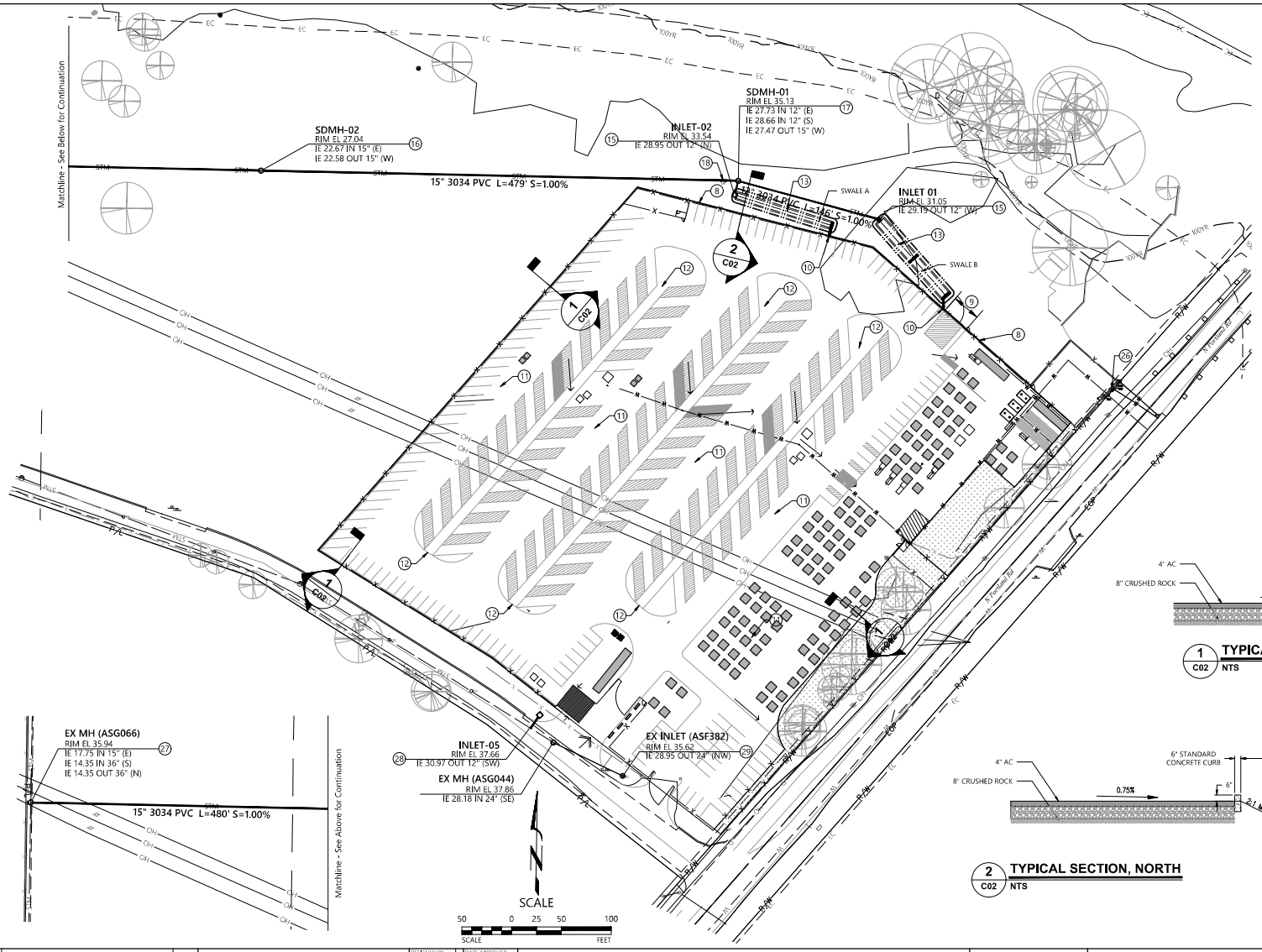
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
OREGON
JULY 12, 1994
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

EXISTING CONDITIONS AND DEMOLITION

1/4 SECTION	1924, 1925
JOB NO.	Exxxxx
SHEET NO.	C01
	03 OF 12



CONSTRUCTION NOTES:

6. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
9. CONSTRUCT 24-FT OF LOW PROFILE MOUNTABLE CURB AT WASTE WATER HOLDING TANK ACCESS ENTRANCE PER STD. DWG. P-540
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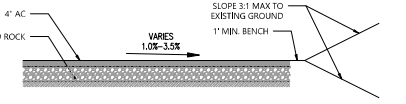
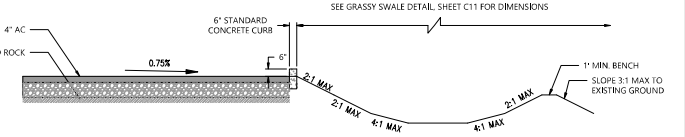
17. SEDIMENTATION MAINTENANCE HOLE PER DETAIL P-161, SEE SHEET C08
18. GATE VALVE
24. SEE ARCHITECTURAL PLANS FOR NEW WATER LINE SERVICES, INCLUDING HYDRANT, METERS, BACKFLOW PREVENTION AND ROUTING.
27. CONNECT TO EXISTING MH (ASG066). CONTRACTOR TO FIELD LOCATE EXISTING MANHOLE LOCATION, CONFIRM EXISTING INVERT INFORMATION, RAISE MANHOLE TO FINISH GRADE.
28. CONSTRUCT DITCH INLET. TEE INTO EXISTING 8" STORM LINE WITH 8-INCH PVC PIPE. SLOPE =1.0% MIN.
29. ADJUST EXISTING INLET AS NECESSARY TO MATCH FINISH GRADE.



1 C02 **TYPICAL SECTION, SOUTH EAST & WEST**
NTS



2 C02 **TYPICAL SECTION, NORTH**
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P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
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DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

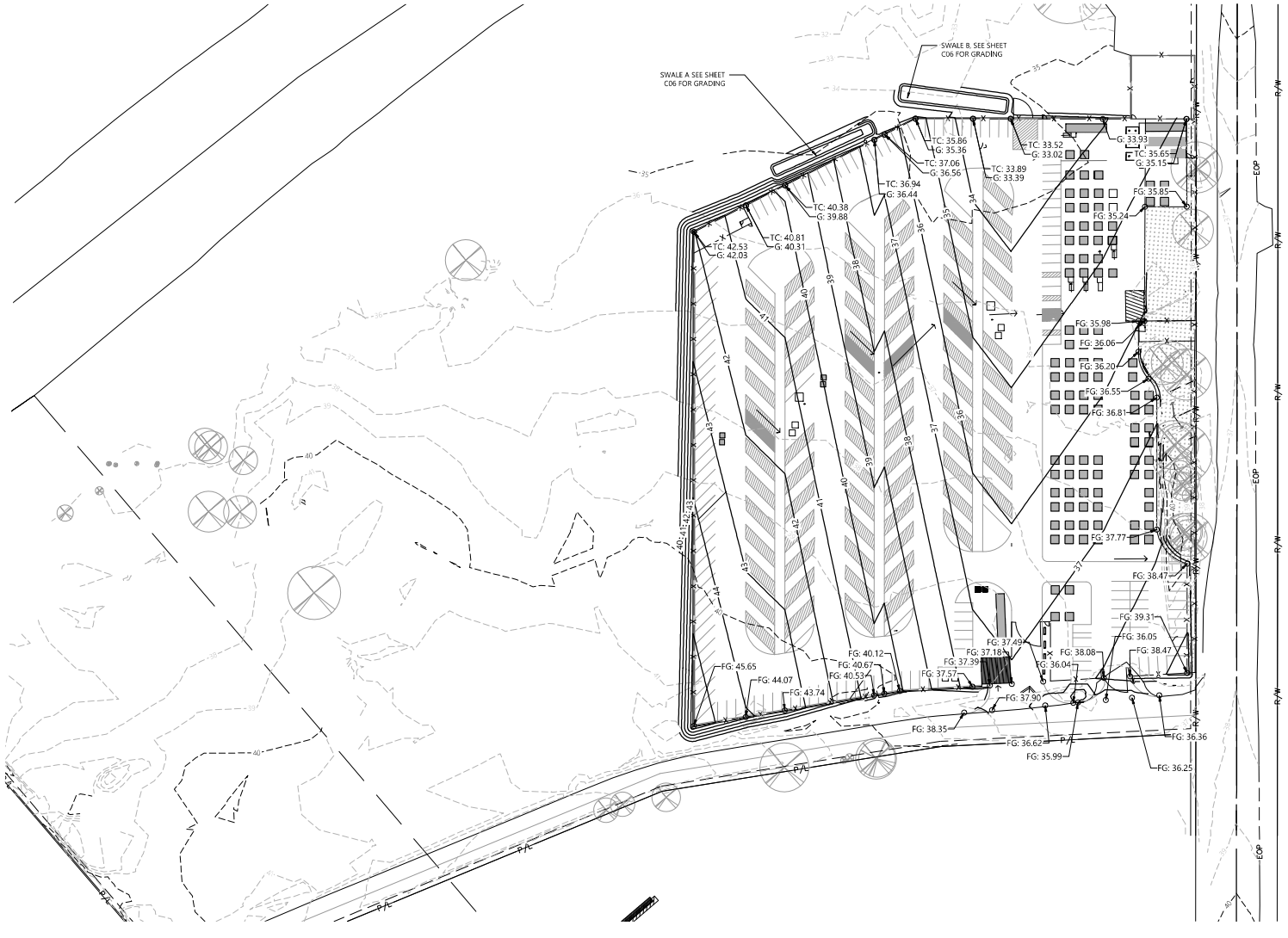
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
7/21/1982
Steve Hansen
OREGON
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

SITE PLAN

1/4 SECTION	1924, 1925
JOB NO.	Exxxxx
SHEET NO.	C02
	04 OF 12



CONSTRUCTION NOTES:

SCALE
50 0 25 50 100
SCALE FEET

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
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DESIGNED BY:
DRAWN BY:
CHECKED BY:
RES DESIGN LEAD:

DATE APPROVED: Site Plan UPDATE
ENGR. SUPV.:
ENGR. DIV. MGR.:
CONST. DIV. MGR.:
QAQC

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

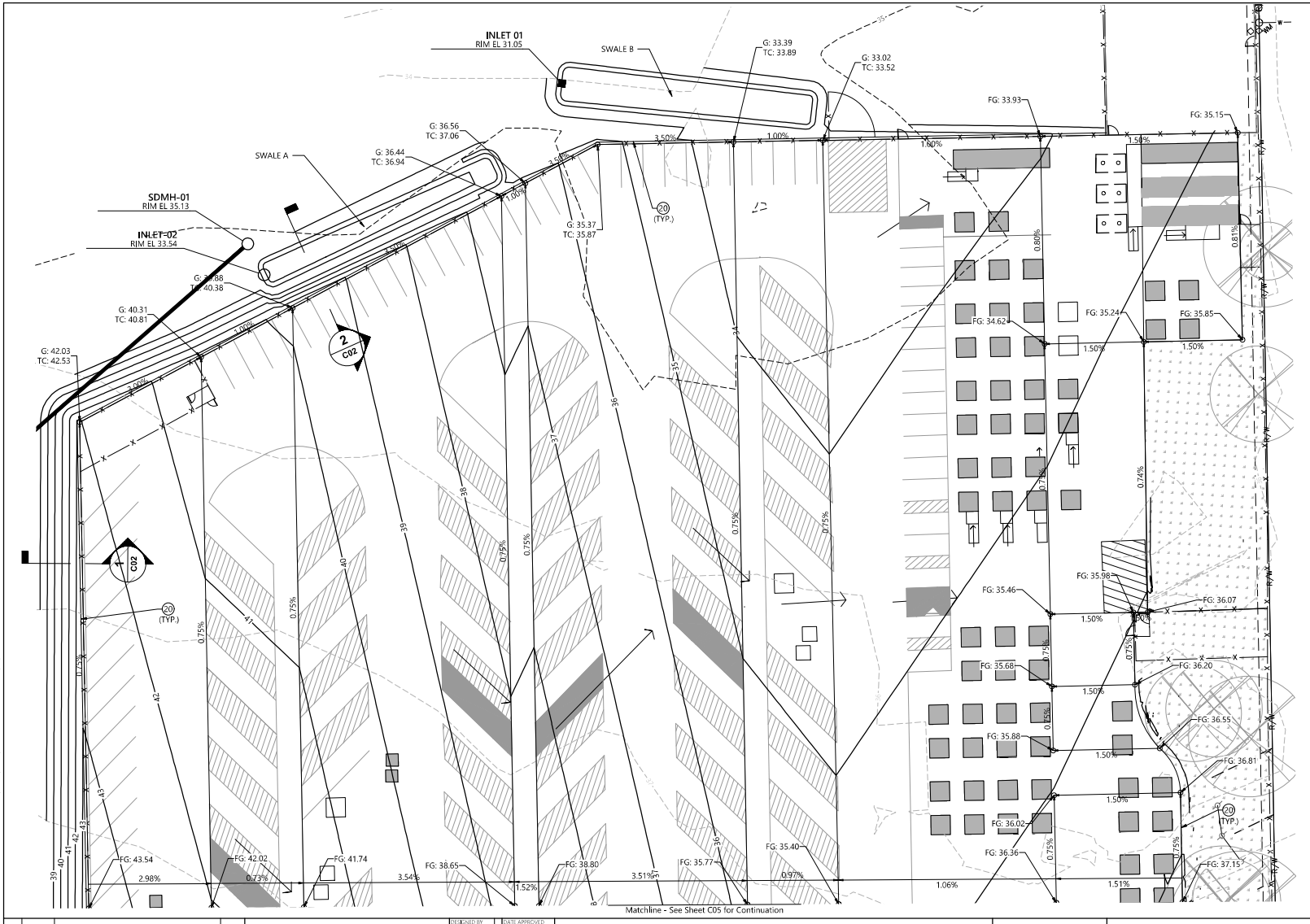
REGISTERED PROFESSIONAL ENGINEER
9-21 RE
Steve Hansen
DEC. 12, 1989
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

OVERALL GRADING PLAN

1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: C03
05 OF 12

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C03.DWG 2/9/2024 STEVE HANSEN



CONSTRUCTION NOTES:

20 PROVIDE 1 FT BENCH BEYOND PAVEMENT AND SLOPE DOWN AT 3:1 TO MATCH EXISTING GRADE

SCALE
20 0 10 20 40
SCALE FEET

P:\.0493---017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C04.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED
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DESIGNED BY | DATE APPROVED
DRAWN BY | ENGR. SUPV.
CHECKED BY | ENGR. DIV. MGR.
RES DESIGN LEAD | CONST. DIV. MGR.

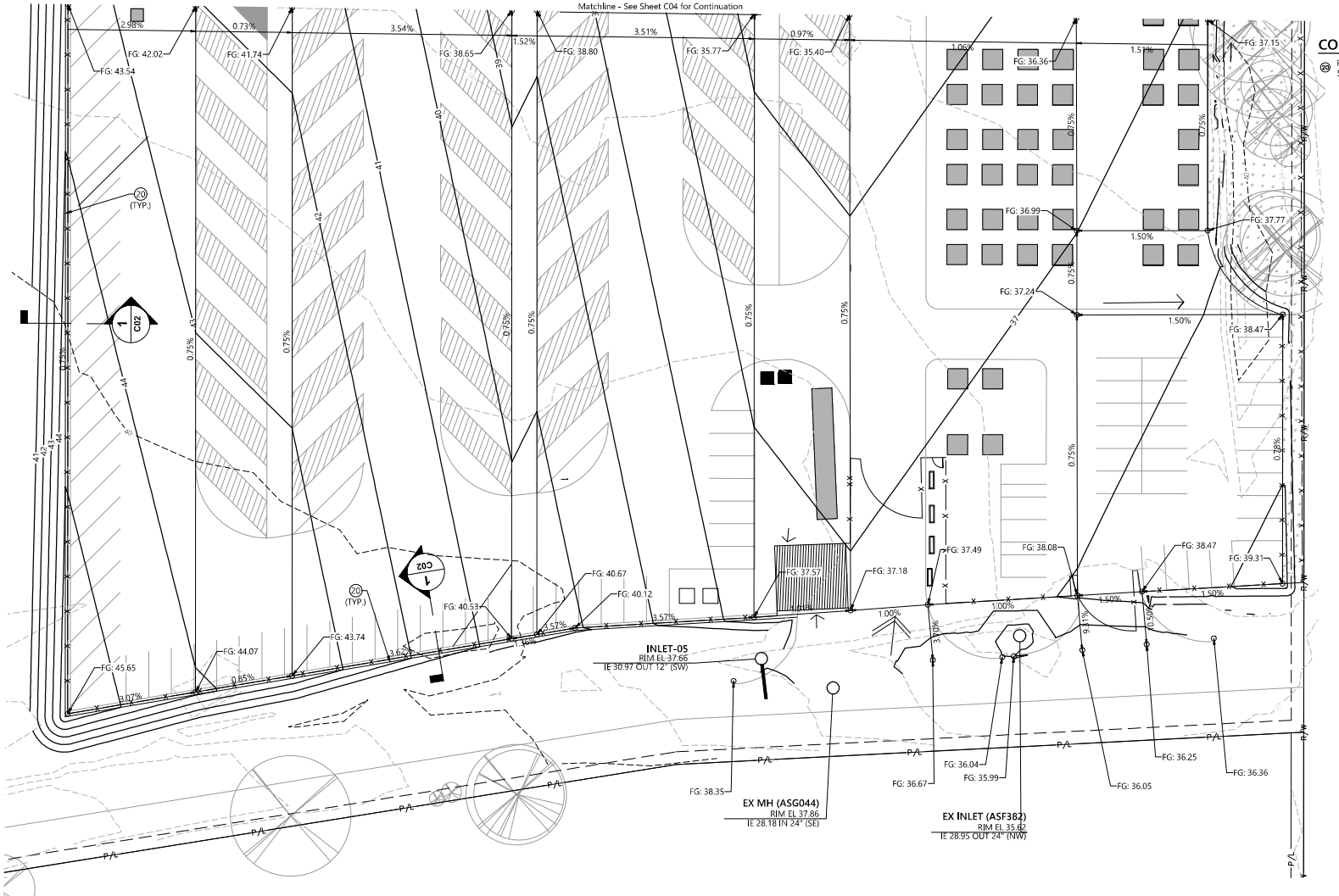
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
7/31/2023
OREGON
JULY 12, 1985
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

GRADING PLAN - NORTH

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	C04
	06 OF 12



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NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

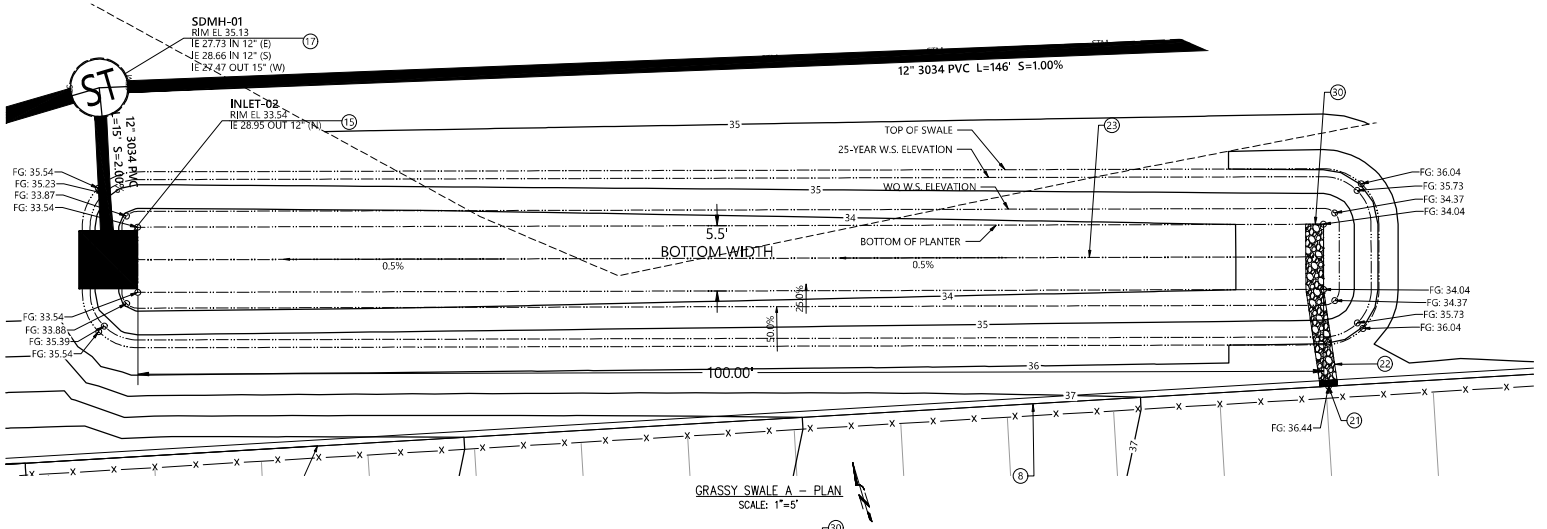
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

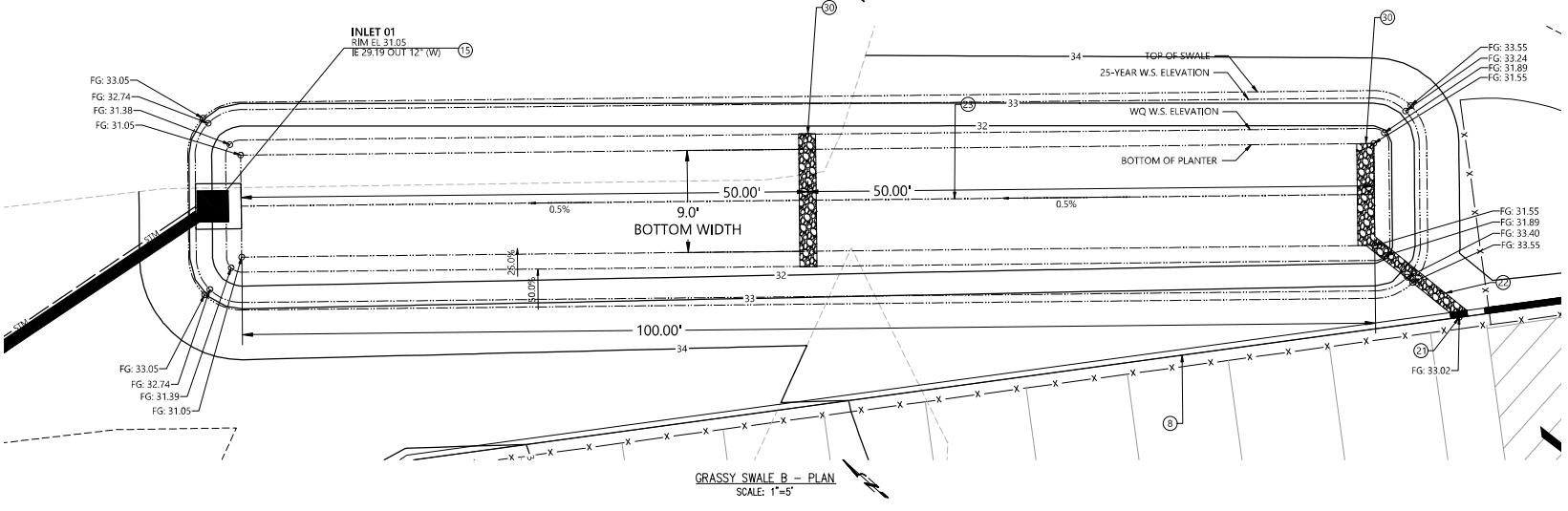
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 1985
STEVEN WELLS HANSEN
Steve Hansen
7/29/2024
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

GRADING PLAN - SOUTH

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C05
07 OF 12





CONSTRUCTION NOTES:

8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
19. DITCH INLET PER DETAIL P-212, SEE SHEET C08
17. SEDIMENTATION MAINTENANCE HOLE PER DETAIL P-161, SEE SHEET C08
21. PROVIDE 2 FT KNOCKOUT IN CURB FOR DRAINAGE OUTFALL TO SWALE
22. INSTALL CLASS 50 RIPRAP CHANNEL TO SWALE
23. CONSTRUCT LINED GRASSY SWALE PER DETAIL ON SHEET C08
30. INSTALL A FLOW-SPREADING DEVICCE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6-FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50-FT

SCALE
5 0 2.5 5 10
SCALE FEET

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C06.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
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FINAL MAP DATA
DRAWING NAME: EXXXXXX_C06.dwg

DESIGNED BY:
DRAWN BY:
CHECKED BY:
RES DESIGN LEAD:

DATE APPROVED:
Site Plan UPDATE
ENGR. SUPV.
ENGR. DIV. MGR.
CONST. DIV. MGR.
QAQC

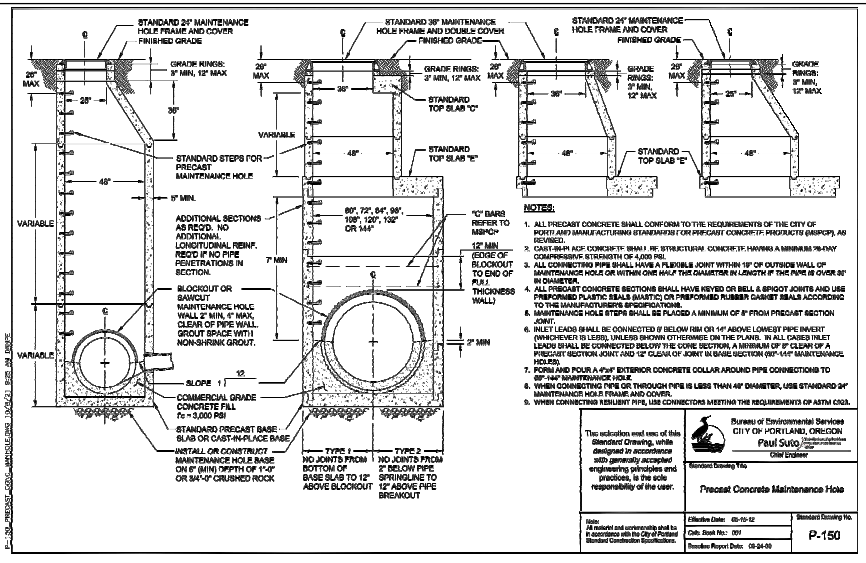
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
7/29/15
Steve Hansen
OREGON
JULY 29, 1994
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

SWALE GRADING PLAN - 1

1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: C06
08 OF 12

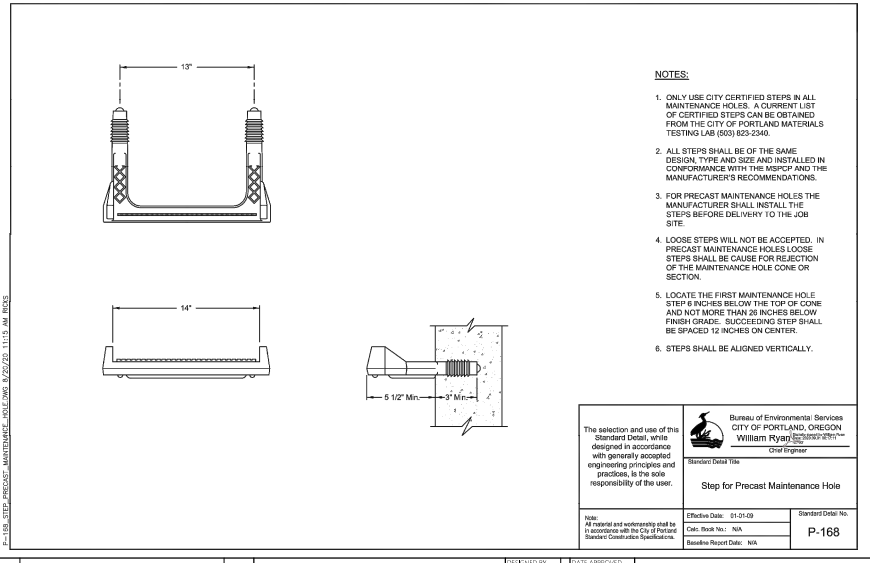


NOTES:

1. ALL PRECAST CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. CAST-IN-PLACE CONCRETE SHALL BE STRUCTURAL CONCRETE HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
3. ALL CONNECTING PIPE SHALL HAVE A FLEXIBLE JOINT WITHIN 18" OF OUTSIDE WALL OF MAINTENANCE HOLE OR WITHIN ONE HALF THE DIAMETER IN LENGTH IF THE PIPE IS OVER 36" IN DIAMETER.
4. ALL PRECAST CONCRETE SECTIONS SHALL HAVE KEYED OR BELL & SPIGOT JOINTS AND USE PREFORMED PLASTIC SEALS (MASTIC) OR PREFORMED RUBBER GASKET SEALS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. MAINTENANCE HOLE STEPS SHALL BE PLACED A MINIMUM OF 8" FROM PRECAST SECTION JOINT.
6. INLET LEADS SHALL BE CONNECTED 6" BELOW RIM OR 14" ABOVE LOWEST PIPE INVERT (WHICHEVER IS LESS), UNLESS SHOWN OTHERWISE ON THE PLANS. IN ALL CASES INLET LEADS SHALL BE CONNECTED BELOW THE CORE SECTION, A MINIMUM OF 9" CLEAR OF A PRECAST SECTION JOINT AND 12" CLEAR OF JOINT IN BASE SECTION (607-1/4" MAINTENANCE HOLES).
7. FORM AND POUR A 4"x4" EXTERIOR CONCRETE COLLAR AROUND PIPE CONNECTIONS TO 60"-144" MAINTENANCE HOLE.
8. WHEN CONNECTING PIPE OR THROUGH PIPE IS LESS THAN 48" DIAMETER, USE STANDARD 24" MAINTENANCE HOLE FRAME AND COVER.
9. WHEN CONNECTING RESILIENT PIPE, USE CONNECTORS MEETING THE REQUIREMENTS OF ASTM C923.

This publication and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON Paul Suto, Chief Engineer
Standard Drawing Title	Precast Concrete Maintenance Hole
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 03-15-12 / Standard Drawing No. P-150
	Calc. Book No.: 009
	Baseline Report Date: 09-24-09

P-150_PRECAST_CONC_MANHOLE.DWG 10/5/21 8:55 PM DMPE

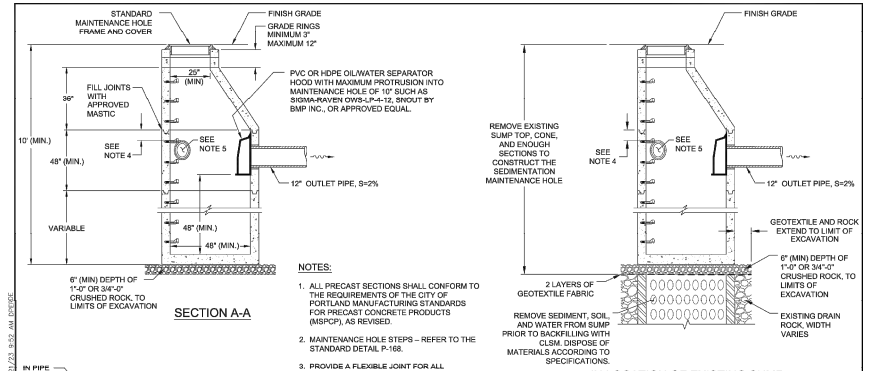


NOTES:

1. ONLY USE CITY CERTIFIED STEPS IN ALL MAINTENANCE HOLES. A CURRENT LIST OF CERTIFIED STEPS CAN BE OBTAINED FROM THE CITY OF PORTLAND MATERIALS TESTING LAB (503) 823-2340.
2. ALL STEPS SHALL BE OF THE SAME DESIGN, TYPE AND SIZE AND INSTALLED IN CONFORMANCE WITH THE MSPCP AND THE MANUFACTURER'S RECOMMENDATIONS.
3. FOR PRECAST MAINTENANCE HOLES THE MANUFACTURER SHALL INSTALL THE STEPS BEFORE DELIVERY TO THE JOB SITE.
4. LOOSE STEPS WILL NOT BE ACCEPTED. IN PRECAST MAINTENANCE HOLES LOOSE STEPS SHALL BE CAUSE FOR REJECTION OF THE MAINTENANCE HOLE CONE OR SECTION.
5. LOCATE THE FIRST MAINTENANCE HOLE STEP 6 INCHES BELOW THE TOP OF CONE AND NOT MORE THAN 26 INCHES BELOW FINISH GRADE. SUCCEEDING STEP SHALL BE SPACED 12 INCHES ON CENTER.
6. STEPS SHALL BE ALIGNED VERTICALLY.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON William Ryan, Chief Engineer
Standard Detail Title	Step for Precast Maintenance Hole
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 01-01-09 / Standard Detail No. P-168
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-168_STEP_PRECAST_MAINTENANCE_HOLE.DWG 8/20/20 11:15 AM RICKS

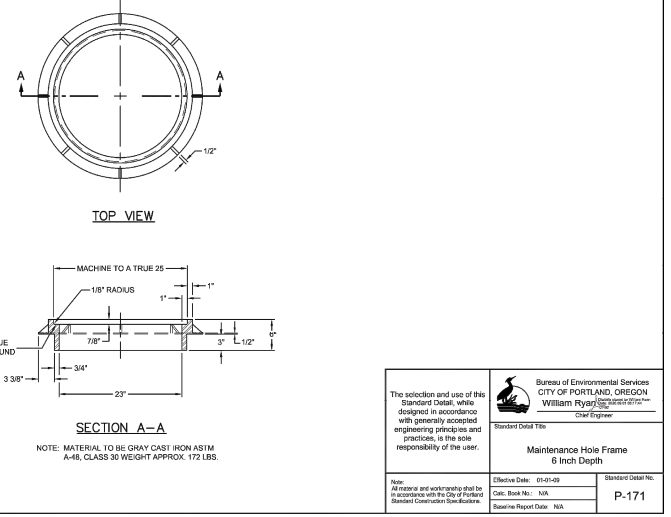


NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. MAINTENANCE HOLE STEPS – REFER TO THE STANDARD DETAIL P-168.
3. PROVIDE A FLEXIBLE JOINT FOR ALL CONNECTED PIPES:
   - RIGID PIPE < 36 INCHES – 18 INCHES (MAX.) FROM OUTSIDE WALL
   - FLEXIBLE PIPE – 18 INCHES (MAX.) FROM THE OUTSIDE WALL UNLESS A FLEXIBLE JOINT FITTING IS INSTALLED AND ACCEPTED.
4. PROVIDE 6 INCHES (MIN.) OF SEPARATION BETWEEN A SECTION JOINT AND THE OUTER EDGE OF ANY OPENING.
5. LOCATE INVERT OF ANY PIPE 6 INCHES (MIN.) ABOVE THE OUTLET PIPE INVERT.
6. CONTACT THE CSA PROGRAM BEFORE CONVERTING AN EXISTING SUMP TO A SEDIMENTATION MAINTENANCE HOLE.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON Chief Engineer
Standard Detail Title	Sedimentation Maintenance Hole and Sedimentation Maintenance Hole in Location of Existing Sump
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 04-01-23 / Standard Detail No. P-161
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-161_SEDIMENTATION_MAINTENANCE_HOLE.DWG 3/21/23 9:52 AM DMPE



NOTE: MATERIAL TO BE GRAY CAST IRON ASTM A-48, CLASS 30 WEIGHT APPROX. 172 LBS.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON William Ryan, Chief Engineer
Standard Detail Title	Maintenance Hole Frame 6 Inch Depth
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 01-01-09 / Standard Detail No. P-171
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-171_MH_FRAME_6-INCH_DEPTH.DWG 8/20/20 12:22 PM DMPE

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXX_C07.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP(S) USED:
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY _____ CHECKED BY _____
FINAL MAP DATA
DRAWING NAME: EXXXXX_C07.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

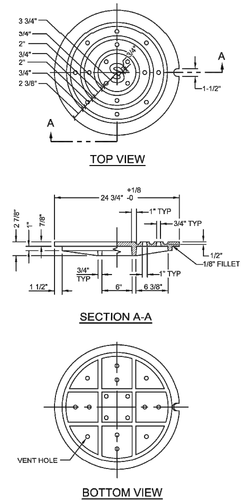
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
21152
Steve Hansen
RENEWAL: 12-31-2025
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

CIVIL DETAILS - 1

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C07
09 OF 12



NOTES:

1. MATERIAL TO BE GRAY CAST IRON, ASTM A48, CLASS 30, WEIGHT APPROX. 139 LBS.
2. MACHINE TO A TRUE BEARING ALL AROUND.

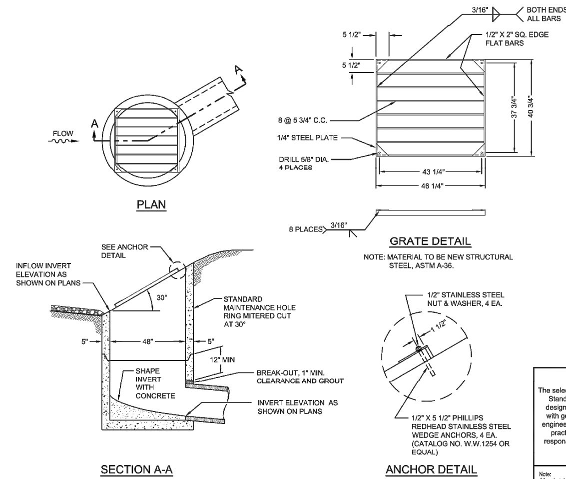
The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan
Chief Engineer

Standard Detail Title: Maintenance Hole Cover

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 01-01-09
Calc. Book No.: N/A
Baseline Report Date: N/A
Standard Detail No. P-176



NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. CONCRETE SHALL BE COMMERCIAL GRADE.

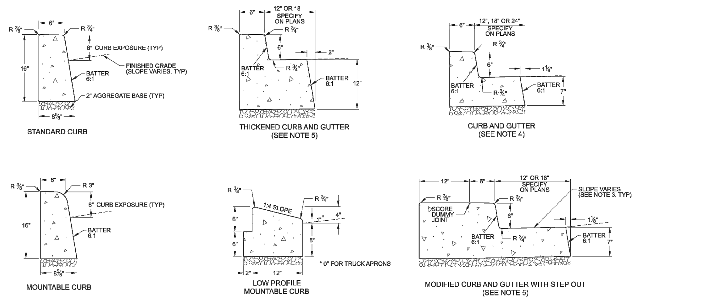
The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan
Chief Engineer

Standard Detail Title: 48" Precast Field Inlet

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 01-01-09
Calc. Book No.: N/A
Baseline Report Date: N/A
Standard Detail No. P-212



GENERAL NOTES:

1. TRANSITION CURBS OF DIFFERENT EXPOSURES OVER A LENGTH EQUAL TO 2' FOR EACH INCH IN DIFFERENCE OF EXPOSURE.
2. TOPS OF ALL CURBS SHALL SLOPE TOWARD THE ROADWAY AT 2% MAX.
3. GUTTER PAN SLOPE TO MATCH EXISTING STREET CROSS SLOPE UP TO A MAXIMUM OF 5% AND PER P-549 AT CURB RAMPS.
4. 18" GUTTER PAN TYPICAL. USE 12" GUTTER PAN WHEN ADJACENT TO BIKE LANES. USE 24" GUTTER PAN FOR GRADE BREAK DIFFERENCE AT CURB RAMPS (SEE STD. DRG. NO. P-549).
5. MODIFIED CURB AND GUTTER, AND THICKENED CURB AND GUTTER FOR USE ADJACENT TO SURFACE STORMWATER FACILITIES.

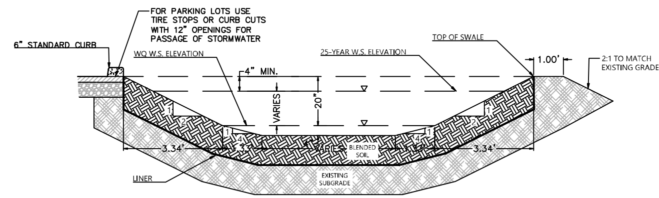
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

PBOT PORTLAND BUREAU OF TRANSPORTATION
City Engineer

Standard Drawing Title: CURBS

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 05/18/2022
Calc. Book No.: N/A
Std. Drg. Report Date: 02/18/2022
Standard Drawing No. P-540



1. Detail intended as an example. Detail must match PAC assumptions and/or design report.
2. Setbacks: 5' from property lines except next to right-of-way; 10' from building foundations.
3. Rock Gallery/Storage Layer, as required: Size per the PAC. Construct rock galleries of ¾" washed drain rock overlain by a 3–4" filter layer of ¼" No.10 washed angular aggregate. Alternative configurations and materials such as cellular storage systems, drainage mats, and non-standard aggregates may be used under the Performance Approach, with BES approval.
4. Overflow: Overflow elevation must allow for 4" of freeboard, minimum. Protect from debris and sediment with strainer or grate.
5. Blended Soil: Use BES standard soil blend for stormwater facilities (SWMM Section 6.3) unless otherwise approved. Install minimum of 12" on native soil. Install minimum of 24" if there's a drainage layer or storage layer below the imported soil. WATERPROOF LINER: 30 MIL EPDM, HDPE OR APPROVED EQUIVALENT.
6. Vegetation: PLANT THE ENTIRE SURFACE AREA OF THE GRASSY SWALE WITH NATIVE GRASS OR SWALE SEED MIX TO PROVIDE 100% COVERAGE OF BOTH THE SWALE BOTTOM AND THE SIDE SLOPES. FOR BES-MAINTAINED FACILITIES, SELECT NATIVE WILDFLOWERS AND GRASSES THAT REQUIRE MINIMAL MOWING (I.E., NO MORE THAN ONCE OR TWICE ANNUALLY). BES DOES NOT ALLOW LAWN-TYPE AREAS IN BES-MAINTAINED FACILITIES AND EXCEPTIONS REQUIRE BES APPROVAL. GRASSY SWALES IN ENVIRONMENTAL ZONES MUST MEET REQUIREMENTS ESTABLISHED BY PCC TITLE 33 FOR GRASS SPECIES IN ENVIRONMENTAL ZONES.
7. Entrance Erosion Control: Install river rock, flagstone, or similar to dissipate the energy of incoming water at entrances and ends of downspout extensions.
8. FLOW SPREADER: INSTALL A FLOW-SPREADING DEVICE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6 FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50 FT.
9. Inspections: Call BDS IVR Inspection Line, (503) 823-7000, request 487. 3 inspections required.

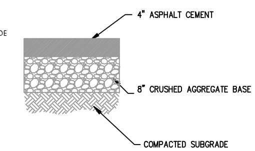
CONSTRUCTION REQUIREMENTS

Mark the location of future facilities, and fence or cover facility locations after excavation. Do not allow vehicular traffic, foot traffic, material storage, or heavy equipment within 10 feet of the infiltration area except as needed to excavate, grade, and construct the facility. Do not allow entry of runoff or sediment during construction.

SEED NATIVE GRASS MIXES IN THE SWALE FLOW PATH. APPLY SEED AT THE RATES SPECIFIED BY THE SUPPLIER. PLANTS MUST BE ESTABLISHED BY THE TIME THE FACILITY IS COMPLETED AND AT LEAST 3 MONTHS AFTER SEEDING. ESTABLISH GRASSES AS SOON AS POSSIBLE AFTER THE SWALE IS COMPLETED AND BEFORE WATER IS ALLOWED TO ENTER THE FACILITY. DO NOT ALLOW ENTRY OF CONCENTRATED STORMWATER FLOWS UNTIL THE VEGETATION IS FULLY ESTABLISHED.

UNLESS VEGETATION IS ESTABLISHED PRIOR TO COMPLETION OF CONSTRUCTION, INSTALL BIODEGRADABLE EROSION CONTROL MATTING THAT IS APPROPRIATE FOR LOW-VELOCITY FLOWS (APPROXIMATELY 1 FT/S) IN THE FLOW PATH BEFORE ALLOWING WATER INTO THE FACILITY.

GRASSY SWALE DTAIL
NTS



ASPHALT PAVEMENT SECTION
NTS

NOTE: REFER TO GEOTECHNICAL REPORT PREPARED BY XX ON XXX FOR MORE INFORMATION. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER TO DETERMINE ACCEPTABLE COMPACTION.

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED:
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY / CHECKED BY
FINAL MAP DATA
DRAWING NAME: EXXXXXX_C08.dwg

DESIGNED BY | DATE APPROVED
DRAWN BY | ENGR. SUPV.
CHECKED BY | ENGR. DIV. MGR.
BES DESIGN LEAD | CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

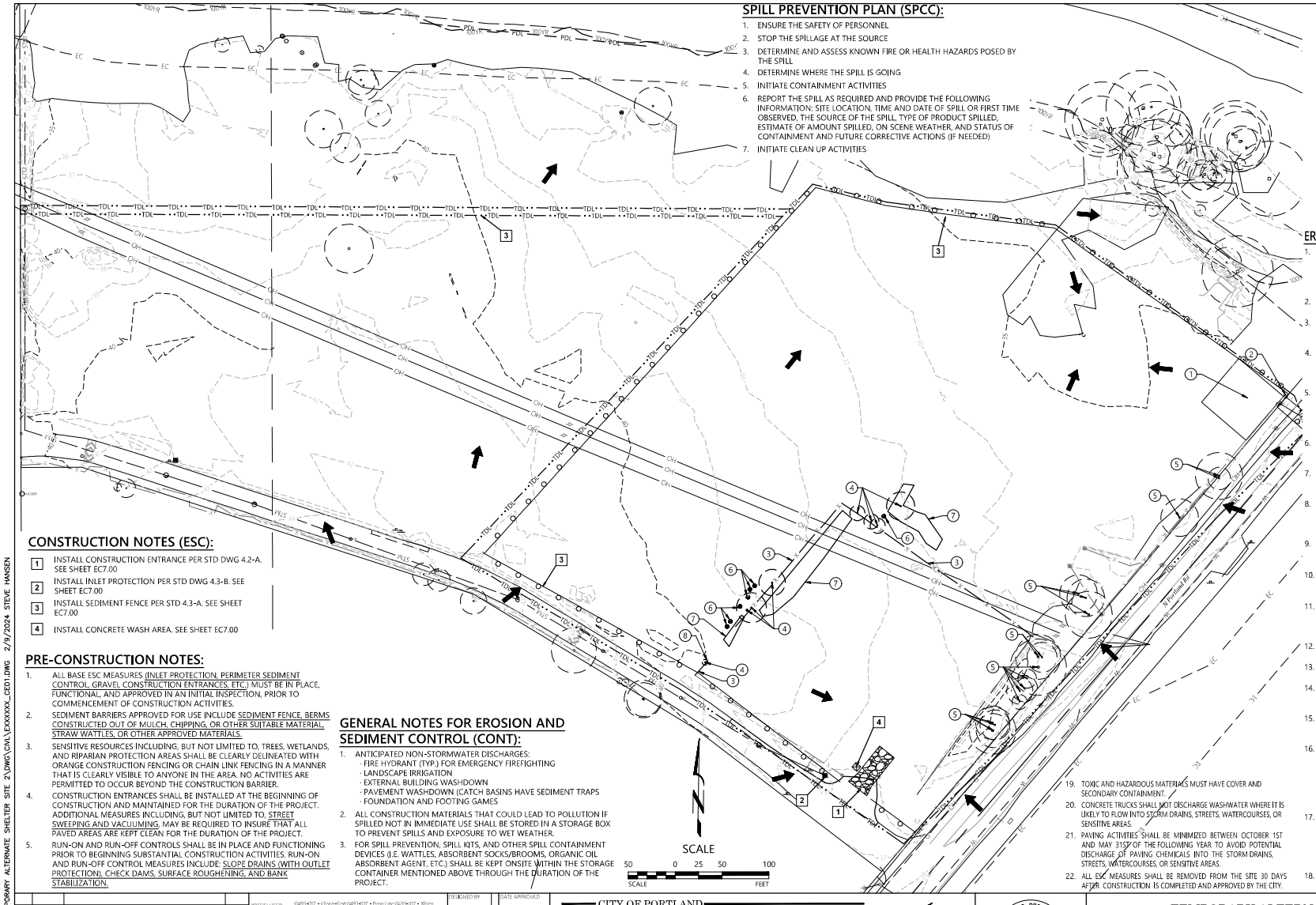
REGISTERED PROFESSIONAL ENGINEER
82915PE
OREGON
MAY 12 2009
STEVEN WELLS HANSEN
Steve Hansen
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

CIVIL DETAILS - 2

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C08
10 OF 12

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C08.DWG 2/9/2024 STEVE HANSEN



SPILL PREVENTION PLAN (SPCC):

1. ENSURE THE SAFETY OF PERSONNEL
2. STOP THE SPILLAGE AT THE SOURCE
3. DETERMINE AND ASSESS KNOWN FIRE OR HEALTH HAZARDS POSED BY THE SPILL
4. DETERMINE WHERE THE SPILL IS GOING
5. INITIATE CONTAINMENT ACTIVITIES
6. REPORT THE SPILL AS REQUIRED AND PROVIDE THE FOLLOWING INFORMATION: SITE LOCATION, TIME AND DATE OF SPILL OR FIRST TIME OBSERVED, THE SOURCE OF THE SPILL, TYPE OF PRODUCT SPILLED, ESTIMATE OF AMOUNT SPILLED, ON SCENE WEATHER, AND STATUS OF CONTAINMENT AND FUTURE CORRECTIVE ACTIONS (IF NEEDED)
7. INITIATE CLEAN UP ACTIVITIES

CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
6. REMOVE VEGETATION.
7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540

EROSION CONTROL GENERAL NOTES:

1. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
2. THE ESC PLAN, ANY REVISIONS, AND INSPECTION LOGS SHALL BE KEPT ONSITE AT ALL TIMES.
3. THE ESC MEASURES SHOWN ON THE PLAN ARE THE MINIMUM REQUIREMENTS FOR THE PROJECT SITE AND SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
4. ALL ESC MEASURES SHALL BE APPROVED, IN PLACE, AND FUNCTIONAL PRIOR TO ANY GROUND DISTURBANCE OF THE SITE. CONTRACTOR SHALL MAINTAIN ALL ESC MEASURES THROUGHOUT CONSTRUCTION.
5. CLEARING LIMITS, CRITICAL RIPARIAN AREAS, BUFFER ZONES, AND PRESERVED VEGETATION (INCLUDING IMPORTANT TREES AND ASSOCIATED CRITICAL ROOT ZONES) SHALL HAVE HIGH VISIBILITY FENCE INSTALLED BEFORE GRADING OR CONSTRUCTION TO IDENTIFY, MARK, AND PROTECT THE AREAS.
6. CONSTRUCTION ACTIVITIES WILL AVOID OR MINIMIZE ANY EXCAVATION OR OTHER SOIL DESTABILIZATION FROM OCTOBER 1ST TO MAY 31ST OF THE FOLLOWING YEAR.
7. TEMPORARY SITE STABILIZATION MEASURES WILL BE INSTALLED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND OR AT THE END OF EACH WORKDAY IF RAIN IS FORECAST IN THE NEXT 24 HOURS.
8. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ALONG THE SITE PERIMETER ON ALL DOWN-GRADIENT SIDES OF THE CONSTRUCTION SITE AND AT ALL ACTIVE AND OPERATIONAL INTERNAL STORMDRAINS AT ALL TIMES DURING CONSTRUCTION.
9. DRY METHODS MUST BE USED TO REMOVE SEDIMENT AND CONCRETE SWEEPINGS FROM AREAS WHERE DISCHARGE IS LIKELY TO THE STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
10. ALL DIRT AND DEBRIS TRACKED ONTO STREETS MUST BE REMOVED IMMEDIATELY IF IT CAN BE SPREAD BY TRAFFIC OR OTHERWISE REACH STORM DRAINS, WATERCOURSES, OR SENSITIVE AREAS.
11. SEDIMENT DISCHARGED OFFSITE MUST BE PLACED BACK ONSITE WITHIN 24 HOURS AND STABILIZED. IN-STREAM WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURES AND TIMEFRAMES OF THE OREGON DEPARTMENT OF STATE LANDS.
12. NO SEDIMENT-LADEN WATER MAY BE PUMPED, DIVERTED, OR OTHERWISE DISCHARGED OFFSITE UNLESS APPROVED BY THE ESC PLAN.
13. SEDIMENT MUST BE REMOVED WHEN IT HAS REACHED THE LEVEL SPECIFIED IN THE STANDARD DETAIL.
14. SEDIMENT MUST BE REMOVED FROM SUMPED STRUCTURES WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 1/3RD AND WITHIN 30 DAYS OF PROJECT COMPLETION.
15. WHEN REMOVING SATURATED SOILS FROM THE SITE, EITHER WATERTIGHT TRUCKS MUST BE USED OR LOADS MUST BE DRAINED ONSITE UNTIL DRIPPING HAS BEEN REDUCED TO MINIMIZE SPILLAGE.
16. EROSION CONTROL MEASURES WILL BE INSPECTED ON ACTIVE SITES AT LEAST WEEKLY OR AFTER PRECIPITATION IN EXCESS OF 0.5 INCHES IN 24 HOURS. IF A SITE WILL BE INACTIVE MORE THAN CITY OF NEWBERG EROSION CONTROL MANUAL 2014 PAGE 30 FOURTEEN (14) DAYS, EROSION CONTROL MEASURES WILL BE INSPECTED PRIOR TO THE INACTIVE PERIOD AND EVERY TWO (2) WEEKS DURING THE INACTIVE PERIOD.
17. ALL CONSTRUCTION SITES MUST FOLLOW PROPER STORAGE, APPLICATION, AND DISPOSAL PROCEDURES OF CONSTRUCTION MATERIALS. NO DUMPING OR DISPOSAL OF CONSTRUCTION DEBRIS, WASTE, OR SPOIL MATERIAL WILL OCCUR IN ANY STREAM, STORMWATER SYSTEM, WETLANDS, SURFACE WATERS, OR OTHER WATERCOURSES OR SENSITIVE AREAS.
18. WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES ARE REQUIRED FOR ALL SITES.
19. TOXIC AND HAZARDOUS MATERIALS MUST HAVE COVER AND SECONDARY CONTAINMENT.
20. CONCRETE TRUCKS SHALL NOT DISCHARGE WASHWATER WHERE IT IS LIKELY TO FLOW INTO STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
21. PAVING ACTIVITIES SHALL BE MINIMIZED BETWEEN OCTOBER 1ST AND MAY 31ST OF THE FOLLOWING YEAR TO AVOID POTENTIAL DISCHARGE OF PAVING CHEMICALS INTO THE STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
22. ALL ESC MEASURES SHALL BE REMOVED FROM THE SITE 30 DAYS AFTER CONSTRUCTION IS COMPLETED AND APPROVED BY THE CITY.

CONSTRUCTION NOTES (ESC):

1. INSTALL CONSTRUCTION ENTRANCE PER STD DWG 4.2-A. SEE SHEET EC7.00
2. INSTALL INLET PROTECTION PER STD DWG 4.3-B. SEE SHEET EC7.00
3. INSTALL SEDIMENT FENCE PER STD 4.3-A. SEE SHEET EC7.00
4. INSTALL CONCRETE WASH AREA. SEE SHEET EC7.00

PRE-CONSTRUCTION NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPING, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL (CONT):

1. ANTICIPATED NON-STORMWATER DISCHARGES:
   - FIRE HYDRANT (TYP.) FOR EMERGENCY FIREFIGHTING
   - LANDSCAPE IRRIGATION
   - EXTERNAL BUILDING WASHDOWN
   - PAVEMENT WASHDOWN (CATCH BASINS HAVE SEDIMENT TRAPS
   - FOUNDATION AND FOOTING GAMES
2. ALL CONSTRUCTION MATERIALS THAT COULD LEAD TO POLLUTION IF SPILLED NOT IN IMMEDIATE USE SHALL BE STORED IN A STORAGE BOX TO PREVENT SPILLS AND EXPOSURE TO WET WEATHER.
3. FOR SPILL PREVENTION, SPILL KITS, AND OTHER SPILL CONTAINMENT DEVICES (I.E. WATTLES, ABSORBENT SOCKS/BROOMS, ORGANIC OIL ABSORBENT AGENT, ETC.) SHALL BE KEPT ONSITE WITHIN THE STORAGE CONTAINER MENTIONED ABOVE THROUGH THE DURATION OF THE PROJECT.

SCALE
50 0 25 50 100
SCALE FEET

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVL\EXXXXXX_CE01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP(S) USED: 0493-017 - xTopo - xSet 0493-017 - xProp Line 0493-017 - xXrefs
ROTATION ANGLE: ######
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_CE01.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

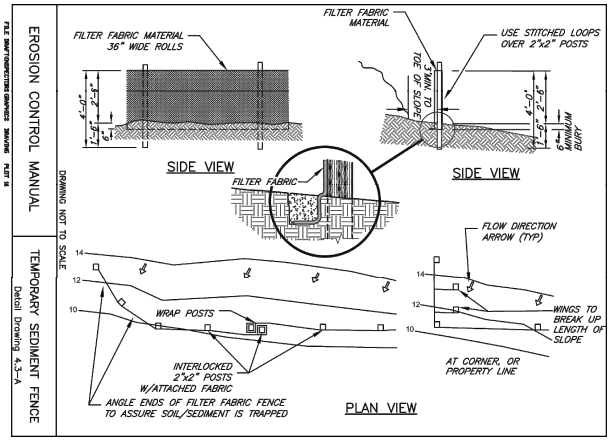
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
Steve Hansen
MAY 12, 1998
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

EXISTING CONDITIONS, DEMOLITION, AND EROSION AND SEDIMENT CONTROL PLAN

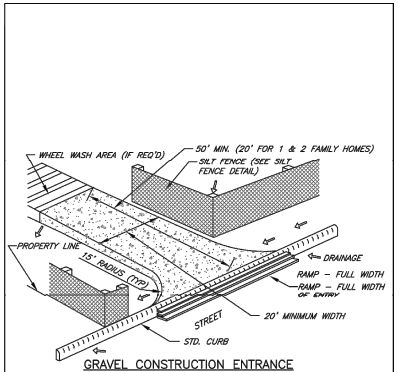
1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: CE01
11 OF 12



EROSION CONTROL MANUAL

TEMPORARY SEDIMENT FENCE

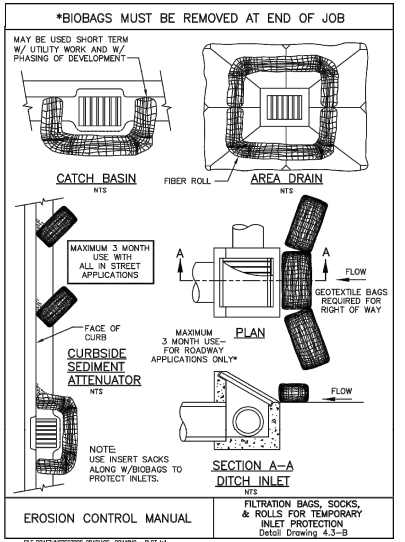
Detail Drawing 4.3–A



GRAVEL CONSTRUCTION ENTRANCE

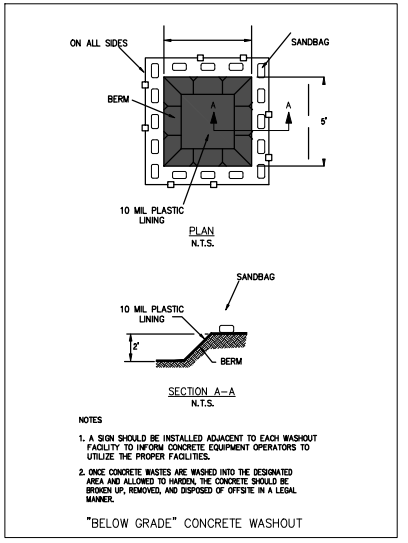
EROSION CONTROL MANUAL | GRAVEL CONSTRUCTION ENTRANCE

Detail Drawing 4.2–A

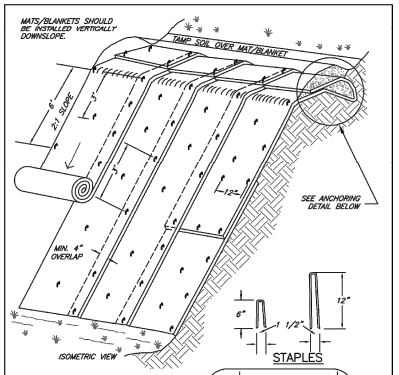


EROSION CONTROL MANUAL | FILTRATION BAGS, SOCKS, & ROLLS FOR TEMPORARY INLET PROTECTION

Detail Drawing 4.3–B

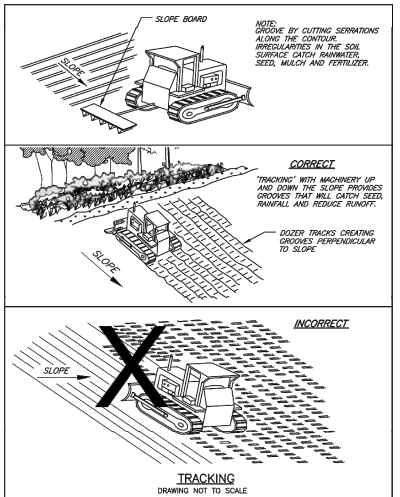


"BELOW GRADE" CONCRETE WASHOUT



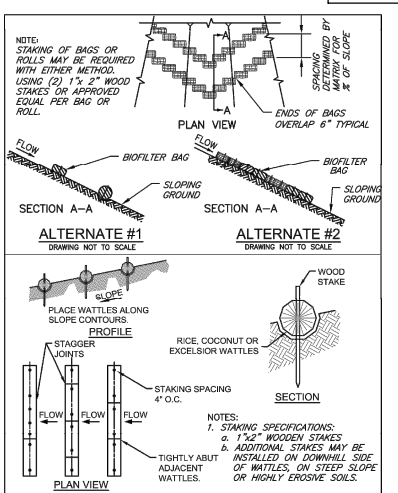
EROSION CONTROL MANUAL | EROSION BLANKETS SLOPE INSTALLATION

Detail Drawing 4.5–C



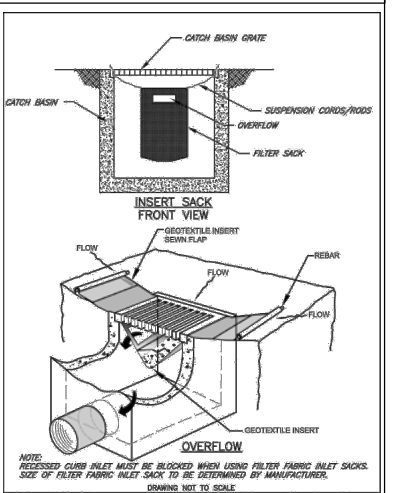
EROSION CONTROL MANUAL | SURFACE ROUGHENING

Detail Drawing 4.5–B



EROSION CONTROL MANUAL | SLOPE INSTALLATIONS: FILTRATION BAGS, SOCKS, & ROLLS

Detail Drawing 4.3–C



EROSION CONTROL MANUAL | INLET INSERT

Detail Drawing 4.3–G

P:\0493–017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXX_CE02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP'D(S) USP'D:	
ROTATION ANGLE:	0d0'0"
CONSTRUCTED BY:	
PROJECT COMPLETED:	
MAP CORRECTED BY:	CHECKED BY:
	FINAL MAP DATA
DRAWING NAME:	EXXXXXX_CE02.dwg

DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

CITY OF PORTLAND

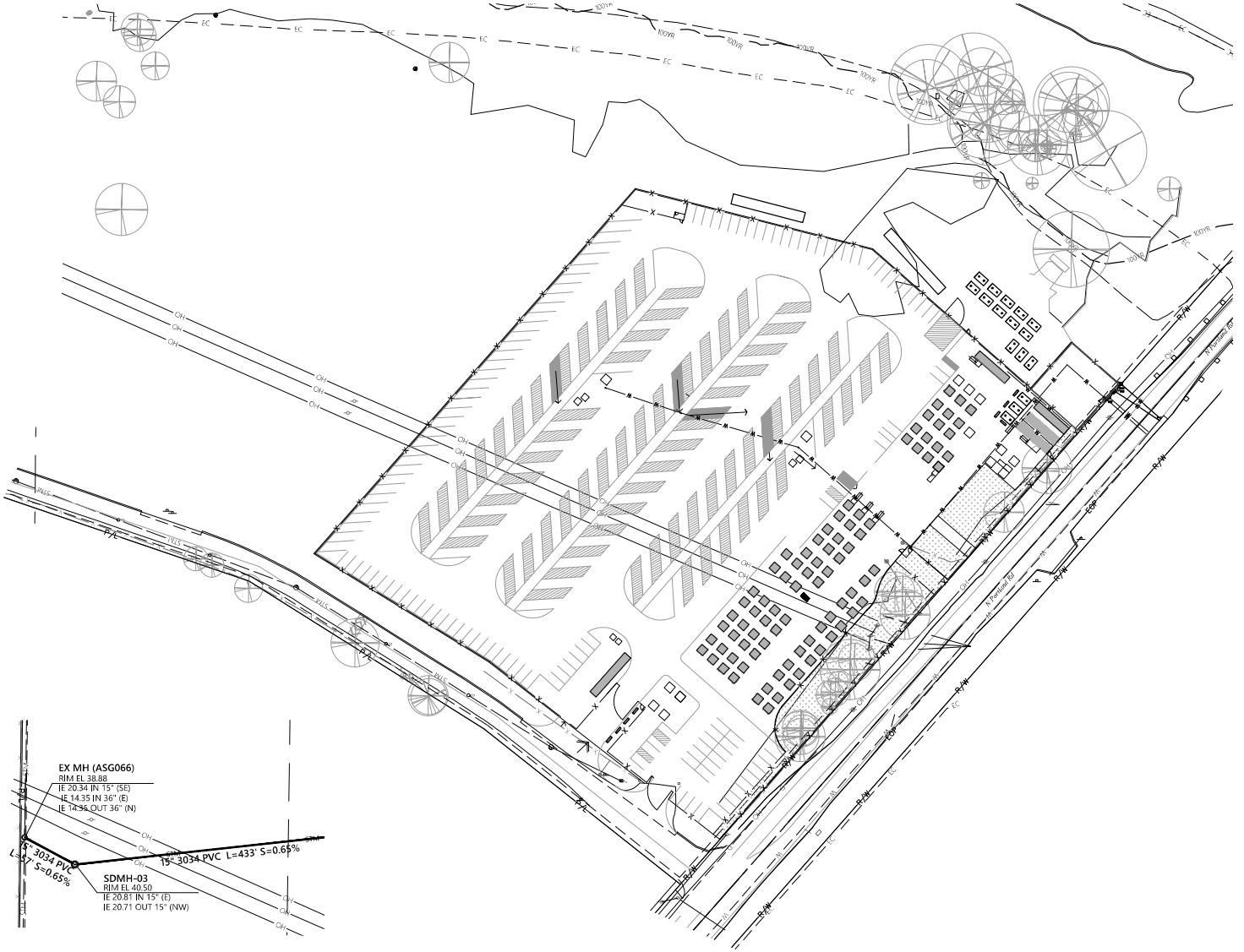
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER 9291EPE Steve Hansen MAY 12 1998 STEVEN WELLS HANSEN EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

EROSION AND SEDIMENT CONTROL DETAILS

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	CE02
	12 OF 12


EX MH (ASG066)
RIM EL 38.88
IE 20.34 IN 15" (SE)
IE 14.35 IN 36" (E)
IE 14.35 OUT 36" (N)
15" 3034 PVC L=47' S=0.65%
15" 3034 PVC L=433' S=0.65%
SDMH-03
RIM EL 40.50
IE 20.81 IN 15" (E)
IE 20.71 OUT 15" (NW)
N Portland Rd
100YR
EC
OH
R/W

THIS PROJECT PERMITTED UNDER THE AUTHORITY OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)
Western Region Salem Office
4026 Fairview Industrial Dr. SE
Salem, OR 97302
503-378-8240

TASS 2

T:1N, R:1E, SEC:05, TL:1000

10505 N Portland Rd, Portland, OR 97203, USA

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

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Page 3	System Schematic	Page 9	Recirculation Tanks (R1 & R2)
Page 4	Site Plan Overall	Page 10	Trash Tank Section
Page 5	Site Plan Tank Area	Page 11	Holding Tank Section
Page 6	Trash Tanks (T1-T3)	Page 12	Section C-C and Pump Out Basin

Project Description

A Temporary Housing and Shelter Site is proposed for 71 RV spaces, 90 living pods, and 143 cars serving an estimated 418 guests and 30 staff. The estimated peak daily flow is 15,000 gallons per day.

All wastewater will be generated by guests and staff using the First Aid office and the 2 community restroom/showers and laundry facilities. There is a kitchen to serve food prepared off-site. There are no RV hookups. There are also 6 portable toilets with hand washing stations.

Residential strength sewage will flow from each of the restrooms (designated H1-2) and the First Aid Office (O-5) into 1500 gallon tanks (designated T1-3). Effluent from these tanks will flow by gravity and comingle in a 3000 gallon dosing tank (Tank E1). This effluent will be dosed to a splitter basin equally dividing the flow into two parallel series of 1500 gallon tanks (A1-5 and B1-5). Effluent from each row of tanks will flow separately into one of two 3000 gallon tanks (R1 and R2) for storage. Tank R1 is fitted with an audible and visual alarm activated at 75% capacity, to indicate the need for pumping out the holding tank system.

Pump out will be via a remote pipe connection, with effluent pumped from tanks E1, R1 and R2 through a 3" pipe fitted with a quick disconnect for direct connection to the pumper truck's vacuum hose. Pumps in each tank will be manually operated until the tank is emptied. These controls will be located in a shed near the pump out basin.

This temporary holding tank system is designed to accommodate the future phase of onsite treatment and disposal, or as pretreatment before being released to a municipal sewer system.

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

PERMITS TO NOTIFY EXCAVATOR OF REQUIREMENTS OF LAW

952-001-0030 Any entity authorized to issue permits for construction which requires excavation shall include on such permits the language set out in OAR 952-001-0020.

Site and Soils

- Domestic water supply by: Portland Water Bureau

INSTALLER: Superior Underground, LLC

LICENSE #: 39230

VICINITY MAP

Page 01
2/6/2024
City of Portland-TASS 2
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COVER SHEET

DESIGN BY:
DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
FAX 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

CHECK OFF	
	GENERAL STANDARDS
	ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone nu
	All work and material shall conform with OAR 340 Div. 71 & 73 approved design permit, and appropriate laws. Permits relating (but not limited) to plumbing, electrical, and grading must be coordinated with the on-site system installer and designer.
	Minor modifications to accommodate stumps, boulders or other unforeseen obstacles may be needed. Major modification cannot be performed without re-design and regulatory approval.
	If the installation contractor (installer) notes any conflicts with applicable State and/or local laws, rules or requirements, he shall request a clarification before ordering or installing affected materials or work. This may include and is not limited t
	Installer is to obtain copies of all necessary permits, authorizations, licenses etc. prior to initiating construction, including that specialty design work designated to a subcontractor which is directly or indirectly related to the system construction,d
	Installer shall request and obtain utility locates by a qualified service for all potential underground utilities before excavation work commences.
	Installer shall maintain any and all survey monuments, which are affected by work and activities, related to the projects. Monuments, if damaged by the installer, shall be reset by a licensed surveyor at the installer's expense.
	All materials and equipment shall be of the type, model and brand listed for the manufacturers specified, unless otherwise authorized by the system designer. Substitution of materials and equipment shall receive pre-authorization and the contractor/insta
	Installer shall prepare, maintain and provide, at completion of the project, drawings detailing the construction "as-built" and shall provide the owner & designer with the manufacturer's current specification and operating data on all equipment installed
	TANK (S)
	Seal all joints and seams with manufacturer-approved sealants. Provide material submittal, and all means and methods for tank and accessory testing.
	Odor proof: Seal riser lid to contact with closed cell plastic foam sheet, or single-side adhesive neoprene foam tape.
	Riser: Tank must be equipped with a watertight riser, with minimum 18" inside diameter, with tank access brought to or above finish grade. Riser must be fiberglass bonded to tank adapter w/ adhesive.
	Knockouts: Perforations and unused knockouts must be grouted or otherwise sealed.
	Watertight: After installation, Tank must be subject to 24 hour test for watertightness. Fill to a maximum 2" into riser. Mark water level, time and date. There may be no more than 1 gallon leakage over 24 hour period.
	THE ABOVE SPECIFICATIONS ARE IN ADDITION TO AND DO NOT REPLACE THE MANUFACTURERS WRITTEN INSTALLATION AND TESTING PROCEDURE REQUIREMENTS.

	ELECTRICAL COMPONENTS
	Wiring of pumps and controls shall be performed by a licensed electrician under the auspices of an electrical permit secured from the local jurisdiction. For details of electrical system, pump controls, floats, and the level of the float settings see the
	Splicing of wires at the splice box inside the tank risers shall be done using the heat shrink connectors provided by the manufacturer or with an approved watertight electrical connector nut.
	Wiring from the splice box to the source or the control panel shall be protected in UL approved PVC conduit, constructed watertight. Pump line voltage shall have water proof insulation such as THW, THWN, or HHW. Wire for all connections shall be 14 gaug
	"Seal offs" shall be installed between the splice box and the power source or control panel, either in the horizontal just outside the riser or in the vertical just below the control panel or per connection. "Seal offs" shall be installed per manufacture
	Wiring shall be color coded or numbered and the schedule written inside the control panel or on the wiring diagram.
	Upon completion, the apparatus shall be tested for operation and correctness. Available voltage, pump run voltage and pump run amperage shall be measured and recorded inside the control panel.
	The wiring diagram shall be retained on site (preferably in control panel enclosure) and any as-built notes or comments entered, initialed, and dated.
	CONTROL PANEL (S)
	The electrician shall label the control panel or electrical panel with his business name and the permit number and date of installation.
	Control panel shall be installed per manufacturers written instructions; alarm shall be audible from the living/working space. Pump and alarm must be on separate circuits.
	Panel shall be in accordance with NEMA 4X rating. Panel enclosure shall meet NEMA 4X requirements.
	Panel shall be installed within 50' of tank and preferably within sight of the tank.
	OTHER
	Setbacks: Maintain required setbacks
	COLLECTION SYSTEM
	Contractor to obtain plumbing permit.
	Do not use the plumbing system for disposal of non-biodeegradable and/or toxic materials such as paints, thinners, gasoline, motor oil, drain cleaners, or other harsh chemicals.
	Do not use the plumbing system for disposal of cooking grease, diapers, sanitary napkins, rags, cigarette butts, rubber or plastic products
	Water softener backwash, storm or ground water sources, floor drains not to be connected to the septic system.
	DISTRIBUTION AND TRANSPORT LINES
	Road crossing: Sleeve transport pipe in Sch. 40 PVC, installed a minimum of 18" below grade, and bedded in ¾ minus to the surface.
	Road/Driveway crossing: Use Sch. 40 or Sch. 80 PVC, installed a minimum of 24" below grade, and bedded in ¾ minus to the surface.
	Trace wire: Provide an electrically continuous 18 gauge, green-jacketed copper wire in trench, above the pipe, for the full length of all pressure or gravity transport lines, accessible at the source end.
	DESIGNER INSPECTIONS
	During system construction, the designer, Environmental Management Systems (EMS) shall inspect all components of the installation. These inspections are to be coordinated with the installer and the Oregon Department of Environmental Quality.

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Page 02

2/6/2024

City of Portland-TASS 2

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CONSTRUCTION SPECIFICATIONS

DESIGNED BY: DRAWN BY:

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
fax 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

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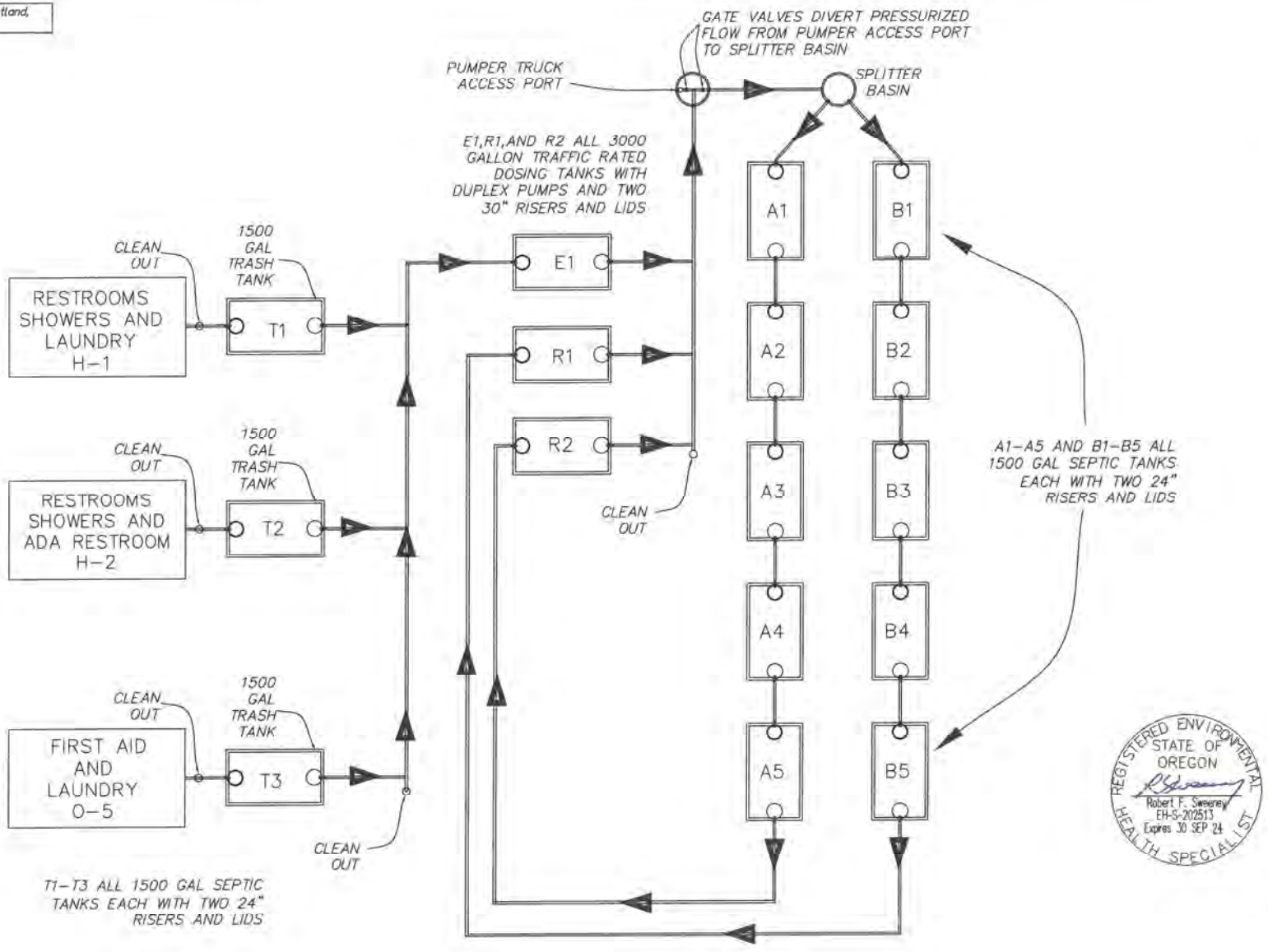

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EH-S-202513
Expires 30 SEP 24

Page 03

2/6/2024

City of Portland- TASS2

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SCHEMATIC DIAGRAM

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DRAWN BY:

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fax 503-353-9695
www.envmgtsys.com

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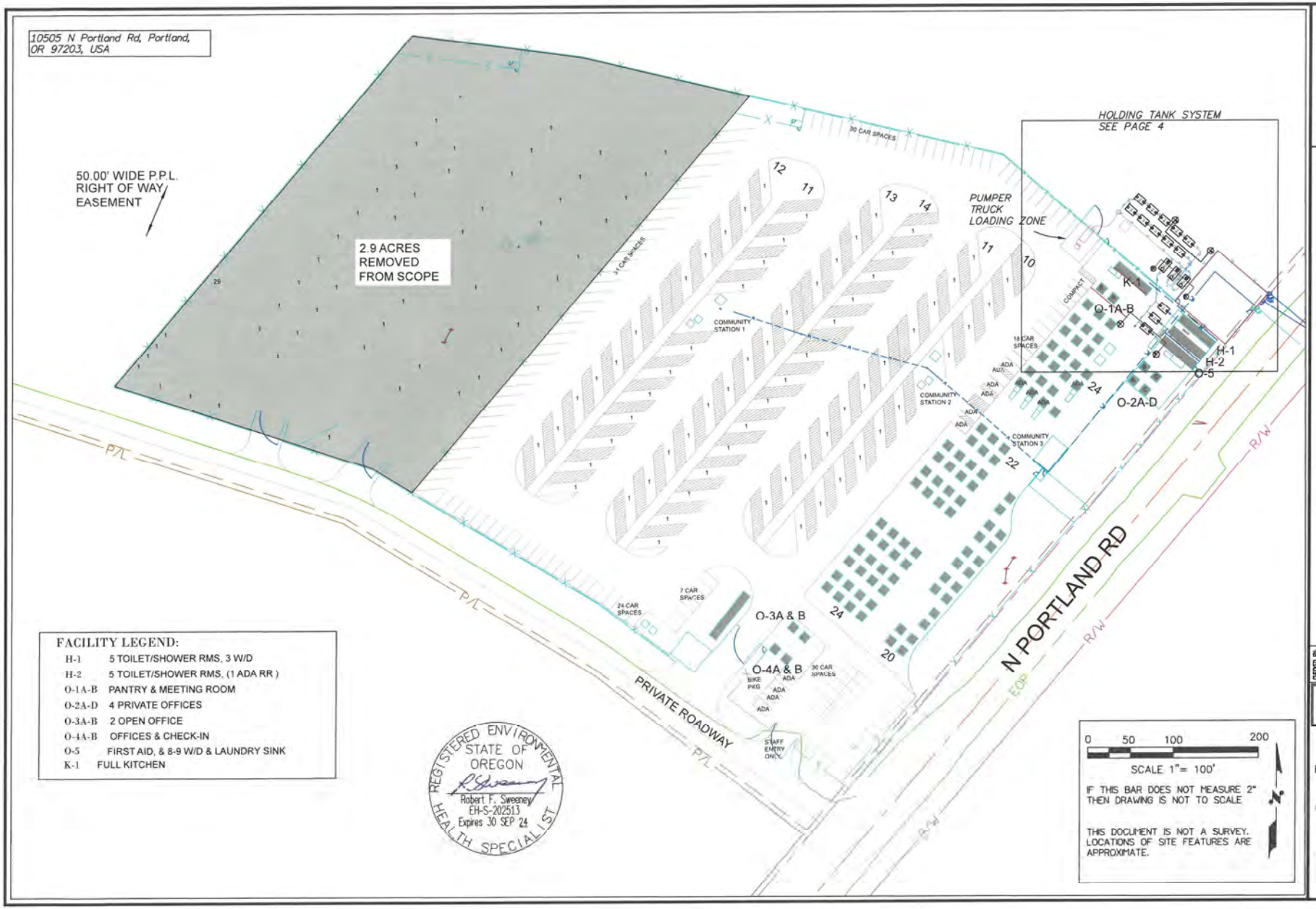
Suite B112
Milwaukie, OR 97222



FACILITY LEGEND:

H-1	5 TOILET/SHOWER RMS, 3 W/D
H-2	5 TOILET/SHOWER RMS, (1 ADA RR)
O-1A-B	PANTRY & MEETING ROOM
O-2A-D	4 PRIVATE OFFICES
O-3A-B	2 OPEN OFFICE
O-4A-B	OFFICES & CHECK-IN
O-5	FIRST AID, & 8-9 W/D & LAUNDRY SINK
K-1	FULL KITCHEN

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Robert F. Sweeney
EH-S-202513
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0 50 100 200
SCALE 1"= 100'

IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

THIS DOCUMENT IS NOT A SURVEY. LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

Page 04

2/6/2024

SCALE: 1"= 100'

City of Portland-TASS 2

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SITE PLAN- OVERALL

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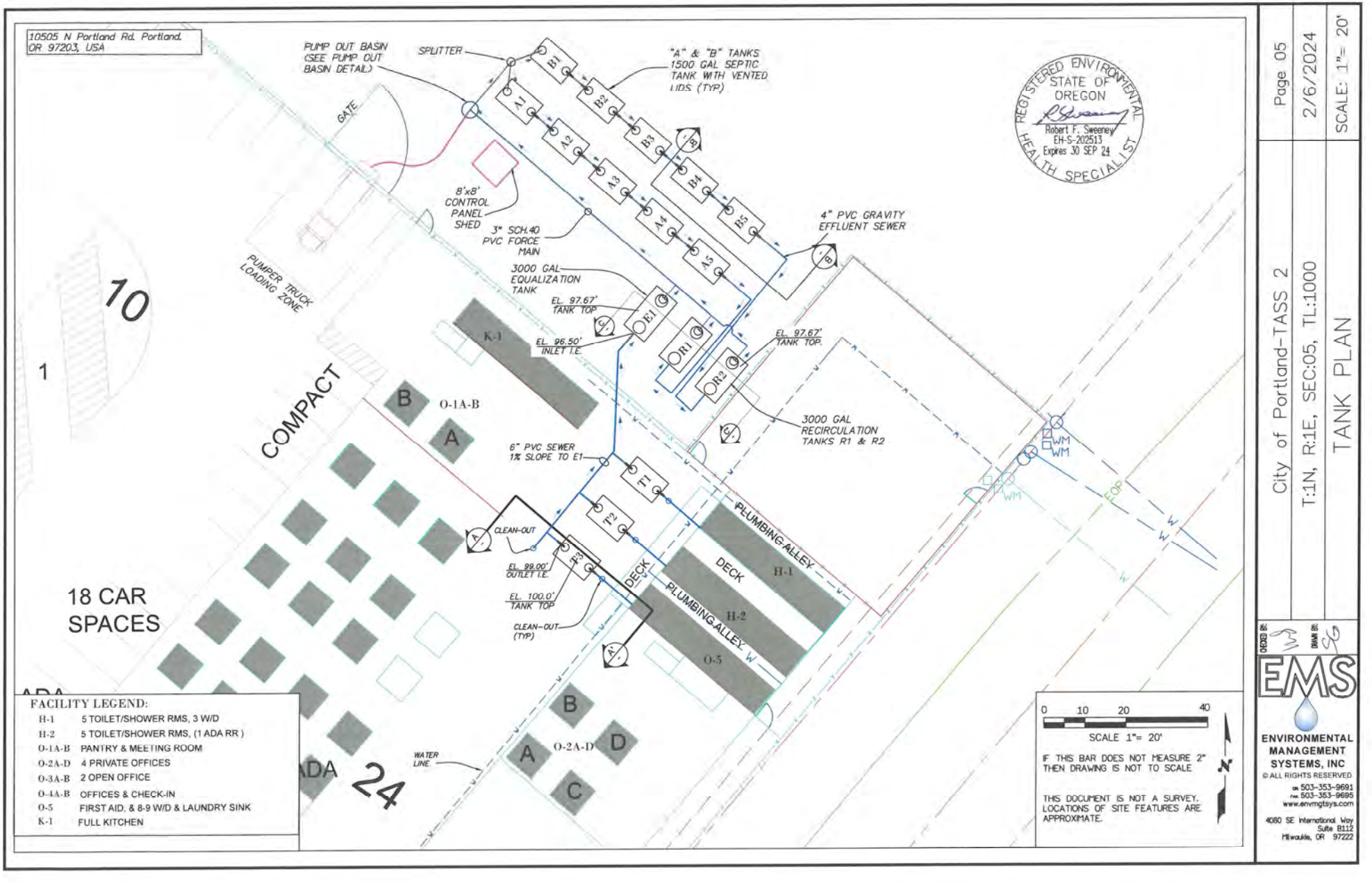

FACILITY LEGEND:

H-1	5 TOILET/SHOWER RMS, 3 W/D
H-2	5 TOILET/SHOWER RMS, (1 ADA RR)
O-1A-B	PANTRY & MEETING ROOM
O-2A-D	4 PRIVATE OFFICES
O-3A-B	2 OPEN OFFICE
O-4A-B	OFFICES & CHECK-IN
O-5	FIRST AID, & 8-9 W/D & LAUNDRY SINK
K-1	FULL KITCHEN

Page 05

2/6/2024

SCALE: 1"= 20'

City of Portland-TASS 2

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TANK PLAN

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DWN BY:

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FAX 503-353-9695
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Suite B112
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Trash TankS (T1-T3)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	84.00	22.00	101.83
B	Top of Tank	62.00	0.00	100.00
C	Ceiling of Tank	57.00	-5.00	99.58
D	Inlet Invert	50.00	-12.00	99.00
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	48.00	-14.00	98.83
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-62.00	94.83
Q	Bottom of Tank	-4.00	-66.00	94.50
R	Excavation	-16.00	-78.00	93.50

TBM= 100.00' USING TOP OF TRASH TANKS

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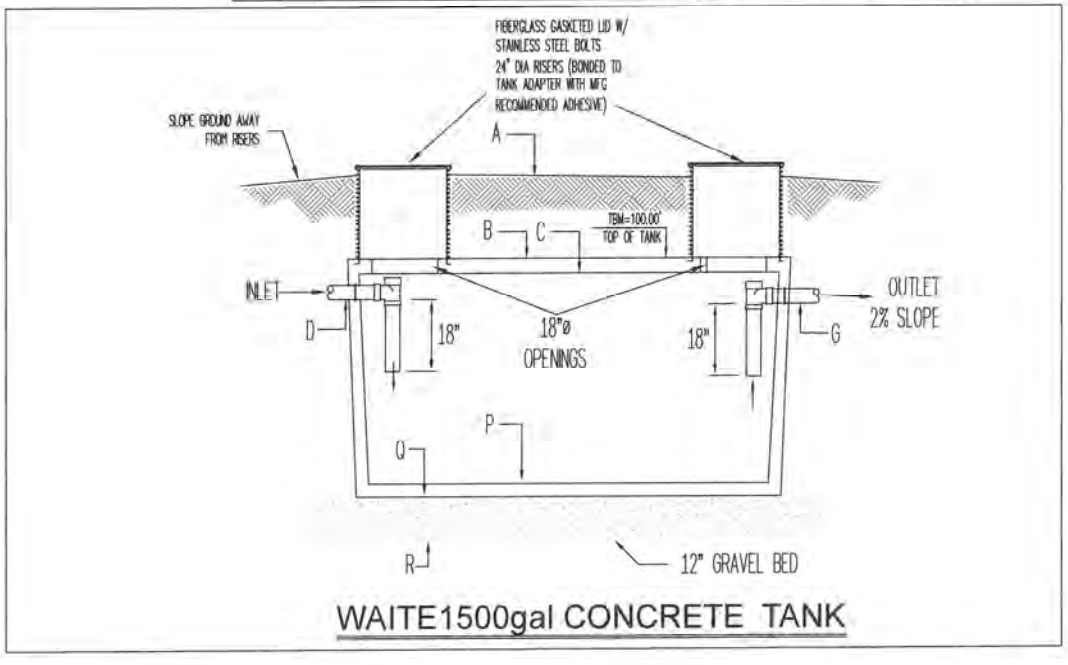
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



WAITE1500gal CONCRETE TANK

Page 05

2/6/2024

City of Portland- TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK DETAILS (T1- T3)

DESIGN BY: WD

DRAWN BY: SG

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

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Suite B112
Milwaukie, OR 97222

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Holding Tanks A1 and B1

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	83.00	22.00	101.83
B	Top of Tank	61.00	0.00	100.00
C	Ceiling of Tank	56.00	-5.00	99.58
D	Inlet Invert	51.00	-10.00	99.16
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-61.00	94.91
Q	Bottom of Tank	-3.50	-64.50	94.62
R	Excavation	-15.50	-76.50	93.62

EACH SUBSEQUENT TANK (NUMBERS 2–5) IS SET 2" DEEPER THAN THE ONE PRECEDING IT. SEE PAGE 10.

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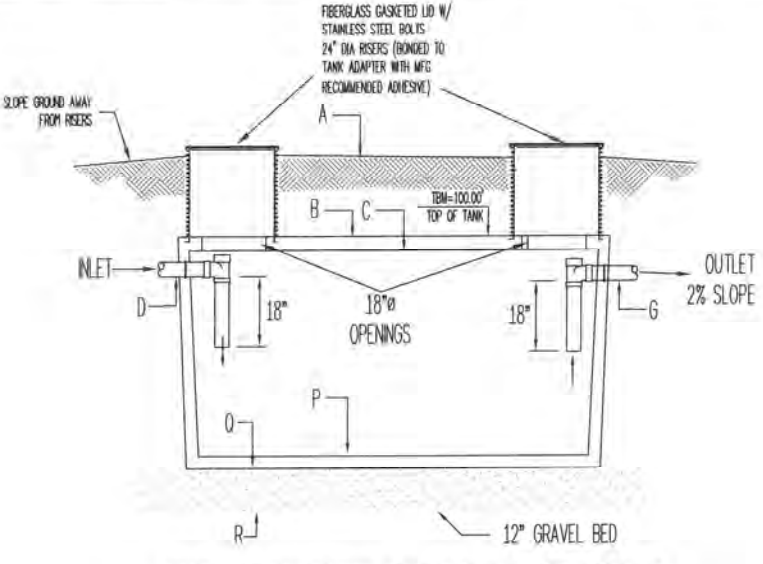

WAITE1500gal CONCRETE TANK

Page 06

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

HOLDING TANK DETAILS

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503-353-9681
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www.emsplc.com
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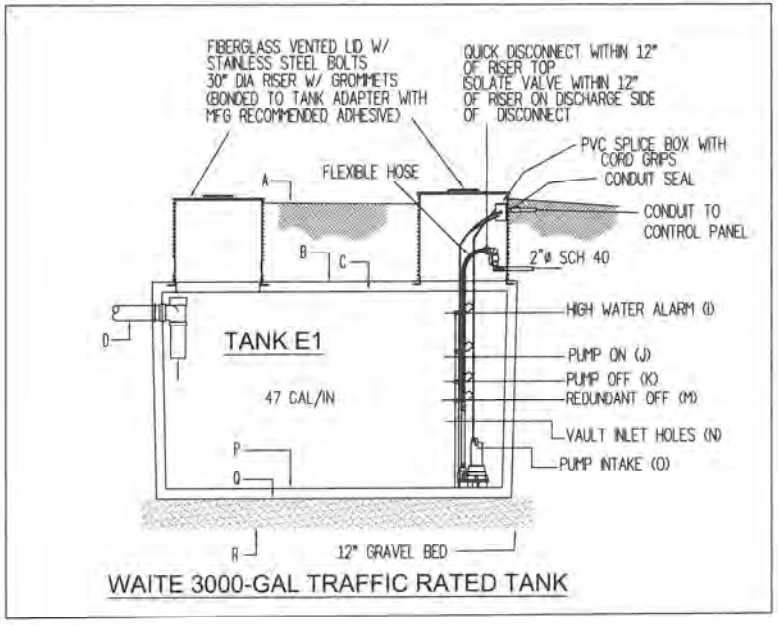
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

Equalization Tank (E1)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	136.18	50.68	101.83
B	Top of Tank	85.50	0.00	97.61
C	Ceiling of Tank	77.50	-8.00	96.94
D	Inlet Invert	71.50	-14.00	96.44
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On / 75% Alarm	55.00	-30.50	95.07
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-85.50	90.48
Q	Bottom of Tank	-4.50	-90.00	90.11
R	Excavation	-16.50	-102.00	89.11

TBM=100.00' AT TOP OF TRASH TANKS



WAITE 3000-GAL TRAFFIC RATED TANK

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Expires: 30 SEP 24

Page 07

2/6/2024

City of Portland TASS 2

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TANK DETAILS E1

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REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
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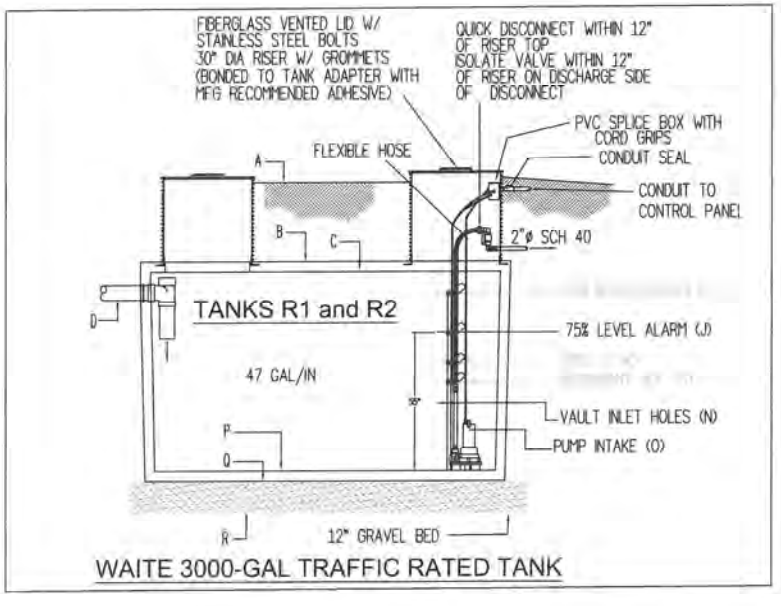
Recirculation Tanks (R1 and R2)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	136.18	50.68	101.83
B	Top of Tank	85.50	0.00	97.61
C	Ceiling of Tank	77.50	-8.00	96.94
D	Inlet Invert	71.50	-14.00	96.44
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	43.22	-42.28	94.08
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-85.50	90.48
Q	Bottom of Tank	-4.50	-90.00	90.11
R	Excavation	-16.50	-102.00	89.11



WAITE 3000-GAL TRAFFIC RATED TANK

Page 08

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK DETAILS (R1 & R2)

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503-353-9085
www.emsyc.com
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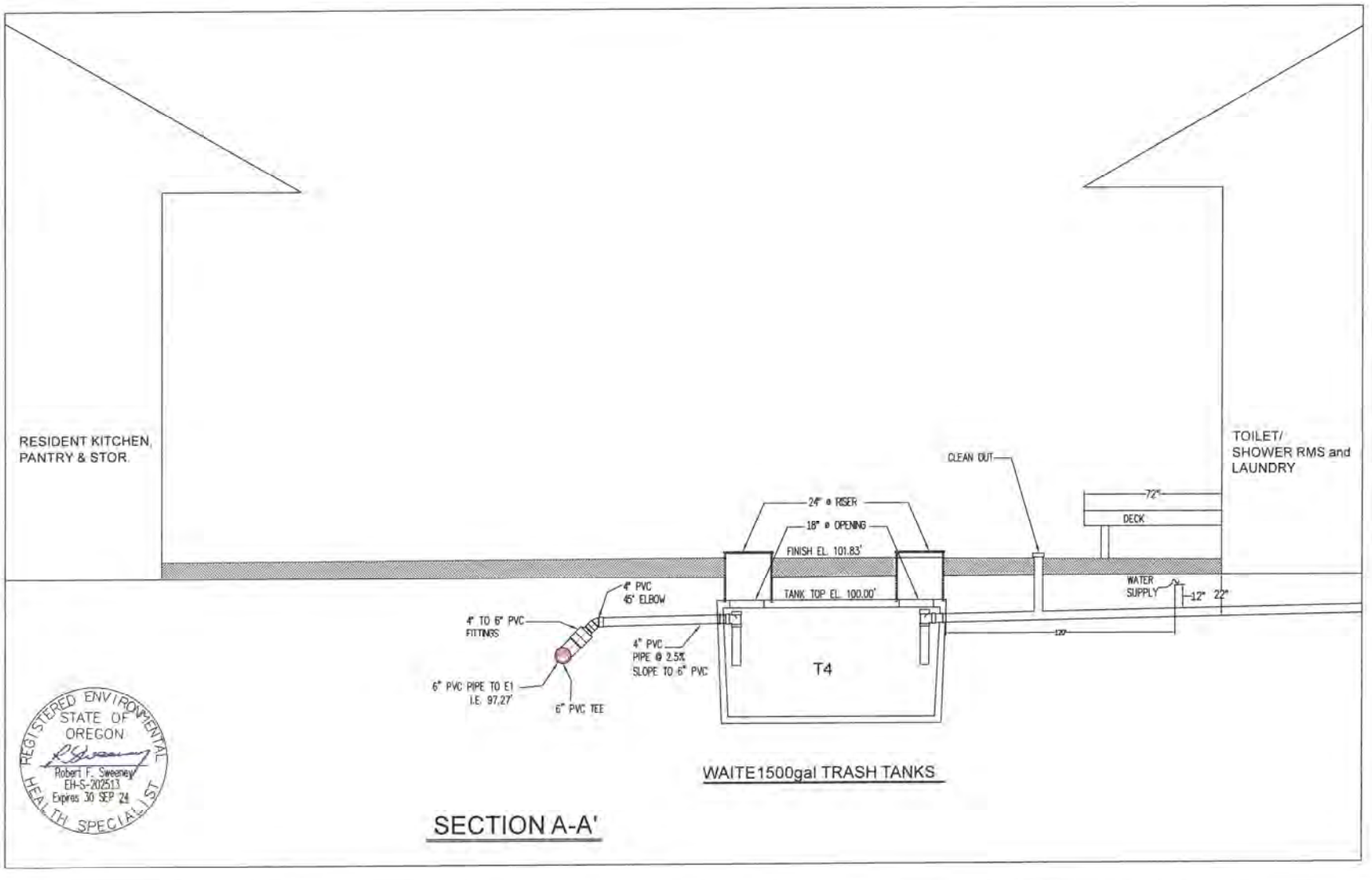

WAITE1500gal TRASH TANKS

SECTION A-A'

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EH-S-202513
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Page 09

2/6/2024

City of Portland-TASS 2

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SECTION A-A'

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Milwaukie, OR 97222

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NOTES
- USE WAITE CONCRETE 1500 GALLON TANKS
- TANK MINIMUM BURIAL DEPTH 24"
- TANKS TO SET ON 12" BED OF 3/4 MINUS GRAVEL
- TANKS TO BE BACKFILLED WITH 3/4 MINUS GRAVEL TO FINISH GRADE
- EACH TANK IN THE SERIES IS SET 2" LOWER THAN THE PRECEDING UPSTREAM TANK

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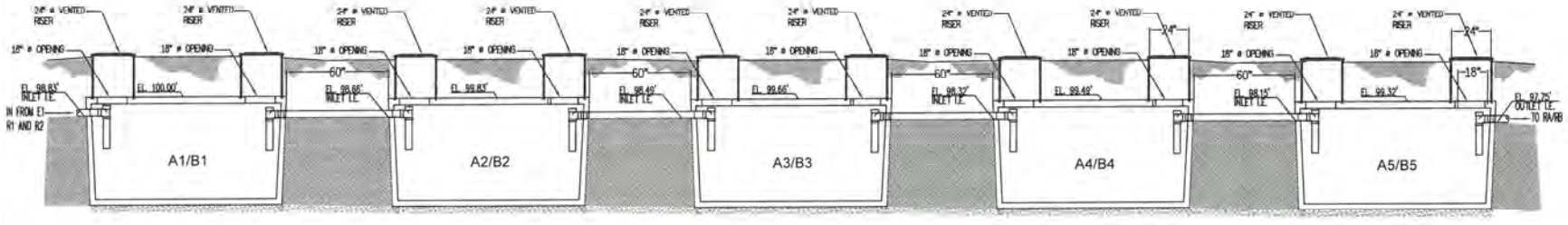

SECTION B-B'

Page 10

2/6/2024

City of Portland TASS 2

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SECTION B-B'

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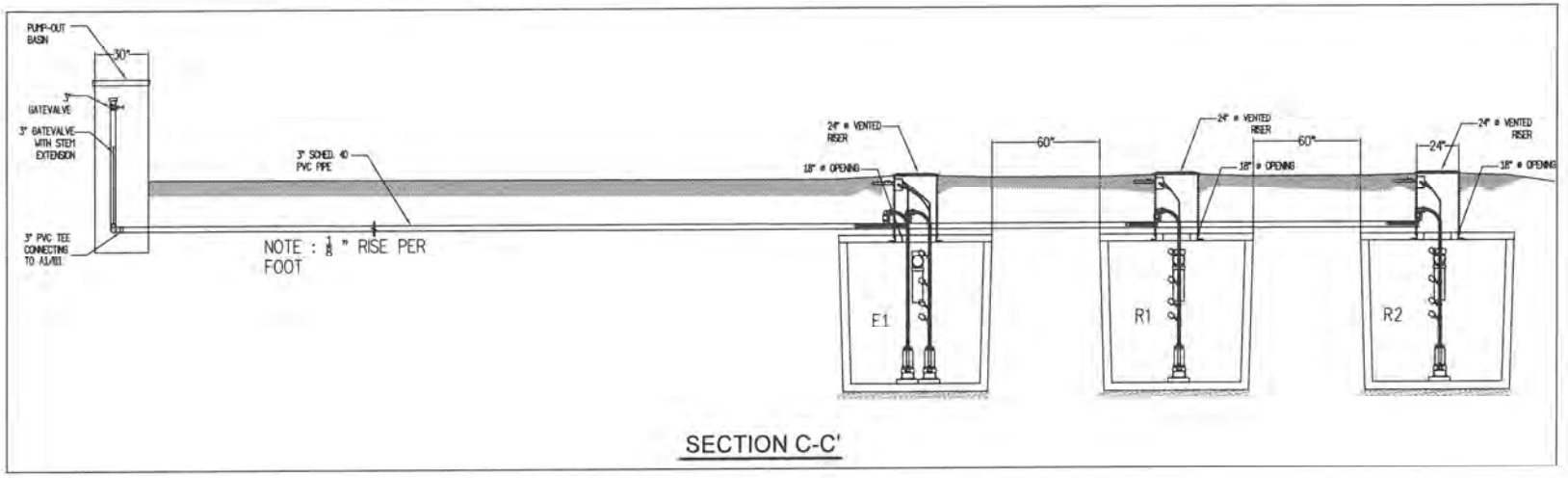
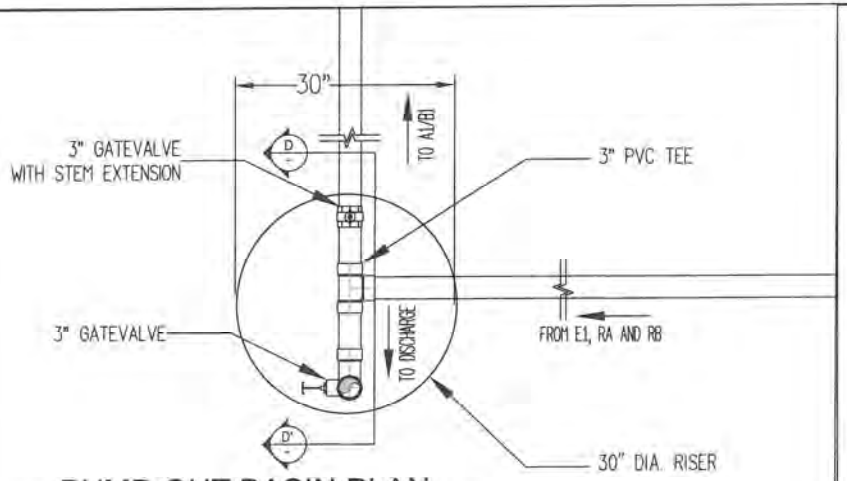
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

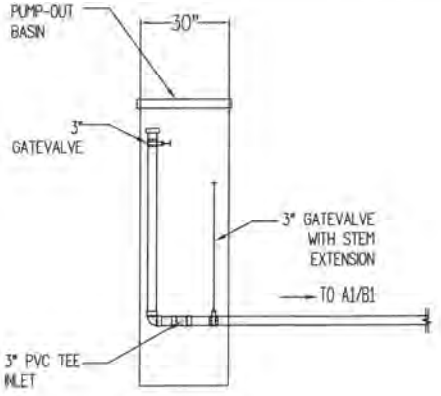


SECTION C-C'



PUMP-OUT BASIN PLAN

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



SECTION D-D'

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2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

SECTION C-C' AND PUMP OUT BASIN DETAILS

DESIGN BY:

DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC
4080 SE International Way
Suite B112
Milwaukie, OR 97222

APPENDIX C
Contaminated Media Management Plan

HALEY ALDRICH

www.haleyaldrich.com

CONTAMINATED MEDIA MANAGEMENT PLAN
WEST PROPERTY - TASS 2 SITE
10505 NORTH PORTLAND ROAD
PORTLAND, OREGON

by
Haley & Aldrich, Inc.
Portland, Oregon

for
City of Portland, Bureau of Environmental Services, TASS Program, and Brownfield Program
Portland, Oregon

File No. 0209772-001
June 2024

HALEY & ALDRICH, INC.
6420 S. Macadam Avenue
Suite 100
Portland, OR 97239-3517
503.620.7284

10 June 2024
File No. 0209772-001

City of Portland, Bureau of Environmental Services
1120 SW 5th Avenue
Portland, Oregon 97204

Attention: Taryn Meyer

Subject: Contaminated Media Management Plan
West Property - TASS 2 Site
10505 North Portland Road
Portland, Oregon

Dear Taryn:

Haley & Aldrich, Inc. (Haley & Aldrich) is pleased to provide this Contaminated Media Management Plan (CMMP) for the West Property - TASS 2 Site located at 10505 North Portland Road in Portland, Oregon. This document has been developed for the construction of an RV and Pod shelter for the Temporary Alternative Shelter Sites (TASS) program within the City of Portland (City) Mayor's office. The City Brownfield Program is providing US Environmental Protection Agency (EPA) grant funding for this project. These services are being provided through the City Bureau of Environmental Services (BES) Coordinated Site Assessment programs environmental on-call contract #31001878 with Haley & Aldrich. During construction of the TASS 2, BES personnel and/or TASS contractors may encounter soil impacted with low concentrations of total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), pesticides, and metals. This CMMP has been prepared for use by BES and/or their contractors during field activities to assist with the proper management of affected media during construction.

Sincerely yours,
HALEY & ALDRICH, INC.

Colby Hunt
Senior Associate

Jennifer Casler
Client Account Manager

Enclosures

HALEY & ALDRICH, INC.
6420 S. MACADAM AVENUE
SUITE 100
PORTLAND, OR 97239-3517
503.620.7284

SIGNATURE PAGE FOR

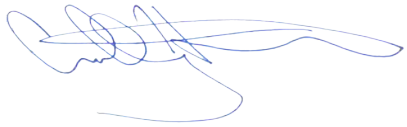
REPORT ON

CONTAMINATED MEDIA MANAGEMENT PLAN
WEST PROPERTY - TASS 2 SITE
10505 NORTH PORTLAND ROAD
PORTLAND, OREGON

PREPARED FOR

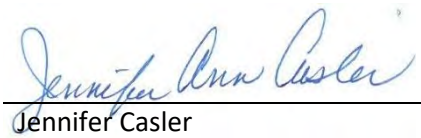
CITY OF PORTLAND, BUREAU OF ENVIRONMENTAL SERVICES
PORTLAND, OREGON

PREPARED BY:



Colby Hunt
Senior Associate
Haley & Aldrich, Inc.

REVIEWED AND APPROVED BY:



Jennifer Casler
Client Account Manager
Haley & Aldrich, Inc.

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HALEY ALDRICH

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List of Abbreviations

Abbreviation	Definition
°C	degrees Celsius
BES	Bureau of Environmental Services (City of Portland)
bgs	below ground surface
BMP	best management practice
BUD	Beneficial Use Determination
CFR	Code of Federal Regulations
CMMP	Contaminated Media Management Plan
DEQ	Department of Environmental Quality (State of Oregon)
ECSI	Environmental Cleanup Site Information
ESCP	Erosion and Sedimentation Control Plan
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
HASP	Health and Safety Plan
IDW	investigation-derived waste
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
msl	mean sea level
NELAP	National Environmental Laboratory Accreditation Program
NFA	No Further Action
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollution Discharge Elimination System
OAR	Oregon Administrative Rules
ORELAP	Oregon Environmental Laboratory Accreditation Program
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PNG	PNG Environmental, Inc.
RAP	Remedial Action Plan
RBC	Risk-Based Concentration
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
RV	recreational vehicle
site	West Property - TASS 2 Site, 10505 North Portland Road, Portland, Oregon
SL	Screening Level
SVOC	semi-volatile organic compound
TASS	Temporary Alternative Shelter Site
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound

1. Introduction

This Contaminated Media Management Plan (CMMP) presents information and guidance for City of Portland (City) Bureau of Environmental Services (BES) personnel and contractors to identify and appropriately manage potentially contaminated soil during future earthwork-related activities at the West Property - Temporary Alternative Shelter Site (TASS) 2 development in Portland, Oregon (referred to as the "TASS 2 site"; Figure 1). This plan includes information on the proper identification, management, removal, temporary storage, transportation, and disposal of potentially contaminated soil that may be encountered during earthwork activities at the TASS 2 site. This CMMP was funded through the City Brownfield Program with federal grant money provided by the US Environmental Protection Agency (EPA).

2. Purpose

The purpose of this CMMP is to provide protocols for identifying and managing potentially contaminated soil that may be encountered during future earthwork activities at the TASS 2 site. Based on the results of previous environmental assessments conducted at the TASS 2 site, soil may contain concentrations of total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), pesticides, and metals, including arsenic, cadmium, chromium, copper, mercury, and lead.

In addition to this CMMP, any redevelopment activities are subject to best management practices (BMPs) prescribed by permits, plans, and specifications, and adherence to regulations and requirements of local, state, and federal agencies.

3. Site Description

The TASS 2 site is located at 10505 North Portland Road in Portland, Oregon (Figure 1) and is located on the east portion of tax lot 1000 of Multnomah County tax map 1N1E05B. Tax lot 1000 was previously referred to as the Former North Larsen Property and is currently called the West Property because it is situated west of the City Columbia Boulevard Wastewater Treatment Plant (WWTP), and the future long-term use for this property is for the expansion of the WWTP. The West Property includes the current planned footprint of a proposed TASS 2 facility, which is an approximately 6-acre portion of the West Property. This CMMP discusses only the activities and results of investigations conducted within the boundary and perimeter of the planned development of the TASS 2 site. The TASS 2 site is currently developed with gravel parking and storage areas. The West Property is bordered by industrial properties to the west (Columbia Steel) and south (Truck Repair Enterprise), North Portland Road to the east, and the Columbia Slough to the north. Access to the TASS 2 site is through an unnamed road along the southern boundary of the TASS 2 site. This CMMP also addresses a storm sewer pipe excavation that extends west from the west boundary of the TASS 2 site to the west boundary of the West Property. The approximate limits of the TASS 2 site and surrounding area, including the storm sewer pipe, are shown on the BES site plans included in Appendix A.

4. Planned Redevelopment

The City intends to construct the TASS 2 facility within the West Property. Environmental services in preparation for construction of the TASS 2 site are being funded using EPA Brownfield Grant funding. Preliminary plans indicate that TASS 2 will consist of RV storage areas; car parking areas; mobile manufactured housing pods; tents for common areas including kitchen areas, trash areas, picnic areas, and gathering areas; and sewage and stormwater infrastructure. Except for stormwater swales and a small, forested area along the east boundary of the TASS 2 site, the entirety of the TASS 2 site will be paved following the completion of construction activities. Sewage infrastructure will likely consist of a series of subsurface sewage treatment tanks connected to above-ground holding tanks that will be periodically pumped out and the sewage properly disposed of off site. Surface grading will slope the TASS 2 site slightly downward to the north, so that surface water at the TASS 2 site will flow toward a curb along the northern edge of the pavement near the north boundary of the TASS 2 site. Stormwater will flow through curb openings to lined stormwater swales along the northern boundary of the TASS 2 site. The lined stormwater swales will discharge to an oil/water separator, which will ultimately discharge to the City of Portland storm sewer system through the new storm sewer pipe that will extend west from the west boundary of the TASS 2 site. Preliminary development plans are included in Appendix B.

Ground-disturbing activities will generally be limited to surface grading of imported gravel fill, installation of subsurface utility lines, subsurface wastewater and stormwater infrastructure, fencing, and surface improvements (i.e., walkways, parking areas, common areas, etc.). Excavations of up to 9 feet below ground surface (bgs) will be required to install septic treatment tanks near the northeast portion of the TASS 2 site. Excavations of up to 18 feet bgs will be required to install the new storm sewer pipe. Excavations deeper than 18 feet bgs are not anticipated. Excavations to install the new storm sewer pipe will be conducted during periods of dry weather to minimize surface water runoff entering the excavations. As discussed below in Section 5.2, groundwater beneath the TASS 2 site is generally present at depths of between 18 and 21 feet bgs, except for an area of perched groundwater observed in former monitoring well MW-3, located near the center of the TASS 2 site. Perched groundwater was encountered at a depth of 10.7 feet bgs in former well MW-3. Based on the location of the new storm sewer pipe relative to the area of perched groundwater dewatering during construction is not anticipated.

Prior to installation of TASS 2 facilities, the entirety of the TASS 2 site except for the lined stormwater swales and a forested area near the east boundary of the TASS 2 site will be capped with a minimum of 8 inches of imported aggregate base rock fill underlying a minimum of 4 inches of asphalt paving. A demarcation layer consisting of geotextile fabric will be installed prior to the placement of the aggregate base rock and asphalt cap. The geotextile fabric demarcation layer will identify the boundary between contaminated soil and overlying clean capping materials, isolating contamination from human or ecological contact. The planned project will prevent direct contact of underlying soil by future TASS 2 site occupants and eliminate exposure to the generally low concentrations of contaminants in surface soil. In addition to this CMMP, the TASS 2 development will be conducted in accordance with a forthcoming Remedial Action Plan (RAP) for the TASS 2 development.

5. Background

A discussion of the site history, geology and hydrology, and previous environmental investigations is presented in the following sections.

5.1 SITE HISTORY

Based on information obtained from the Oregon Department of Environmental Quality (DEQ), the West Property, which includes the TASS 2 site, operated as an industrial site since at least the 1940s, including use as a shingle mill, a boat manufacture and repair facility, for materials storage, welding, diesel engine repair and rebuilding, and as a tank-truck washing facility. The West Property is currently vacant. The Columbia Slough adjoins the northern boundary of the West Property. The West Property was listed on the DEQ Environmental Cleanup Site Information (ECSI) database (ECSI No. 0186) because of the presence or suspected presence of metals, polychlorinated biphenyls (PCBs), and petroleum hydrocarbons and associated constituents in soil and/or groundwater. Contamination present on-site resulted from historical practices that included discharge of wastewaters to on-site ponds, product spillage, leaking underground storage tanks (USTs), contaminated stormwater runoff, as well as contaminants released to an on-site drywell.

Historically, the primary environmental concern for the West Property was groundwater contamination from a solvent plume migrating from the adjacent South Larsen site (ECSI No. 3337). Other potential historical sources at the TASS 2 site include historical truck washing, historical diesel truck repair, and a former UST as shown on the BES figure included in Appendix A. BES installed several monitoring wells and conducted several monitoring events to determine if groundwater contamination from the South Larsen site was migrating to the West Property. Groundwater was encountered in the monitoring well located closest to the unnamed road separating the two sites at depths of between 35 to 60 feet bgs.

Structures at the TASS 2 site will be mobile or temporary in nature, i.e., they will be driven on site and supported on axels, support struts, or will be skid mounted units deposited at the TASS 2 site. As a result, all TASS 2 structures will be air gapped and not in direct contact with the ground surface (i.e., structures will have airspace of between approximately 5 to 6 inches or 1 to 1.5 feet between the ground surface and the bottom of the structure, depending on the type of structure); therefore, the *Vapor Intrusion into Indoor Air* exposure pathway is considered incomplete. The structures will not have skirting or flashing around their bases that could impede airflow through the airspace below the structure. Groundwater beneath TASS 2 is a data gap. There is minimal data available for the TASS 2 site with the only existing data located along the western boundary from MW-3 and MW-4. The existing data is pertinent to monitoring the VOC plume from the South Larsen property but was collected prior to remediation of the South Larsen VOC plume. There is no on-site data pertaining to the former UST releases in the northeast corner of the TASS 2 site. Additional data in and adjacent to the source area should be collected to further characterize groundwater at the TASS 2 site.

The South Larsen Property owners remediated the groundwater contamination present on the South Larsen site and the small area of impacted groundwater that migrated onto the West Property. ECSI No. 3337, including the small area of impacted groundwater that migrated onto the West Property, was granted a No Further Action (NFA) designation from DEQ after the completion of remedial activities (Appendix C). DEQ determined that the groundwater exposure pathway evaluation was complete and approved the abandonment of the groundwater wells on the West Property that were installed to investigate the plume from the South Larsen site. A detailed comparison of previous soil and groundwater sample analytical results to applicable cleanup levels is presented in Haley & Aldrich's draft Risk Assessment for the TASS 2 site (Haley & Aldrich, 2024).

The solvents in groundwater that migrated onto the southern-most portion of the West Property from the South Larsen site are a listed hazardous waste. Despite the low concentrations of solvents in soil and groundwater, because the solvents are a listed hazardous waste, soil and groundwater at the subject property must either be managed as a hazardous waste or managed as non-hazardous waste under a No Longer Contained-In Determination (NLCID) from DEQ. DEQ issued an NLCID for investigation-derived waste (IDW) generated during well abandonment and soil generated during subsurface investigations at the West Property in December 2023 (Appendix C), allowing IDW generated during well abandonment and soil generated during subsurface investigations at the West Property to be disposed of as non-hazardous waste.

Foundry waste from the Columbia Steel facility located adjacent to the west of the West Property was previously stored on the western-most portion of the West Property, outside the limits of the TASS 2 site. The foundry waste from Columbia Steel included heavy metals, with elevated concentrations of cobalt and manganese. The majority of this foundry waste has been removed from the West Property. Previous sampling of the foundry waste indicated that the material is not a characteristic hazardous waste.

5.2 GEOLOGY AND HYDROGEOLOGY

The TASS 2 site is approximately 43 feet above mean sea level (msl) and is generally flat, with a slight downwards slope north toward the Columbia Slough located approximately 160 feet north of the TASS 2 site. Stormwater at the TASS 2 site appears to either infiltrate into the ground surface or surface flow to the south, east, or north.

Near-surface soils mapped on the TASS 2 site primarily consist of Sauvie-Rafton-Urban land complex on the eastern portion of the TASS 2 site and Sauvie silt loam on the western portion of the TASS 2 site (NRCS, 2023). Subsurface conditions encountered at the TASS 2 site during previous investigations consisted of clayey to silty fill soils with varying amounts of debris (concrete, wood, plastic, brick, piping, and rebar). Abundant large concrete and asphalt debris (up to 3 feet in diameter) was encountered in a majority of the test pits excavated at the TASS 2 site by Kleinfelder, Inc. in May 2000 (). This debris was encountered generally between 6 to 14 feet bgs. The fill soils appeared to extend to a depth of at least 21 feet bgs in some areas of the TASS 2 site.

Static groundwater measurements from former on-site groundwater monitoring wells MW-1, MW-3, and MW-4 generally ranged from approximately 18 feet bgs to 21 feet bgs. Apparent perched groundwater was encountered at a depth of 10.7 feet bgs in monitoring well MW-3, formerly located near the center of the TASS 2 site. The depth to groundwater in monitoring wells MW-2, formerly located off site near the northeast portion of the TASS 2 site and the closest monitoring well to the future locations of the septic tanks, ranged between 20 and 21 feet bgs. Based on the maximum depth of planned excavationsand the depth to static groundwater beneath the TASS 2 site, groundwater is not anticipated to be encountered during ground disturbance activities and is therefore not discussed in this CMMP.

Regional groundwater is expected to flow to the north toward the Columbia Slough and follow the direction of flow to the west. Groundwater is not anticipated to be encountered during ground disturbance activities; however, a description of protocols that will be followed if groundwater is encountered, is presented in Section 7.

5.3 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Numerous previous environmental investigations have been conducted on the West Property; however, this CMMP discusses only the activities and results of investigations conducted within the boundary and perimeter of the planned development of the TASS 2 site. Previous environmental investigations conducted at the TASS 2 site consist of a Phase II Environmental Site Assessment (ESA) conducted by PNG Environmental, Inc. (PNG) in November 1999, a Phase II ESA conducted by Kleinfelder, Inc. in May 2000, and soil sampling activities conducted by BES in October and November 2023.

For the purpose of this CMMP, soil sample analytical results were compared to DEQ Clean Fill Screening Levels (Clean Fill SLs; DEQ, 2019) and DEQ Ecological RBCs for Freshwater Sediment (DEQ, 2020). Soil sample analytical results were also compared to the following DEQ RBCs (DEQ, 2023):

- *Soil Ingestion, Dermal Contact, and Inhalation* for residential, occupational, construction worker, and excavation worker receptors; and

Groundwater sample analytical results were compared to the following DEQ RBCs (DEQ, 2023):

- *Groundwater in Excavation* for construction and excavation worker receptors; and

Previous soil sample analytical results, including a comparison to the above-described regulatory criteria, are presented in BES tables 1 through 6, included in Appendix D. The November 1999 PNG report and the July 2000 Kleinfelder, Inc. report, which include previous on-site groundwater analytical data, are included in Appendix E. The results of the previous investigations are summarized in the following sections.

5.3.1 Phase II ESA - PNG Environmental, Inc. - November 1999

PNG conducted a Phase II ESA of the West Property in November 1999. The Phase II ESA included analyzing a soil sample collected from one test pit (TP-3) advanced adjacent to the west boundary of the TASS 2 site, installing three on-site groundwater monitoring wells (MW-1, MW-3, and MW-4), and collecting groundwater samples from the monitoring wells during two sampling events. It appears that soil samples were either not collected from the monitoring well borings or were not analyzed. The locations of the 1999 explorations on the site are shown on the site plans included in Appendix A.

5.3.1.1 Soil Analytical Results

Test Pit TP-3 encountered fill material to a total depth excavated of 13 feet bgs. The fill material consisted of construction debris, primarily concrete rubble, with a dark brown silt/sand matrix. The fill material emitted a petroleum-like odor and displayed staining indicative of petroleum contamination. Groundwater was not encountered in the excavation. Soil sample TP-3-13 was collected from the base of the excavation at a depth of 13 feet bgs and analyzed for diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx, gasoline-range hydrocarbons by Northwest Method NWTPH-Gx, VOCs by United States Environmental Protection Agency (EPA) Method 8240, and semi-volatile organic compounds (SVOCs) by EPA Method 8270B.

Diesel-range hydrocarbons were not detected in soil sample TP-3-13. Gasoline- and oil-range hydrocarbons were detected in soil sample TP-3-13 at concentrations of 4.77 and 1,000 milligrams per kilogram (mg/kg), respectively. The detected concentrations of gasoline- and oil-range hydrocarbons

were less than DEQ Clean Fill SLs and applicable DEQ RBCs. DEQ has not established freshwater sediment ecological RBCs for gasoline- or oil-range hydrocarbons. Benzene was detected in soil sample TP-3-13 at a concentration of 956 micrograms per kilogram (µg/kg), greater than the corresponding DEQ Clean Fill SL but less than applicable DEQ RBCs. DEQ has not established freshwater sediment ecological RBCs for benzene. Additional VOCs or SVOCs were not detected in soil sample TP-3-13.

Soil sample TP-3-13 analytical results, including a comparison to the above-described regulatory criteria, are presented in BES tables 1 through 3, included in Appendix D.

5.3.1.2 Groundwater Analytical Results

Groundwater samples were collected from former on-site monitoring wells MW-1, MW-3, and MW-4 in May and June 1999 and analyzed for gasoline-range hydrocarbons by Northwest Method NWTPH-Gx, diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx, SVOCs by EPA Method 625, and VOCs by EPA Method 624. Contaminants were not detected at concentrations greater than applicable DEQ RBCs in the groundwater samples analyzed.

Groundwater sample analytical results are presented in the November 1999 PNG report, included in Appendix E.

5.3.2 Phase II ESA - Kleinfelder, Inc. - May 2000

Kleinfelder, Inc. completed a Phase II ESA at the West Property in July 2000. The July 2000 Phase II ESA included analyzing 11 soil samples collected from two test pits advanced on or adjacent to the TASS 2 site (TP-1 and TP-2) and analyzing groundwater samples collected from on-site monitoring wells MW-1, MW-3, and MW-4. This Phase II ESA used the same nomenclature for test pit labeling as the previous Phase II ESA performed by PNG in 1999; however, the test pits of the same identification were not in the same location for both investigations. The locations of the July 2000 explorations on the TASS 2 site are shown on the site plans included in Appendix A.

5.3.2.1 Soil Analytical Results

Subsurface conditions encountered in the test pits generally consisted of clayey to silty fill soils with varying amounts of debris (concrete, wood, plastic, brick, piping, and rebar). Abundant large concrete and asphalt debris (up to 3 feet in diameter) was encountered in a majority of the test pits excavated. This debris was encountered generally from 6 to 14 feet bgs. Fill soils stained black or gray were observed in test pit TP-1. Field screening did not detect the presence of volatile organic vapors in test pits TP-1 or TP-2.

Soil samples were analyzed for VOCs by EPA Method 8260, PAHs by EPA Method 8270D, and total Resource Conservation and Recovery Act (RCRA) 8 metals by EPA 6000/7000 series methods. Naphthalene and/or 1,2,4-trimethylbenzene were detected in soil sample TP-2-19 at a concentration greater than DEQ Clean Fill SLs. VOCs were not detected at concentrations greater than applicable DEQ RBCs. Except for naphthalene, DEQ has not established freshwater sediment ecological RBCs for VOCs. The detected concentration of naphthalene in soil sample TP-2-19 of 408 µg/kg was greater than the corresponding DEQ freshwater sediment ecological RBC of 176 µg/kg.

PAHs were not detected at concentrations greater than applicable DEQ RBCs or DEQ Clean Fill SLs. Fluoranthene and pyrene were detected in soil sample TP-2-5 at a concentration greater than the corresponding DEQ freshwater sediment ecological RBCs.

RCRA 8 metals were not detected at concentrations greater than applicable DEQ RBCs. Lead and/or mercury were detected at concentrations greater than DEQ Clean Fill SLs and DEQ freshwater sediment ecological RBCs in soil samples TP-1-19 and TP-2-19.

Soil sample analytical results from the July 2000 Phase II ESA, including a comparison to the above-described regulatory criteria, are presented in BES tables 1 through 4, included in Appendix D.

5.3.2.2 Groundwater Analytical Results

Groundwater samples were collected from former on-site monitoring wells MW-1, MW-3, and MW-4 and analyzed for SVOCs by EPA Method 8270, VOCs by EPA Method 8260B, and total Resource Conservation and Recovery Act (RCRA) 8 metals. Contaminants were not detected at concentrations greater than applicable DEQ RBCs in the groundwater samples analyzed.

Groundwater sample analytical results are presented in the July 2000 Kleinfelder report, included in Appendix E.

5.3.3 Test Pit Investigation - City of Portland BES - October 2023

The BES analyzed 13 composite soil samples collected from 12 test pits advanced on or adjacent to the northern portion of the TASS 2 site in October 2023 (test pits T-Pit-1 through T-Pit-12). The composite soil samples included seven composite soil samples collected between 0 and 1.5 feet bgs and six composite soil samples collected between 0 and 5 feet bgs. The composite soil samples were analyzed for qualitative hydrocarbon identification by Method NWTPH-HCID; gasoline-range hydrocarbons by Northwest Method NWTPH-Gx; diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx; PAHs by EPA Method 8270-SIM; total arsenic, cadmium, chromium, copper, lead, mercury, and zinc by EPA Method 6020; PCBs by EPA Method 8082, and/or organochlorine pesticides by EPA Method 8081B.

5.3.3.1 Soil Analytical Results

Gasoline- and diesel-range hydrocarbons were either not detected or were detected at concentrations less than DEQ Clean Fill SLs and applicable DEQ RBCs in the composite soil samples analyzed. Oil-range hydrocarbons were either not detected or were detected at concentrations less than applicable DEQ RBCs in the composite soil samples analyzed. DEQ has not established Clean Fill SLs for oil-range hydrocarbons and has not established freshwater sediment ecological RBCs for petroleum hydrocarbons.

Benzo(a)pyrene, dibenz(a,h)anthracene, and/or indeno(1,2,3-cd)pyrene were detected at concentrations greater than DEQ Clean Fill SLs in soil samples T-Pit-2 0-5', T-Pit-3 0-18", T-Pit-5 0-18", T-Pit-6 0-18", T-Pit-6 0-5', T-Pit-9 0-5', and T-Pit-11 0-5'. The detected concentrations of benzo(a)pyrene, dibenz(a,h,)anthracene, and/or indeno(1,2,3-cd)pyrene in soil samples T-Pit-2 0-5', T-Pit-3 0-18", T-Pit-5 0-18", T-Pit-6 0-18", T-Pit-6 0-5', and/or T-Pit-9 0-5' were greater than the corresponding DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation for residential receptors. With these exceptions, PAHs were not detected at concentrations greater than applicable DEQ RBCs. One or more PAHs were

detected at concentrations greater than DEQ freshwater sediment ecological RBCs in seven of the 13 composite soil samples analyzed.

Arsenic, cadmium, chromium, copper, lead, mercury, and/or zinc were detected at concentrations greater than DEQ Clean Fill SLs in 11 of the 13 composite soil samples analyzed (i.e., except for soil samples T-Pit-8 0-18" and T-Pit-12 0-18"). Except for arsenic in soil sample T-Pit-3 0-18", metals were not detected at concentrations greater than applicable DEQ RBCs in the 13 composite soil samples analyzed. One or more metals were detected at concentrations greater than DEQ freshwater sediment ecological RBCs in nine of the 13 composite soil samples analyzed (i.e., except for soil samples T-Pit-6 0-18", T-Pit-8 0-18", T-Pit-9 0-5', and T-Pit-12 0-18").

One of the 13 composite soil samples (composite soil sample T-Pit-6 0-5') was analyzed for PCBs. PCBs were not detected. One of the 13 composite soil samples (composite soil sample T-Pit-7 0-5') was analyzed for organochlorine pesticides. Three organochlorine pesticides, including 4-4'-DDD, 4-4'-DDE, and 4-4'-DDT, were detected at concentrations greater than DEQ Clean Fill SLs and DEQ freshwater sediment ecological RBCs. Organochlorine pesticides were not detected at concentrations greater than applicable DEQ RBCs.

5.3.4 Direct-Push Boring Investigation - City of Portland BES - November 2023

The BES analyzed 27 soil samples collected from 12 direct-push borings (WP-1 through WP-7 and WP-9 through WP-13) advanced on or adjacent to the TASS 2 site in October 2023. The soil samples included one discrete soil sample collected between 0 and 1 foot bgs, 12 composite soil samples collected between 0 and 5 feet bgs, 12 composite soil samples collected between 5 and 10 feet bgs, and two composite soil samples collected between 10 and 15 feet bgs. The soil samples were analyzed for qualitative hydrocarbon identification by Method NWTPH-HCID; gasoline-range hydrocarbons by Northwest Method NWTPH-Gx; diesel- and oil-range hydrocarbons by Northwest Method NWTPH-Dx; VOCs by EPA Method 8260, PAHs by EPA Method 8270-SIM; total arsenic, cadmium, chromium, copper, lead, mercury, and zinc by EPA Method 6020; and/or PCBs by EPA Method 8082.

5.3.4.1 Soil Analytical Results

Gasoline- and diesel-range hydrocarbons were either not detected or were detected at concentrations less than DEQ Clean Fill SLs and applicable DEQ RBCs in the composite soil samples analyzed. Oil-range hydrocarbons were either not detected or were detected at concentrations less than applicable DEQ RBCs in the composite soil samples analyzed. DEQ has not established Clean Fill SLs for oil-range hydrocarbons and has not established freshwater sediment ecological RBCs for petroleum hydrocarbons.

One of the 27 soil samples (WP-11-0-1) was analyzed for VOCs. VOCs were not detected at concentrations greater than DEQ Clean Fill SLs, DEQ RBCs, or DEQ freshwater sediment ecological RBCs.

One or more PAHs were detected in each of the 27 soil samples analyzed. PAHs were detected at concentrations greater than DEQ Clean Fill SLs in 11 of the soil samples analyzed, including five soil samples collected between 0 and 5 feet bgs, five soil samples collected between 5 and 10 feet bgs, and one soil sample collected between 10 and 15 feet bgs. One or more PAHs were detected at concentrations greater than DEQ RBCs for soil ingestion, dermal contact, and inhalation for residential and/or occupational receptors in three soil samples (WP-9 0-5, WP-10 0-5, WP-12 0-5, and WP-13 0-5)

collected between 0 and 5 feet bgs. For soil below 3 feet bgs, the soil ingestion, dermal contact, and inhalation exposure pathway is considered an incomplete exposure pathway for residential and occupational receptors. PAHs were not detected at concentrations greater than applicable DEQ RBCs for construction or excavation workers.

One or more PAHs were detected at concentrations greater than DEQ freshwater sediment criteria in 22 of the 27 soil samples analyzed (all except for WP-3 0-5, WP-6 0-5, WP-10 5-10, WP-11 5-10, and WP-12 5-10).

Arsenic, chromium, copper, and/or lead were detected at concentrations greater than DEQ Clean Fill SLs in 20 of the 27 composite soil samples analyzed. Except for arsenic in soil sample WP-2 0-5, metals were not detected at concentrations greater than applicable DEQ RBCs in the 27 soil samples analyzed. One or more metals were detected at concentrations greater than DEQ freshwater sediment ecological RBCs in 12 of the 27 soil samples analyzed.

Two of the 27 soil samples (WP-3 0-5 and WP-10 5-10) were analyzed for PCBs. Except for Aroclor 1254 in soil sample WP-3 0-5, PCBs were not detected. The detected concentration of Aroclor 1254 and/or concentration of total PCBs in soil sample WP-3 0-5 of 19.3 µg/kg was less than the DEQ Clean Fill SL and applicable DEQ RBC, but greater than the DEQ freshwater sediment ecological RBC.

5.3.5 Previous Soil and Groundwater Sample Summary

Based on the previous soil analytical data, all soil excavated during TASS 2 site redevelopment should be considered restricted fill and will require disposal at a Subtitle-D landfill, either because of the presence of fill material or because of the presence of contaminants at concentrations exceeding DEQ Clean Fill SLs. The analytical results from previous soil and groundwater samples collected from the TASS 2 site indicate that:

- Contaminants were not detected in soil samples at concentrations greater than DEQ *Soil Ingestion, Dermal contact, and Inhalation* RBCs for construction worker and excavation worker receptors, and contaminants were not detected in groundwater samples at concentrations greater than DEQ *Groundwater in Excavation* for construction and excavation worker receptors; therefore, the low concentrations of contaminants in soil and groundwater do not appear to present a risk to future construction and excavation workers.
- Except for PAHs and arsenic, contaminants were not detected in soil samples at concentrations greater than DEQ *Soil Ingestion, Dermal contact, and Inhalation* RBCs for residential receptors.
- Based on the measured depths to groundwater beneath the TASS 2 site, groundwater is not expected to be encountered during site redevelopment. In the unlikely event that groundwater is encountered during excavation, work will stop until this CMMP is revised to include appropriate guidance on appropriate permitting and treatment requirements for dewatering and construction water disposal.
- Contaminants were detected in some soil samples at concentrations greater than DEQ ecological RBCs for freshwater sediment. Appropriate efforts will be made to restrict stormwater flow to catch basins and surface water bodies during construction.

A detailed comparison of previous soil and groundwater sample analytical results to applicable cleanup levels is presented in Haley & Aldrich's draft Risk Assessment for the TASS 2 site (Haley & Aldrich, 2024).

5.3.6 Soil Vapor Investigation – Haley & Aldrich - November 2023

Haley & Aldrich conducted a soil vapor investigation of the TASS 2 site in April 2024 that included collecting nine soil vapor samples (SV-1 through SV-6 and SV-8 through SV-9) and analyzing the soil vapor samples for VOCs by EPA Method TO-15. The soil vapor sample chemical analytical results were compared to DEQ-developed, site-specific volatilization to outdoor air RBCs. One or more VOCs were detected in each of the nine soil vapor samples analyzed. The detected concentrations of these VOCs were generally between three and six orders of magnitude less than the DEQ-developed, site-specific RBCs, indicating that a volatilization risk is not present at the TASS 2 site. Soil vapor sample analytical results are presented in the draft June 2024 Haley & Aldrich report, included in Appendix E.

During monitoring of the soil vapor probes, methane concentrations ranging from 4 to 48 percent were measured in soil vapor probes SV-1 through SV-6, SV-8, and SV-9. The presence of subsurface methane gas may pose a risk to human health with respect to fire hazard and asphyxiation during earthwork activities. Therefore, a methane in soil health and safety plan (HASP) was developed for use during site earthwork, discuss further below in Section 6.

6. Worker Safety

Contamination has not been detected at the TASS 2 site at concentrations greater than DEQ direct-contact RBCs for construction or excavation workers. However, higher concentrations of contaminants may be present in areas not explored. Each entity involved in earthwork-related activities is responsible for the safety of their workers. Prior to beginning construction activities, each entity shall prepare a site-specific HASP in accordance with Oregon Occupational Safety and Health Administration (OSHA) requirements to cover safety issues related to site environmental and physical hazards and to describe any training requirements, monitoring, and certifications. The HASP shall include the potential exposure to contaminated soil. Because methane was detected in the subsurface at concentrations that may pose a risk to human health with respect to fire hazard and asphyxiation during earthwork activities, a methane in soil HASP was developed by PBS for use during site earthwork. The methane in soil HASP is included in Appendix F.

As part of the HASP preparation, each involved entity shall assess existing data and the location of the planned work to identify potentially contaminated media as it relates to worker safety. Occupational health guidelines for chemical hazards (i.e., OSHA and the National Institute for Occupational Safety and Health [NIOSH]) can be used to evaluate site conditions. The evaluation should consider exposure limits (i.e., time-weighted average, short term exposure limit, and/or permissible exposure limit), exposure symptoms, and personal protective equipment. Haley & Aldrich environmental personnel who may be on site during future earthwork must have received 40-hour Hazardous Waste Operation and Emergency Response (29 Code of Federal Regulations [CFR] 1910.120) training. Additionally, the City of Portland or the Contractor must have a 40-hour Hazardous Waste Operation and Emergency Response (29 CFR 1910.120) trained representative on site during earthwork activities who is able to identify contaminated media to oversee or observe earthwork activities and direct staff in the correct handling of contaminated media during earthwork activities. Each party involved should assess the need for this training for additional staff or for supervisory staff based on the activities to be performed and current information for the TASS 2 site. Specific recommendations should be provided in the forthcoming HASP to protect worker safety.

All entities shall be responsible for notifying and updating their employees of potential TASS 2 site hazards that may be encountered during the project. Changes may need to be made should additional contamination be discovered. DEQ should be notified if additional unanticipated contamination is discovered during TASS 2 site work. Prior to TASS 2 site work, this CMMP and the HASP must also be provided to employees who will be working on the TASS 2 site, and a list of contacts should be prepared and distributed to all entities involved in work at the TASS 2 site for implementation of this CMMP. This will help ensure timely notification of changing TASS 2 site conditions to maintain the appropriate level of worker safety. All TASS 2 site workers will be responsible for compliance with their HASP, including use of appropriate personal protective equipment.

7. Contaminated Media Identification and Management

Previous environmental investigations at the TASS 2 site identified TPH, VOCs, PAHs, pesticides, and arsenic, cadmium, chromium, copper, mercury, and lead in soil at the TASS 2 site. Prior to any earthwork-related activities, site workers and their employers should review this CMMP. This section presents regulatory requirements, methods to identify and manage contaminated soil, as well as an analytical program to identify uncontaminated media.

Groundwater is not anticipated to be encountered and therefore is not discussed in the CMMP. If groundwater is encountered, work still stop and DEQ will be notified. This CMMP will be modified to address potential groundwater contamination prior to excavation work resuming.

7.1 REGULATORY REQUIREMENTS, SCREENING LEVELS, AND CRITERIA

Certain regulatory requirements, screening levels, and criteria are applicable for managing soil from the TASS 2 site. Future users of this document should review regulatory requirements for updates and revisions. The regulatory factors described below are applicable as of February 2024. While these requirements are primarily applicable during excavation or grading, they also will apply for contaminated media exposed or generated during future TASS 2 site maintenance. These items are described below as they pertain to this TASS 2 site. Additional criteria may be used by disposal facilities to determine whether to accept environmental media from the TASS 2 site for treatment and/or disposal. A disposal permit will be obtained by the City Coordinated Site Assessment (CSA) program under the forthcoming amended NLCID.

7.1.1 Clean Fill SLs

The DEQ has developed guidance and Clean Fill SLs for soil (DEQ, 2019). If contaminant concentrations in excavated soil are below Clean Fill SLs and "…the material type is limited to soil, rock, concrete, brick, building block, tile or asphalt paving and does not consist of putrescible wastes, construction and demolition wastes and industrial solid wastes," the soil can be used as unrestricted clean fill for placement on and off the site, with the exception that soil cannot be placed in a location where surface water would be affected. Clean Fill SLs are based on RBCs for residential use, ecological SLs for terrestrial receptors, and background levels. Based on the nature of the TASS 2 site and the previous soil sample analytical results, soil generated during TASS 2 site redevelopment cannot be managed as clean fill.

7.1.2 Solid Waste Regulations

Any soil not meeting Clean Fill SLs and that is not considered a hazardous waste would fall under DEQ's solid waste regulations (Oregon Administrative Rules [OAR] 340-093). At the TASS 2 site, soil generated during earthwork will be disposed of at a Subtitle D landfill.

7.1.3 Risk-Based Concentrations

Based on toxicity data and standard exposure factors, the DEQ has calculated RBCs to estimate contaminant concentrations in environmental media that are considered protective of ecological receptors and humans, including sensitive groups, over a lifetime. RBCs are used to assess if contaminant concentrations might pose an unacceptable health risk.

7.1.4 National Pollution Discharge Elimination System (NPDES)

NPDES permits set regulatory benchmarks for surface water discharge to a storm sewer system, including runoff from the TASS 2 site during earthwork activities. Earthwork activities will be conducted in accordance with a forthcoming NPDES 1200-CA permit for the TASS 2 development. DEQ's Cleanup Program will be provided a copy of the approved 1200-CA permit and will be involved in review of the 1200-CA permit application prior to approval.

7.2 IDENTIFICATION OF POTENTIALLY CONTAMINATED SOIL

Each party involved in any earthwork-related construction activities shall be solely responsible for identification of contaminated soil. Each contractor shall monitor soil for evidence of contamination. If TASS 2 site personnel observe media exhibiting characteristics of contaminant impacts, the media in question shall be identified as potentially impacted and handled and characterized as described in Sections 7.3 and 7.4. The following field observations can be used to screen potentially impacted media:

- Staining of soil (dark gray or black in color);
- Chemical or petroleum odors;
- Measurements made with a photoionization detector; and/or
- Sheen on moist or saturated soil.

Note that the absence of these characteristics does not necessarily imply that the media does not contain contaminants. Contaminant concentrations at the site are likely only detectable with the use of environmental testing equipment or analytical testing. As such, chemical analysis of excavated soil is recommended. In addition, all media generated during construction should be assumed to be contaminated and handled accordingly.

The contractor should expect to encounter soil with generally low concentrations of TPH, VOCs, PAHs, pesticides, and metals, and debris including concrete, wood, plastic, brick, piping, and rebar. If unexpected hazardous materials are encountered, the contractors shall:

- Stop all work in that area;
- Notify the BES immediately;
- Ensure no contaminated material is hauled from the TASS 2 site;

- Remove the work force from the immediate area of the contamination;
- Involve an environmental consultant; and
- Secure the area from access by the public to prevent unauthorized entry prior to and during construction activities.

7.3 HANDLING OF CONTAMINATED MEDIA

Except for the septic treatment tanks, which will include excavations to a maximum depth of 9 feet bgs, only shallow soil will be excavated during TASS 2 site redevelopment. Groundwater is not expected to be encountered during TASS 2 site redevelopment. Soil generated during the planned redevelopment of the TASS 2 site cannot be managed as clean fill. Because of the presence of listed hazardous wastes from an off-site source in deep soil and groundwater at the site, soil generated during the planned redevelopment must be disposed of at an RCRA Subtitle D landfill as non-hazardous waste under a NLCID from DEQ. The previous NLCID for the West Property, including the TASS 2 site, only applies to specific drums and IDW. The existing NLCID will be amended to include soil generated during planned TASS 2 site redevelopment. The City of Portland should use the forthcoming amended NLCID to support a disposal permit for soil generated during TASS 2 site redevelopment. The forthcoming NLCID will be added to Appendix C upon issuance. Care should be taken to minimize worker exposure to contaminated soil in accordance with the forthcoming site-specific HASP.

7.4 ANALYTICAL PROTOCOLS FOR MEDIA CHARACTERIZATION

Specific media characterization requirements should be negotiated with the receiving facility. The receiving facility may determine that recent analytical data collected by BES may be adequate to support a disposal permit.

If additional soil samples are collected, samples should undergo a minimal amount of disturbance during sample collection. Generally, all sample containers should be filled to the top, leaving no observable head space. Protocol may vary depending on the contaminant of concern, particularly VOCs, if collected. Samples should then be stored in a cooler at 4 degrees Celsius (°C) ± 2°C from collection to receipt by the analytical laboratory. Chain of custody documentation must be maintained. The laboratory must be certified by Oregon and/or National Environmental Laboratory Accreditation Program (ORELAP and NELAP, respectively). Soil samples should be analyzed for RCRA 8 metals by EPA Method 6010/6020 and/or 7471, gasoline-range hydrocarbons by Northwest Method NWTPH-Gx, diesel-range hydrocarbons by Northwest Method NWTPH-Dx, VOCs by EPA Method 5035/8260B, organochlorine pesticides by EPA Method 8081A, and PAHs by EPA Method 8270-SIM. The receiving facility may require additional analyses.

Method reporting limits for the above tests shall be consistent with industry standards and less than that required for disposal or regulatory screening criteria (e.g., Clean Fill guidelines of DEQ [2019]), as appropriate.

Waste characterization should adequately determine the nature and magnitude of contamination; consult with the waste disposal facility for current sampling and analysis requirements to ensure acceptance of the waste materials by the facility. These may include composite sampling or other methods to help reduce overall analytical costs. If additional soil samples are required by the receiving

facility, they may be collected *in situ* prior to earthwork activities or from stockpiles of excavated material.

7.5 OFF-SITE TRANSPORT AND DISPOSAL

The City is responsible for obtaining appropriate soil disposal permits from the permitted landfill facility(s) under the forthcoming amended NLCID prior to the contractor hauling the impacted soil or other materials off site. The City will likely need to provide a copy of the chemical analytical laboratory report to the selected disposal facility. Copies of the permit should accompany each load transported to the selected disposal facility.

Disposal facilities often have the following requirements prior to accepting soil at their facility:

- Contaminated soil will not be received without first completing a soil profile sheet, obtaining a permit (to be completed by the City), having an approval of credit application on file, and having pre-approval from the disposal facility.
- Trucks will be permitted to weigh in as negotiated with the facility.
- Material may be sampled during delivery by the disposal facility. Comparisons may be made between the submitted profile and on-site analysis. Any material's profile that does not compare to the delivered material may be rejected.
- Exported soil must not contain any free liquids or foreign material (i.e., rebar, fittings, cans, wood, etc.). Truckloads found with excessive foreign material may be reloaded and returned to the customer or screened, sorted, and disposed of by the disposal facility for an additional fee. Truckloads with free liquids may be rejected or charged an additional solidification fee.
- BES and DEQ shall be notified and approve of all off-site soil disposal locations.

7.6 STOCKPILE MANAGEMENT

Soil generated during excavation that cannot be immediately transported off site can be temporarily stockpiled on the TASS 2 site or in other areas on the West Property designated by BES. Excavated material that is placed in temporary stockpiles must be well maintained at all times. All stockpiled material must be placed on impermeable plastic sheeting (minimum 6-mil-thick) with a berm around the perimeter of the stockpile. The plastic sheeting and berm must be constructed to prevent the runoff of soil and contaminants to surrounding areas. The berm will be constructed with either hay bales or dimensional lumber. The bottom plastic sheeting should be lapped over the berm materials and the soil stockpile covered with plastic sheeting to prevent erosion or leaching of contaminants to underlying soil and to prevent exposure to precipitation and wind. Plastic sheeting that covers the soil stockpile should be secured using sandbags or equivalent.

Stockpiles must be clearly designated as to the nature of the stockpiled soil (e.g., contaminated soil, pending analysis, or awaiting transport), either with signage or stakes with different colored flagging. The locations and nature of each stockpile should be discussed during daily work meetings. There are currently no plans to stockpile soil outside of the West Property. Off-site stockpiling of soil will not be conducted unless DEQ approves an off-site soil stockpile location and provides a Solid Waste Letter of Authorization. Following removal, the stockpile areas should be restored to a pre-stockpile condition. Residual plastic or debris should not be left unattended at the TASS 2 site and must be properly disposed of following stockpile removal.

7.7 LOADING AND HAULING

Material intended for off-site disposal can be loaded directly into trucks for transport to the receiving facility once the appropriate permitting has been completed and field screening protocols implemented, as appropriate. All truck loading will occur on the West Property. The contractor must exercise care during loading of the impacted material to help minimize spillage of the material onto the ground surface. All trucks leaving the West Property will be free of loose soil on the exterior of the trucks and tires, will have loads sitting below the bed walls, and beds will be covered with tight fitting covers. Impacted soil loaded into trucks will be covered during transport to the disposal facility. The contractor must use care not to track soil onto roads and must implement additional BMPs if soil is observed tracked onto roads. Trucks should not be allowed to leave the West Property if liquids are draining from the load. Transport tracking tickets may be required, which document the haul to the approved disposal facility for each truck leaving the West Property.

7.8 WHEEL WASH

Standard site entry BMPs, including stabilized construction entrances/exits (e.g., rock pad) to the construction site and gravel filter berms, will be implemented at the TASS 2 site in accordance with Section 4.2 of the City of Portland's Erosion and Sediment Control Manual dated October 2022. If sediment is tracked off site during construction, additional BMPs shall be implemented, including washing wheels before vehicles leave the TASS 2 site. Wheel washing will be completed on the rock pad or in an approved wheel wash structure, as specified in Section 4.2 of the City of Portland's Erosion Control Manual dated March 2008. The wheels will be washed before crossing the construction exit to leave the TASS 2 site. Wheel wash water will be containerized by constructing a wheel wash station consisting of a paved or lined shallow depression to hold wheel wash water, or by installing a specialized system consisting of a large surface pad with direct drainage to a large sump. Water generated during wheel washing will be periodically disposed of to the City of Portland sanitary sewer system under a forthcoming batch discharge authorization.

7.9 EROSION AND DUST CONTROL

Exposed soil will become susceptible to erosion by wind and water; therefore, erosion control measures should be planned carefully and in place before excavation and stockpiling begin. Silt fences, fiber rolls or compost socks, and/or gravel haul roads will be used as required to reduce sediment transport during construction to acceptable levels. Measures to reduce erosion should be implemented in accordance with the State of Oregon 1200-CA Construction Stormwater Discharge General Permit. Erosion and dust control measures will be presented in an Erosion and Sedimentation Control Plan (ESCP) for on- and off-site portions of the TASS 2 site. The anticipated erosion and dust control measures to be outlined in the ESCP include the use of sediment fences, inlet protection, gravel construction entrances, and biofilter bags where necessary.

7.10 RIGHT-OF-WAY EXCAVATION

Right-of-way (ROW) excavation activities shall comply with the City of Portland's Hazardous Substances requirements (PCC 17.24.067). Contaminated soil encountered during excavation work within the ROW will be managed in accordance with this CMMP. The City of Portland's Hazardous Substances code requires that residual contaminated soil left in-place within the ROW after excavation activities be characterized and demarked using orange geotextile fabric or similar material.

7.11 IMPORTED FILL MATERIAL

All fill material imported to the TASS 2 site shall consist of either a manufactured rock product (e.g., 0.75-inch-minus crushed rock from a permitted rock quarry) or must be free of contaminants at concentrations exceeding DEQ's Clean Fill SLs. It is the contractor's responsibility to ensure all imported fill material meets these criteria and provide BES with the imported origin information and accompanying documentation demonstrating the material meets DEQ Clean Fill SLs, if not using a manufactured rock product. If a non-manufactured rock material is used, test results demonstrating that the material meets DEQ Clean Fill SLs must be reviewed and approved by DEQ prior to being brought onsite. In addition, if evidence of contamination is observed in imported fill material, the contractor should reject the imported backfill and identify an alternate source. Also, any material imported as structural backfill should be evaluated and approved by the geotechnical engineer before placement on the TASS 2 site.

7.12 CONTRACTOR REPORTING REQUIREMENTS

The contractor is responsible for keeping a detailed daily record of all soil excavation, stockpiling, export, and disposal activities. This includes the purpose, origin, destination, and volume of soil that is: (1) loaded and hauled to the approved off-site disposal sites; (2) reused on the TASS 2 site; or (3) transported to temporary soil stockpile locations on the West Property. The contractor is responsible for preparing a daily field report for distribution to BES representatives that identifies the number of truckloads and tonnage of soil transported off site and daily tonnage for each disposal location. All soil excavation, handling, and disposal activities should be documented in daily field reports by the contractor, and soil sampling and chemical analytical data shall be summarized in a final report upon the completion of construction that will be submitted to DEQ.

7.13 PERMITS AND APPROVALS

All involved parties are responsible for obtaining the appropriate permits for construction activities at the site. These may include but are not limited to general construction/erosion control permits and disposal permits. For disposal of soil and water, the landfill or treatment facility should be contacted regarding their acceptance and chemical analysis requirements prior to beginning work. The landfill or treatment facility may accept the data listed herein for disposal characterization; however, it is likely that more recent data will be required for profiling. Copies of all approved permits obtained to complete the work will be included in the Construction Completion report.

8. Communications

The key personnel and roles and responsibilities for communication during construction are summarized below:

City of Portland Project Contact
Ms. Taryn Meyer, Hydrogeologist
Bureau of Environmental Services
1120 SW 5th Avenue, Suite 613
Portland, Oregon 97204

503.823.8155
taryn.meyer@portlandoregon.gov

Ms. Meyer will have the role of primary City contact during implementation of the RA. Ms. Meyer has overall responsibility for project performance and meeting regulatory requirements.

General Contractor Project Manager
Mr. Luis Lopez
Fulcrum Construction
971.201.6843
luis.l@fulcrumpdx.com

Mr. Lopez will have the role of construction manager during completion of the TASS 2 project.

Haley & Aldrich Project Manager
Mr. Colby Hunt
6420 S. Macadam, Suite 100
Portland, Oregon 97239
971.327.9103
chunt@haleyaldrich.com

Mr. Hunt will have the role of Environmental Consultant during implementation of the RA. The Environmental Consultant in collaboration with the contractor has responsibility for implementation of the CMMP. The Environmental Consultant is responsible for oversight during installation of the protective cap, response if notified of suspected contamination beyond that described in Section 5.0 is encountered, sampling and analysis (if conducted) evaluation of disposal requirements and options for contaminated soil management, and response to other environmental issues that may develop.

Oregon Department of Environmental Quality (DEQ) Project Manager
Ms. Sarah Greenfield
Oregon Department of Environmental Quality
700 Multnomah Street, Suite 600
Portland, Oregon
503.229.5245
sarah.greenfield@deq.oregon.gov

Ms. Greenfield is responsible for environmental regulatory oversight during implementation of this CMMP.

9. Reporting

Following completion of earthwork activities, a Construction Completion Report will be prepared and submitted to DEQ for review and approval. The Construction Completion Report will include a description of methods and procedures used during cap construction, a summary of observations during earthwork activities, final copies of all approved permits, and a summary of media management and disposal.

10. Schedule

It is anticipated that ground disturbing activities will begin immediately upon receiving DEQ approval of this draft CMMP. Construction of the protective cap and any other remedial elements of the TASS 2 development will begin following DEQ review and approval of the draft Risk Assessment and the draft RAP. The Construction is anticipated to be completed within 60 days after the initiation of construction activities. DEQ will be notified at least 10 days before construction activities commence. The Construction Completion Report will be submitted to DEQ within 60 days of completion of construction.

11. Limitations

This CMMP is intended to provide procedures for identifying and managing potentially contaminated soil encountered during earthwork and ground-disturbing activities only on the portion of the West Property comprising the site and the storm sewer pipe excavation. Haley & Aldrich prepared this CMMP in accordance with generally accepted professional practices related to the nature of the work specified in the CMMP, in the same or similar localities, at the time this plan was prepared. Future users of this plan shall consider changes that may have occurred in environmental practices, regulations, and guidance, including risk-based and Clean Fill criteria since plan preparation. No other warranty, express or implied, is made.

References

1. DEQ, 2019. Clean Fill Determinations. February 21.

2. DEQ, 2020. Conducting Ecological Risk Assessments. September 14.

3. DEQ, 2023. Risk-Based Concentrations for Individual Chemicals. Revised August.

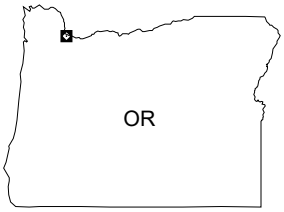
4. Kleinfelder, 2000. Limited Site Investigation and Groundwater Monitoring, Backfilled Retention Ponds, 10505 North Portland Road, Portland Oregon. July 6.

5. NRCS, 2023. Web Soil Survey, accessed November 2023 at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

6. PNG, 1999. Phase II Environmental Investigation, Larsen Property, 10505 North Portland Road, Portland, Oregon. November 12.

7. Haley & Aldrich, 2024. Draft Risk Assessment, Former North Larsen Property, 10505 North Portland Road, Portland, Oregon, dated 29 January.

FIGURE



MAP SOURCE: ESRI
SITE COORDINATES: 45°35'59"N, 122°43'22"W

HALEY ALDRICH

CONTAMINATED MEDIA MANAGEMENT PLAN
WEST PROPERTY - TASS 2 SITE
10505 N PORTLAND ROAD
PORTLAND, OREGON 97203

VICINITY MAP

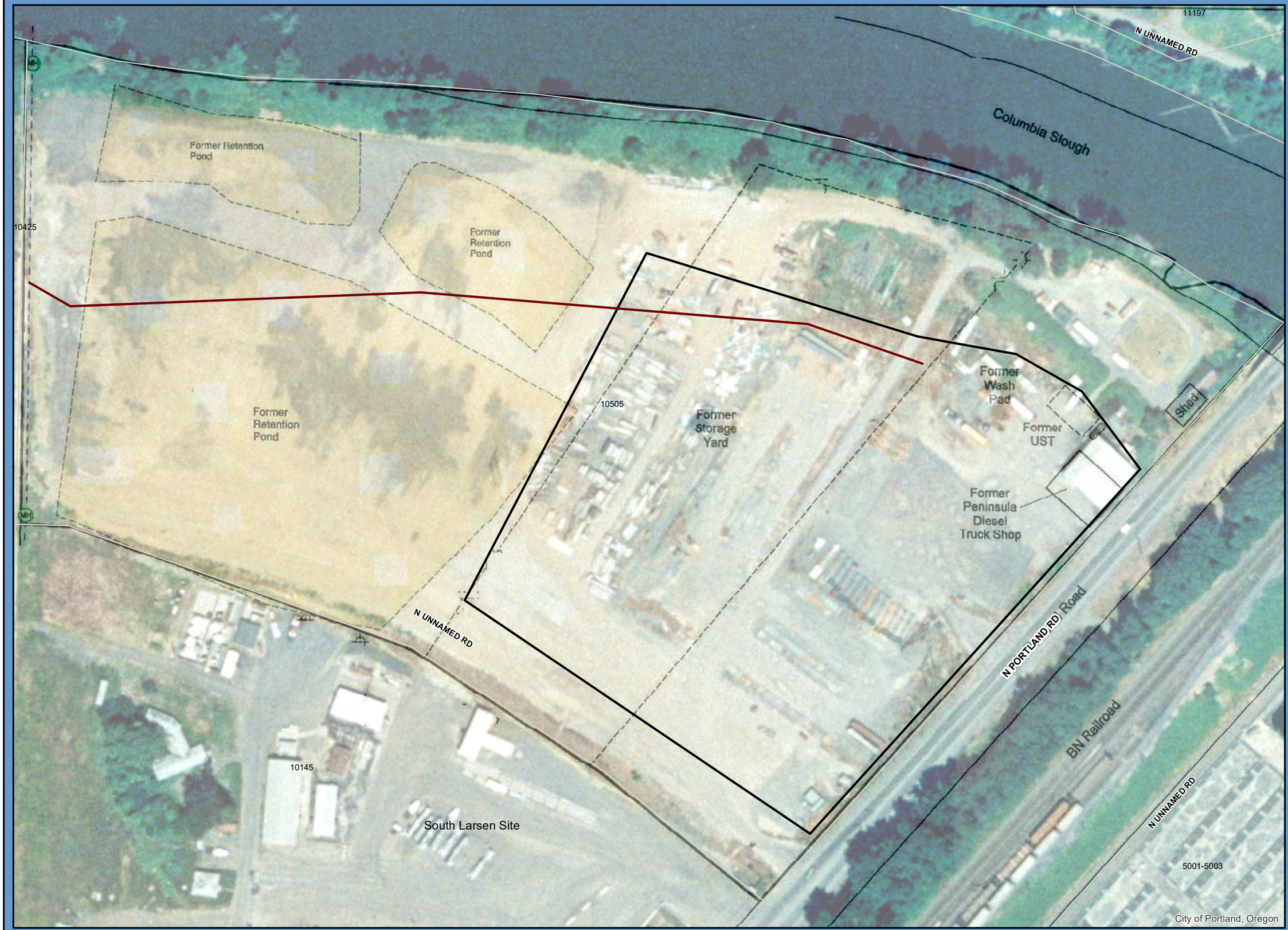
APPROXIMATE SCALE: 1 IN = 2000 FT
MAY 2024

FIGURE 1

GIS: \\haleyaldrich.com\share\CF\Projects\0209772\GIS\209772_COP_WEST_PARCEL.aprx - ayabu - 11/16/2023 11:32 AM

APPENDIX A

City of Portland Bureau of Environmental Services Figures



West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 1996

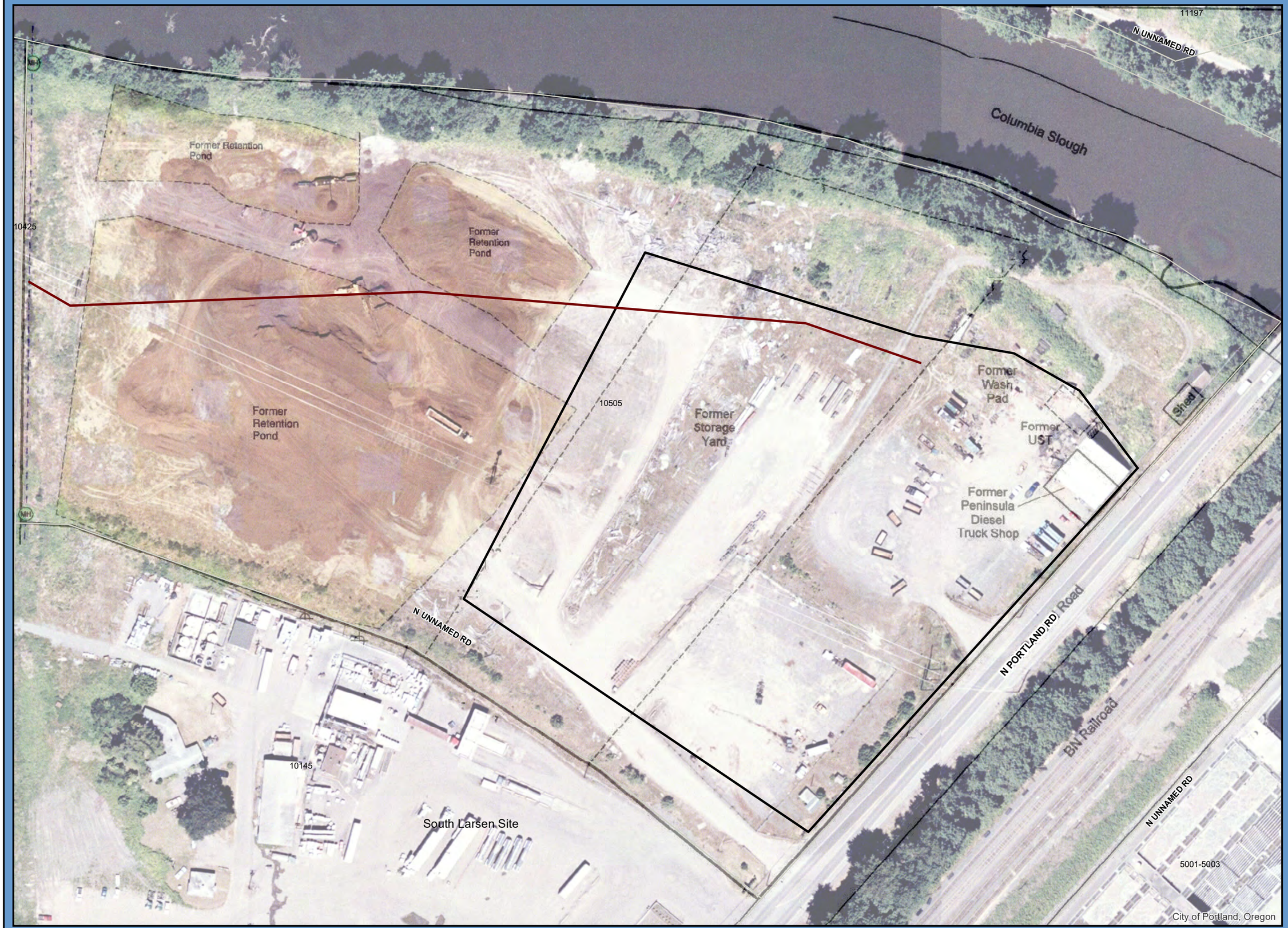
Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024



West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 2000

Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024

West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 2005

Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024

West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 2010

Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024

West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 2015

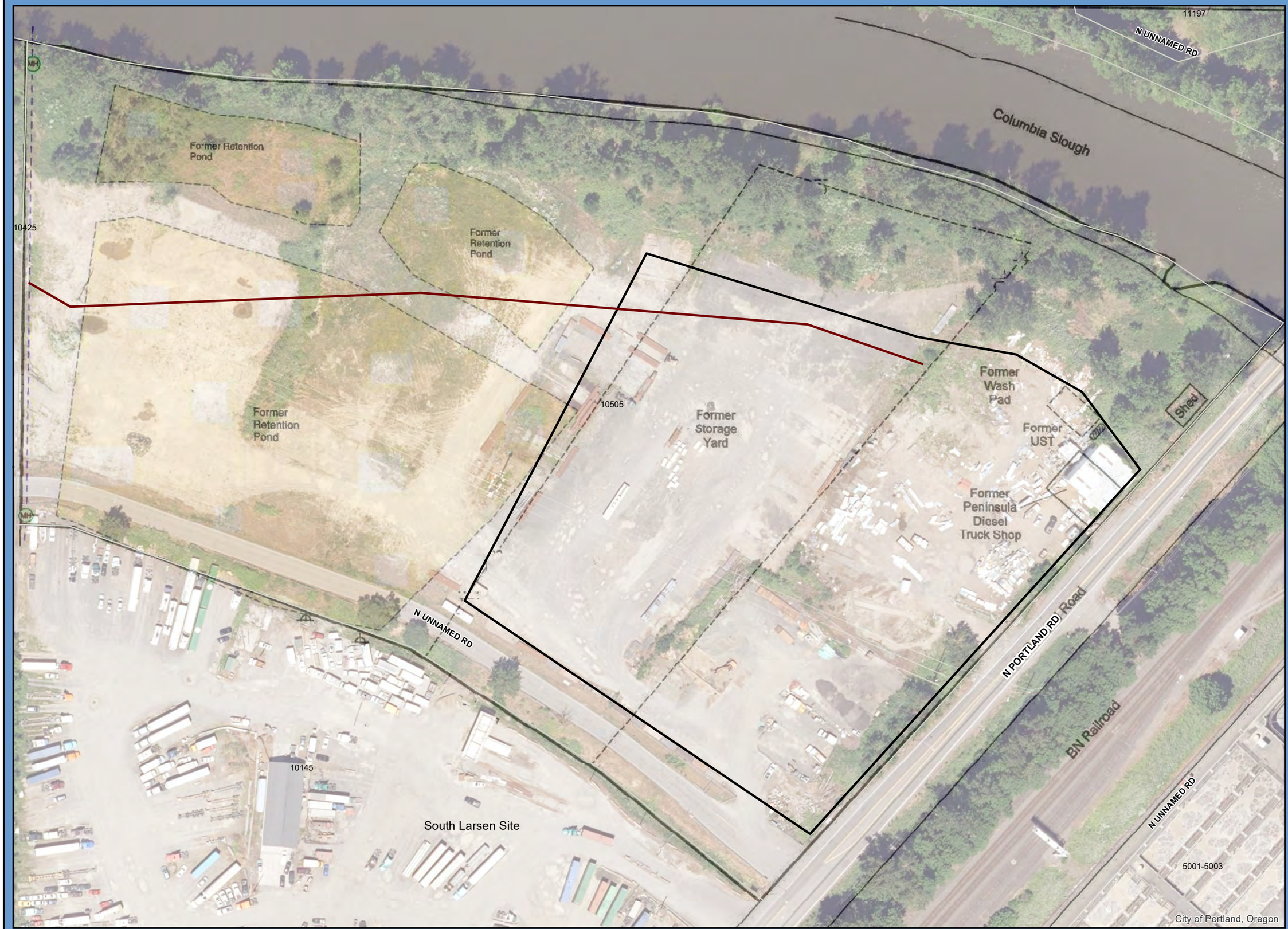
Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024



West Property
TASS 2 Site
10505 N Portland Rd

Aerial Photo 2021

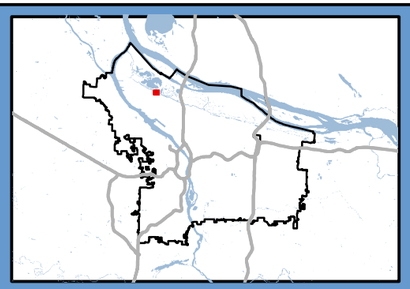
Map Symbols

- Pipe Line
- RV Shelter Boundary

0 35 70 140 Feet

N
W E
S

Map Created by: Jonah Y June 2024



West Property
TASS 2 Site

10505 N Portland Rd

Soil Sampling Locations

Map Symbols

- BES Sample Points
- PNG Sample Points
- Kleinfelder Sample Points
- BES Test Pit Sites
- Vegetated
- Project Area
- Pipe Line

0 37.5 75 150 Feet

N
W E
S

Map Created by: JonahY

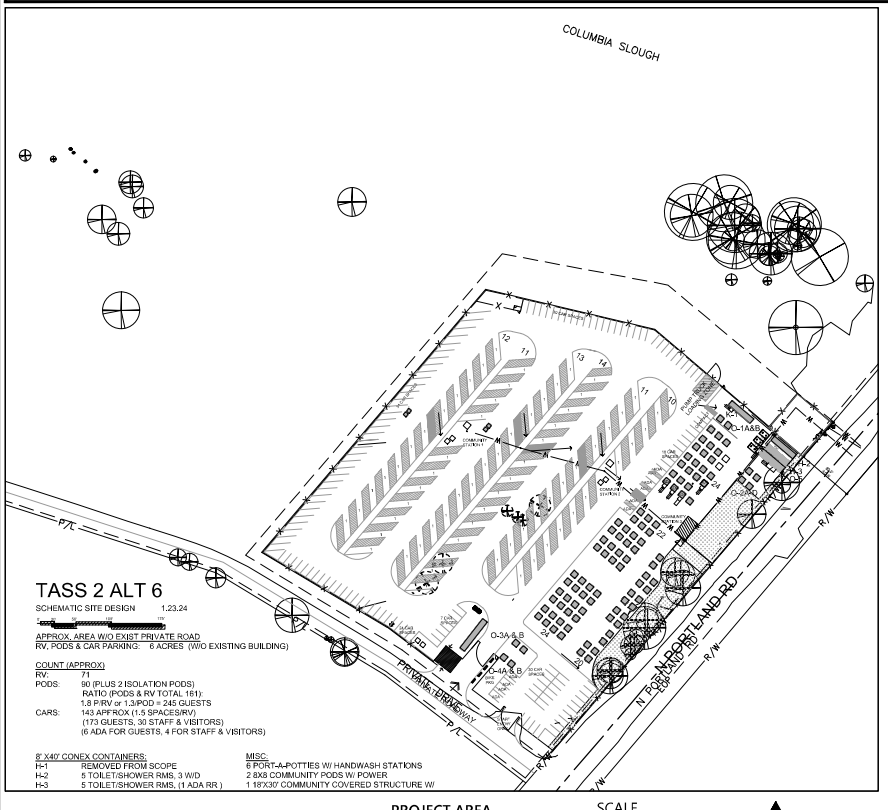
June 2024

Map Produced in ArcMap

APPENDIX B

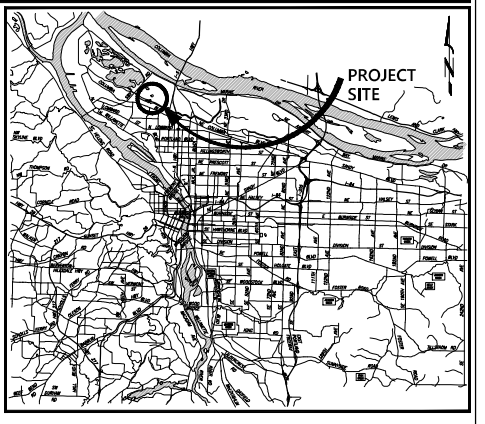
Preliminary Development Plans and Septic System Plans

TEMPORARY ALTERNATE SHELTER - SITE 2



SHEET INDEX:

SHEET NUMBER	SHEET TITLE	SHEET DESCRIPTION
01	G01	COVER SHEET
02	G02	LEGEND, ABBREVIATIONS, & CONSTRUCTION NOTES
03	C01	EXISTING CONDITIONS AND DEMOLITION
04	C02	SITE PLAN
05	C03	OVERALL GRADING PLAN
06	C04	GRADING PLAN - NORTH
07	C05	GRADING PLAN - SOUTH
08	C06	SWALE GRADING PLAN - 1
09	C07	CIVIL DETAILS - 1
10	C08	CIVIL DETAILS - 2
11	CE01	ESC PLAN
12	CE02	ESC DETAILS



PORTLAND, OREGON
VICINITY MAP
NOT TO SCALE

NOTICE TO EXCAVATORS:
ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS 503-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.
Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL GAS	
M-F 7am-6pm	503-226-4211 Ext.4313
AFTER HOURS	503-226-4211
PGE	503-464-7777
CENTURYLINK	1-800-573-1311
CITY BUREAU OF MAINTENANCE	503-823-1700
CITY WATER	503-823-4874
VERIZON	1-800-483-1000

DESIGN CRITERIA AND ASSUMPTIONS:

1. NO EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS WERE TAKEN DURING THE DESIGN OF THIS PROJECT.
2. WATER QUALITY TREATMENT AND DETENTION ARE NOT REQUIRED FOR THIS PROJECT PER THE CURRENT STORMWATER MANAGEMENT MANUAL.
3. NO ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY.
4. DESIGN IS BASED ON THE HYDRAULIC MODELING REPORT DATED <MONTH> <YEAR>.
5. ENVIRONMENTAL ZONES EXIST WITHIN THE PROJECT BOUNDARY. NO WORK ALLOWED EXCEPT WHAT IS AUTHORIZED.
6. STORMWATER FACILITIES SIZED BASED ON STORMWATER MANAGEMENT MANUAL REQUIREMENTS AND DESIGN EXCEPTIONS.
7. STORMWATER NARRATIVE: SUMMARIZE ANY OF THE DESIGN ASSUMPTIONS AND SERVICE LEVELS IN THIS SECTION. IF THERE IS A DESIGN REPORT, PLEASE REFERENCE IT HERE. FOR STORMWATER FACILITIES, DOCUMENT THE CATCHMENT AREA AND RUNOFF COEFFICIENTS AND/OR PEAK FLOW RATES (FOR MANUFACTURED TREATMENT) IF LESS THAN 5 FACILITIES OR CAPTURED IN ONE STATEMENT.

DESIGN EXCEPTIONS TO CITY STANDARDS OR OTHER REGULATORY REQUIREMENTS THAT WERE TAKEN DURING THE DESIGN OF THIS PROJECT:

WHERE PROPOSED 8-INCH OR 10-INCH DIAMETER SEWER MAINS ARE BEING CONSTRUCTED INSTEAD OF 12-INCH DIAMETER SEWER MAINS. FUTURE CONDITION DESIGN FLOWS ARE CONVEYED WITHOUT SURCHARGE AND A LARGER PIPE IS NOT NECESSARY.

NOT ALL TERMINAL CLEANOUTS USED ON 8-INCH DIAMETER PIPE MEET THE SEWER DESIGN MANUAL REQUIREMENTS OF 100 FEET OF PIPE OR LESS.

THIS PROJECT USES A FLAT TOP MAINTENANCE HOLE INSTEAD OF STANDARD MAINTENANCE HOLE WITH A CONE.

INSIDE DROP ASSEMBLIES LARGER THAN 12 INCHES (SHEETS CXX & CXX) DUE TO MAINTENANCE HOLE DEPTHS GREATHER THAN 20 FEET.

GENERAL NOTES:

1. EXISTING GRADES AND ELEVATIONS SHOWN IN PROFILE WERE PROVIDED BY THE CITY OF PORTLAND AND TAKEN ALONG THE CENTERLINE STATIONED ALIGNMENT OF SEWER MAIN. VERIFY ALL ELEVATIONS AND GRADES.
2. UTILITIES AND SERVICE LATERALS AS SHOWN IN THE CONTRACT DOCUMENTS ARE AT APPROXIMATE LOCATIONS. VERIFY ALL LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.
3. NOT ALL WATER OR GAS SERVICE LATERALS ARE SHOWN.
4. SEWER SERVICE LATERALS SHALL CONNECT TO A SEWER MAIN AND EXTEND TO THE CURB LINE UNLESS OTHERWISE SHOWN OR DIRECTED BY OWNER'S REPRESENTATIVE.
5. REINSTATE ALL ACTIVE SERVICE LATERAL CONNECTIONS UNLESS OTHERWISE SHOWN OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
6. SEWER LATERALS SHALL BE 6-INCH ASTM D3034 PVC, SDR-35 AT 2% SLOPE (MINIMUM) UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS OR APPROVED BY THE OWNER'S REPRESENTATIVE.
7. RECONNECT EXISTING INLET OR CATCH BASIN LEADS AS SHOWN IN THE CONTRACT DOCUMENTS. UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
8. SUPPORT UTILITIES, AS REQUIRED, TO PROTECT IN PLACE.
9. CONSTRUCT PER CURRENT CITY OF PORTLAND STANDARD DETAILS AND DRAWINGS, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS OR DIRECTED BY THE OWNER'S REPRESENTATIVE.
10. ALL INLET PIPING SHALL BE EITHER ASTM F714 DR 26 HDPE OR ASTM D3034 PVC SDR-35. FOR G-1 INLETS INSTALL 10-INCH DIAMETER PIPE AND FOR G-2 INLETS INSTALL 12-INCH DIAMETER PIPE.

CITY OF PORTLAND VERTICAL DATUM AND OCRS83.PORTLANDIF

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_G01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_G01.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

MINGUS MAPPS
COMMISSIONER

PAUL SUTO, P.E.
CHIEF ENGINEER

APPROVAL

ENVIRONMENTAL SERVICES CHIEF ENGINEER
REG. PROF. ENGR. NO. 82245

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
OREGON
JULY 12, 2005
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

COVER SHEET

UTM ZONE(S): 1924, 1925
JOB NO.: Exxxxx
SHEET NO.: G01
01 OF 12

LEGEND:

EXISTING	PROPOSED
ROAD SIGN	CLEANOUT
CLEANOUT	INLET
FIELD INLET	G2 INLET
MAINTENANCE HOLE	BEEHIVE
CULVERT INLET	FIELD INLET
CULVERT OUTLET	MAINTENANCE HOLE
BOLLARD	PERMANENT PLUG
POLE ANCHOR	TEMPORARY PLUG
POLE WITH STREET LIGHT	BOREHOLE
STREET LIGHT	BIO-BAG
BUSH	INLET PROTECTION
DECIDUOUS TREE	PROTECT TREE
CONIFEROUS TREE	REMOVE TREE
STUMP	CHAIN LINK FFENCE
FIRE HYDRANT	COMBINED SEWER MAIN
WATER METER	CONDUIT
WATER VALVE	CURB
EDGE OF GRAVEL	FENCE
EDGE OF PAVEMENT	INLET PIPE
EDGE OF WATER	MAJOR CONTOUR LINE
ENVIRONMENTAL CONSERVATION	MINOR CONTOUR LINE
ENVIRONMENTAL PROTECTION	PERMANENT DISTURBANCE LIMITS
ENVIRONMENTAL TRANSITION	TEMPORARY DISTURBANCE LIMITS
FENCE	PLUGGED LATERAL
GAS LINE	PROJECT SITE BOUNDARY
GUARD RAIL	PRIVATE SEWER LATERAL
MAJOR CONTOUR LINE	PRIVATE SEWER MAIN
MINOR CONTOUR LINE	PROPERTY LINE
OVERHEAD LINE	RIGHT-OF-WAY
PROPERTY LINE	SANITARY SEWER MAIN
RIGHT-OF-WAY	SAW CUT
STORM SEWER MAIN	SEWER SERVICE LATERAL
TOE OF SLOPE	SILT FENCE
TOP OF SLOPE	STORM DITCH
WATER LINE	

STORM SEWER MAIN	
MATTING	
AGGREGATE	
SEEDING AREA	
NATIVE PLANTING	

ABBREVIATIONS:

AC.	ACRE
AC	ASPHALTIC CONCRETE
AGGR	AGGREGATE
APPROX	APPROXIMATE
ASPH	ASPHALT
BES	BUREAU OF ENVIRONMENTAL SERVICES
BOTT	BOTTOM
BDRY	BOUNDARY
BR	BRIDGE
BKFL	BACKFILL
BLK	BLOCK
BLDG	BUILDING
CIP	CAST IRON PIPE
CL	CENTERLINE
CLSM	CONCRETE LOW STRENGTH MIX
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT OR COUNTY
COMP	COMPACTED
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT
CORR	
CP	CONTROL POINT
CSP	CONCRETE SEWER PIPE
CULV	CULVERT
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EL, ELEV	ELEVATION
EXIST, EXTG, EX.	EXISTING
FDTN	FOUNDATION
FL	FLOW LINE
FT	FOOT OR FEET
GEN	GENERAL
GPM	GALLONS PER MINUTE
GR	GUARDRAIL
HDPE	HIGH-DENSITY POLYETHYLENE
HMAC	HOT-MIXED ASPHALT CONCRETE
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
IN.	INCHES
J	JUNCTION BOX
JCT	JUNCTION
LB	POUND
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MIN	MINIMUM
MSTF	MANUFACTURED STORMWATER TREATMENT FACILITY
N	NORTH
NE	NORTHEAST
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
PE	PROFESSIONAL ENGINEER
PED	PEDESTRIAN
PERM	PERMANENT
PGE	PORTLAND GENERAL ELECTRIC
PP	POWER POLE
PROF	PROFILE
PVMT	PAVEMENT
R	RADIUS
REQ'D	REQUIRED
RT	RIGHT
S	SOUTH, SLOPE OR SEWER
SALV	SALVAGE
SE	SOUTHEAST
SED	SEDIMENTATION
SF, SQ FT	SQUARE FEET
SHT	SHEET
SL	STREET LIGHT OR SLOPE
STA	STATION
STD	STANDARD
SU	SUMP
SW	SOUTHWEST
TEMP	TEMPORARY
TOPO	TOPOGRAPHY
TYP	TYPICAL
VAR	VARIES OR VARIABLE
W	WEST, WIDTH OR WATER
WM	WATER METER
WV	WATER VALVE
W/	WITH
W/O	WITHOUT

CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
6. REMOVE VEGETATION.
7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
9. CONSTRUCT 24-FT OF LOW PROFILE MOUNTABLE CURB AT WASTE WATER HOLDING TANK ACCESS ENTRANCE PER STD. DWG. P-540
10. CONSTRUCT CURB OUTLET
11. CONSTRUCT PAVEMENT SECTION WITH 4" ASPHALT OVER 8" AGGREGATE BASE ROCK
12. CONSTRUCT WALKWAY/UTILITY ALLEY
13. CONSTRUCT FULLY LINED STORMWATER SWALE, SEE SHEET C06
14. CONSTRUCT FULLY LINED STORMWATER SWALE, SEE SHEET C06
15. DITCH INLET PER DETAIL P-212, SEE SHEET C08
16. STORM DRAIN MAINTENANCE HOLE PER DETAIL P-151, SEE SHEET C08
17. SEDIMENTATION MAINTENANCE HOLE PER DETAIL P-161, SEE SHEET C08
18. GATE VALVE
19. CONNECT TO EXISTING MAINTENANCE HOLE AAG066
20. PROVIDE 1 FT BENCH BEYOND PAVEMENT AND SLOPE DOWN AT 3:1 TO MATCH EXISTING GRADE
21. PROVIDE 2 FT KNOCKOUT IN CURB FOR DRAINAGE OUTFALL TO SWALE
22. INSTALL CLASS 50 RIPRAP CHANNEL TO SWALE
23. CONSTRUCT LINED GRASSY SWALE PER DETAIL ON SHEET C08
24. PORTLAND WATER BUREAU TO KILL EXISTING METER SERVICE
25. SAWCUT AND REMOVE EXISTING ASPHALT AT DRIVEWAY ENTRANCE. EXTEND 1-FT MINIMUM INTO EXISTING ASPHALT ROAD
26. SEE ARCHITECTURAL PLANS FOR NEW WATER LINE SERVICES, INCLUDING HYDRANT, METERS, BACKFLOW PREVENTION AND ROUTING.
27. CONNECT TO EXISTING MH (ASG066). CONTRACTOR TO FIELD LOCATE EXISTING MANHOLE LOCATION, CONFIRM EXISTING INVERT INFORMATION, RAISE MANHOLE TO FINISH GRADE.
28. CONSTRUCT DITCH INLET. TEE INTO EXISTING 8" STORM LINE WITH 8-INCH PVC PIPE. SLOPE =1.0% MIN.
29. ADJUST EXISTING INLET AS NECESSARY TO MATCH FINISH GRADE.
30. INSTALL A FLOW-SPREADING DEVICE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6-FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50-FT

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_G02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

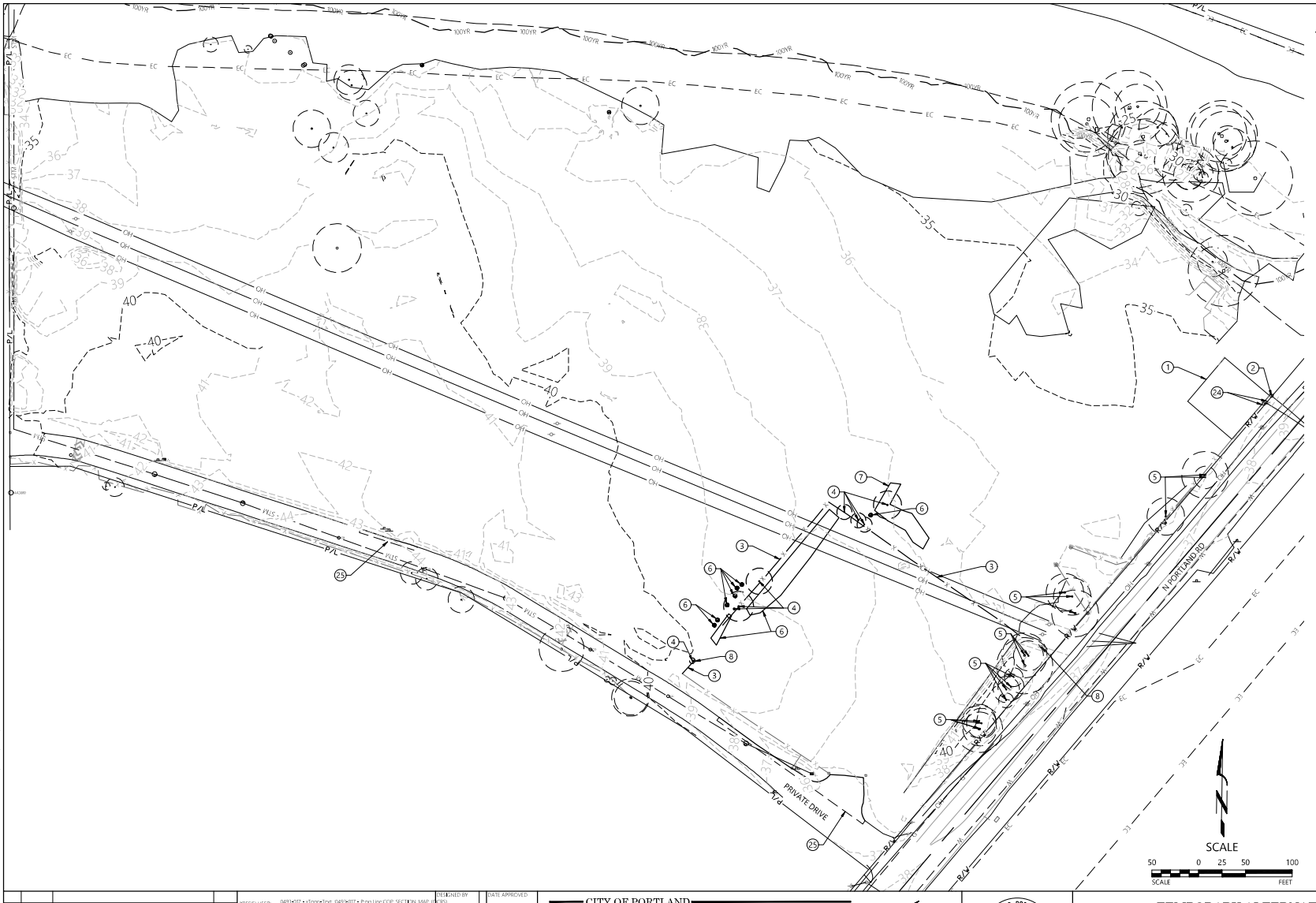
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 2005
Steve Hansen
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

LEGEND, ABBREVIATIONS, & CONSTRUCTION NOTES

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	G02
	02 OF 12



CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
6. REMOVE VEGETATION.
7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
24. PORTLAND WATER BUREAU TO KILL EXISTING METER SERVICE
25. SAWCUT AND REMOVE EXISTING ASPHALT AT DRIVEWAY ENTRANCE. EXTEND 1-FT MINIMUM INTO EXISTING ASPHALT ROAD

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_C01.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

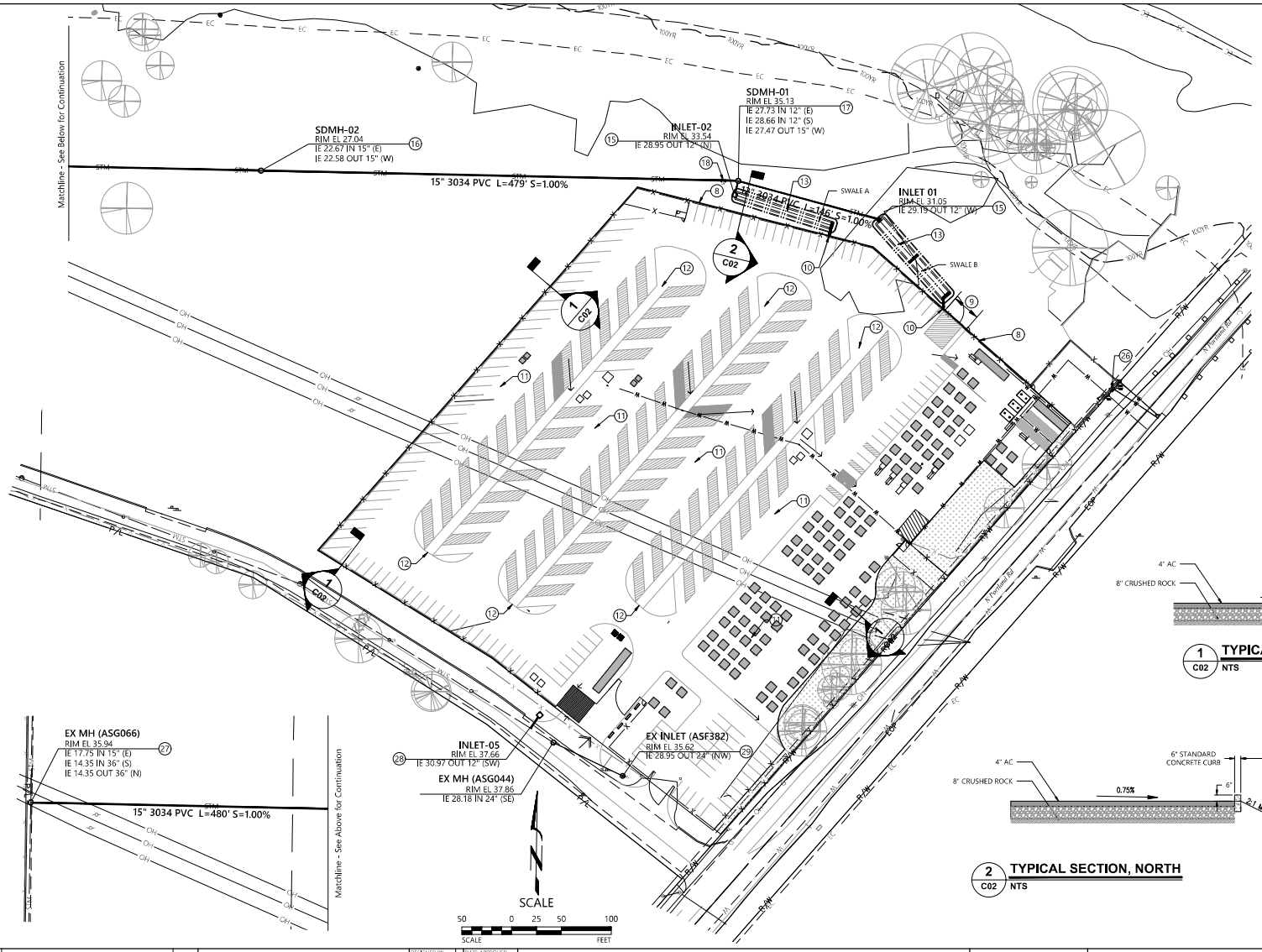
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
OREGON
JULY 12, 1994
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

EXISTING CONDITIONS AND DEMOLITION

1/4 SECTION	1924, 1925
JOB NO.	Exxxxx
SHEET NO.	C01
	03 OF 12



CONSTRUCTION NOTES:

6. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
9. CONSTRUCT 24-FT OF LOW PROFILE MOUNTABLE CURB AT WASTE WATER HOLDING TANK ACCESS ENTRANCE PER STD. DWG. P-540
10. CONSTRUCT CURB OUTLET
11. CONSTRUCT PAVEMENT SECTION WITH 4" ASPHALT OVER 8" AGGREGATE BASE ROCK
12. CONSTRUCT WALKWAY/UTILITY ALLEY
13. CONSTRUCT FULLY LINED STORMWATER SWALE, SEE SHEET C06
15. DITCH INLET PER DETAIL P-212, SEE SHEET C08
16. STORM DRAIN MAINTENANCE HOLE PER DETAIL P-151, SEE SHEET C08
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24. SEE ARCHITECTURAL PLANS FOR NEW WATER LINE SERVICES, INCLUDING HYDRANT, METERS, BACKFLOW PREVENTION AND ROUTING.
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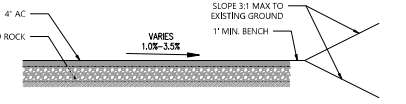
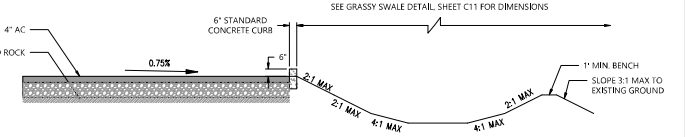
28. CONSTRUCT DITCH INLET. TEE INTO EXISTING 8" STORM LINE WITH 8-INCH PVC PIPE. SLOPE =1.0% MIN.
29. ADJUST EXISTING INLET AS NECESSARY TO MATCH FINISH GRADE.



1 C02 **TYPICAL SECTION, SOUTH EAST & WEST**
NTS



2 C02 **TYPICAL SECTION, NORTH**
NTS

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
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DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

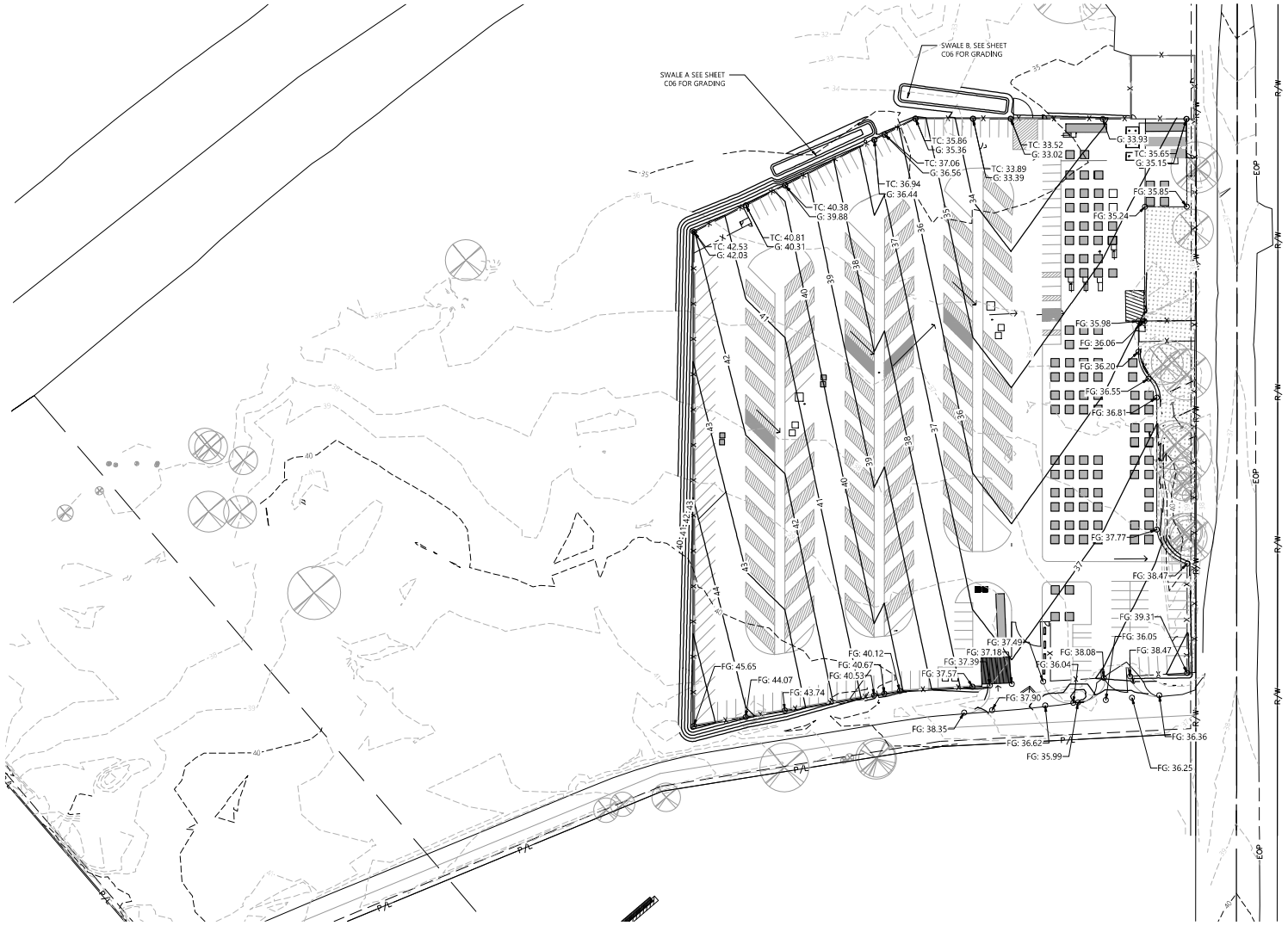
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
7/21/1982
Steve Hansen
OREGON
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

SITE PLAN

1/4 SECTION	1924, 1925
JOB NO.	Exxxxx
SHEET NO.	C02
	04 OF 12



CONSTRUCTION NOTES:

SCALE
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SCALE FEET

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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PROJECT COMPLETED:
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DESIGNED BY:
DRAWN BY:
CHECKED BY:
RES DESIGN LEAD:

DATE APPROVED: Site Plan UPDATE
ENGR. SUPV.:
ENGR. DIV. MGR.:
CONST. DIV. MGR.:
QAQC

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

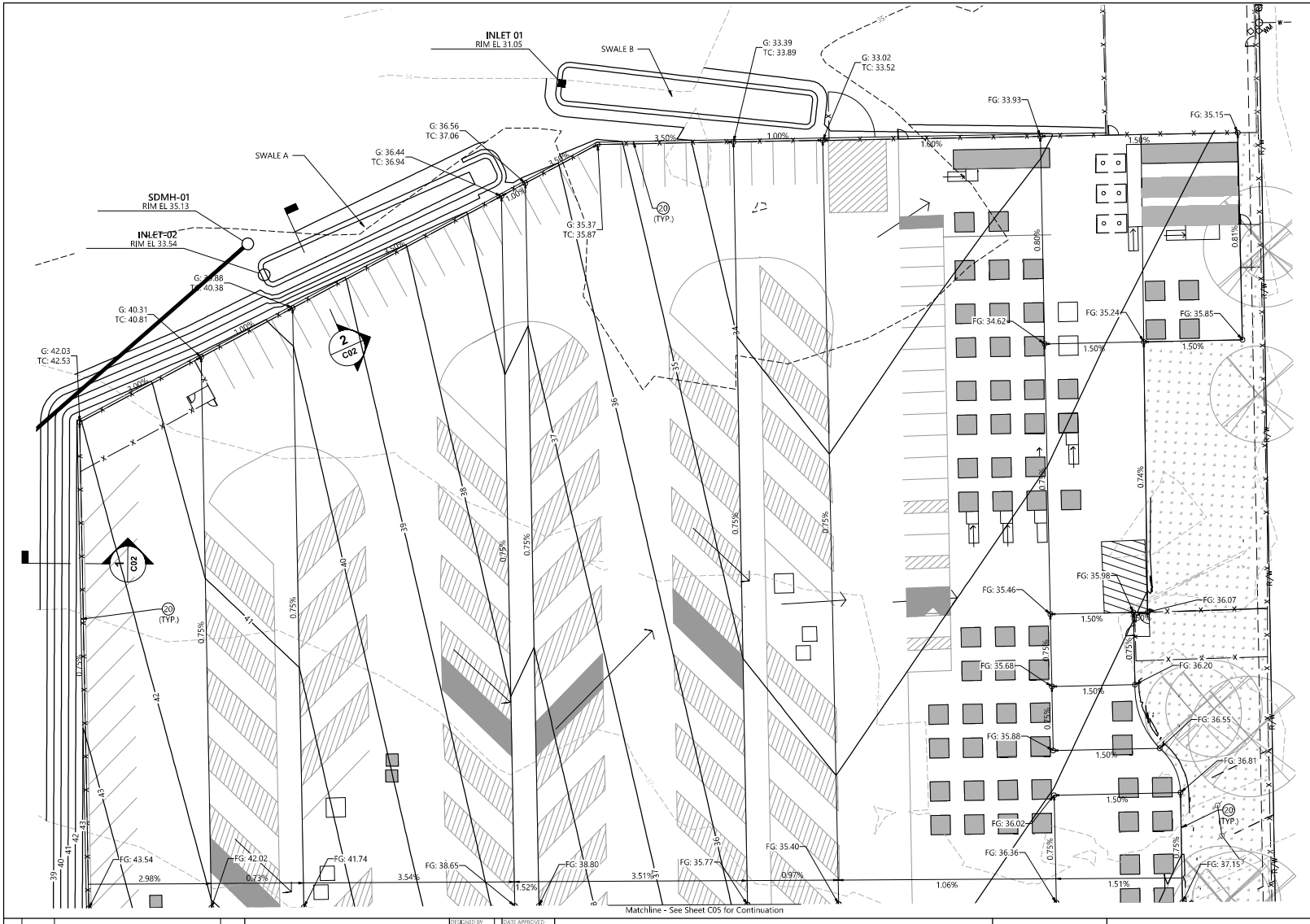
REGISTERED PROFESSIONAL ENGINEER
9-21 RE
Steve Hansen
DEC. 12, 1989
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

OVERALL GRADING PLAN

1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: C03
05 OF 12

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C03.DWG 2/9/2024 STEVE HANSEN



CONSTRUCTION NOTES:

20 PROVIDE 1 FT BENCH BEYOND PAVEMENT AND SLOPE DOWN AT 3:1 TO MATCH EXISTING GRADE

SCALE
20 0 10 20 40
SCALE FEET

P:\.0493---017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C04.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: .0493 017 Prop Lines\0493 017 Site Plan\0493 017 eTopo Text\0493 017 Site Plan UPDATE
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CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY _____ CHECKED BY _____
FINAL MAP DATA
DRAWING NAME: EXXXXXX_C04.dwg

DESIGNED BY | DATE APPROVED
DRAWN BY | ENGR. SUPV.
CHECKED BY | ENGR. DIV. MGR.
RES DESIGN LEAD | CONST. DIV. MGR.

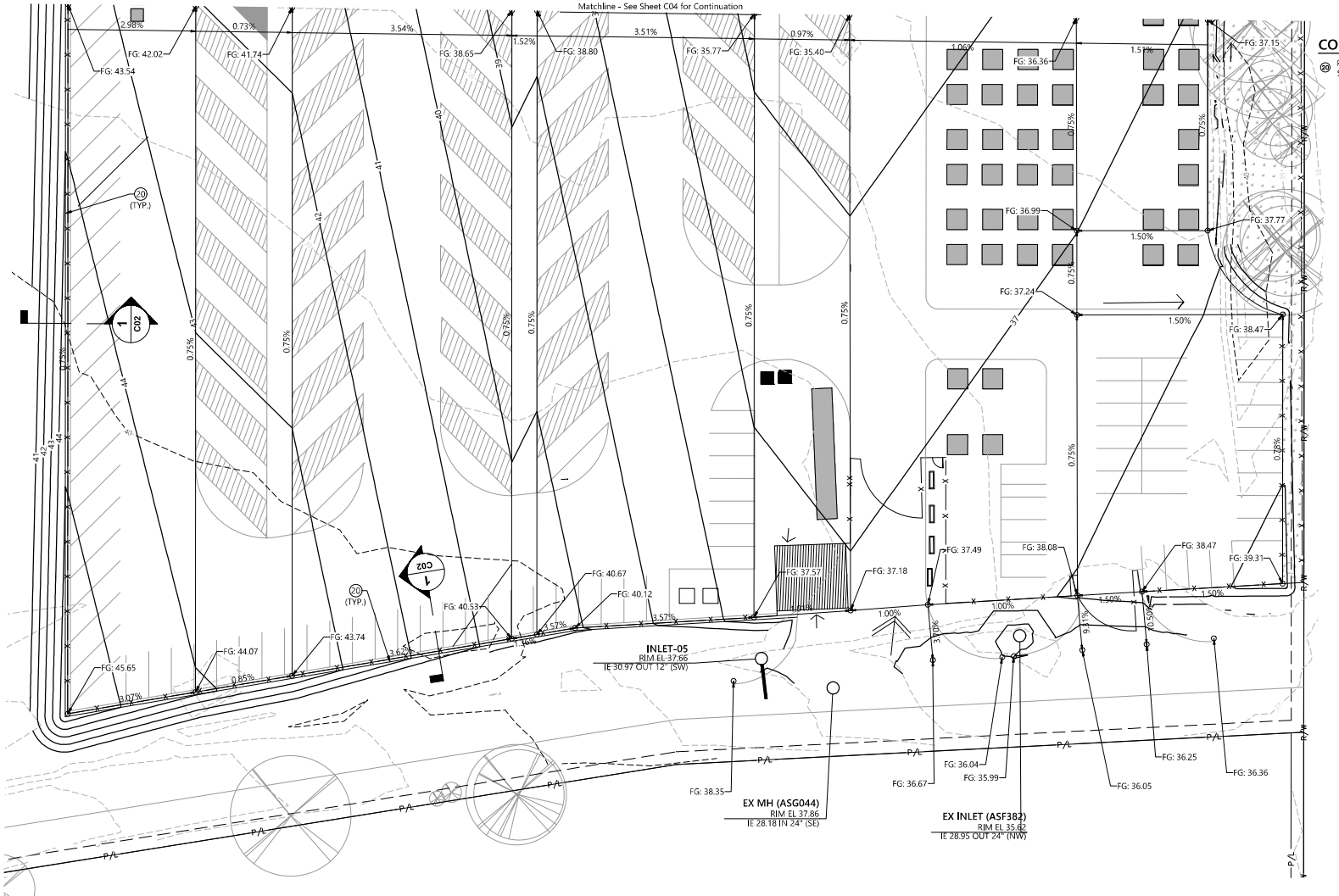
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
Steve Hansen
7/31/2023
OREGON
JULY 12, 1985
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

GRADING PLAN - NORTH

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	C04
	06 OF 12



P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C05.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

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FINAL MAP DATA
DRAWING NAME: EXXXXXX_C05.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

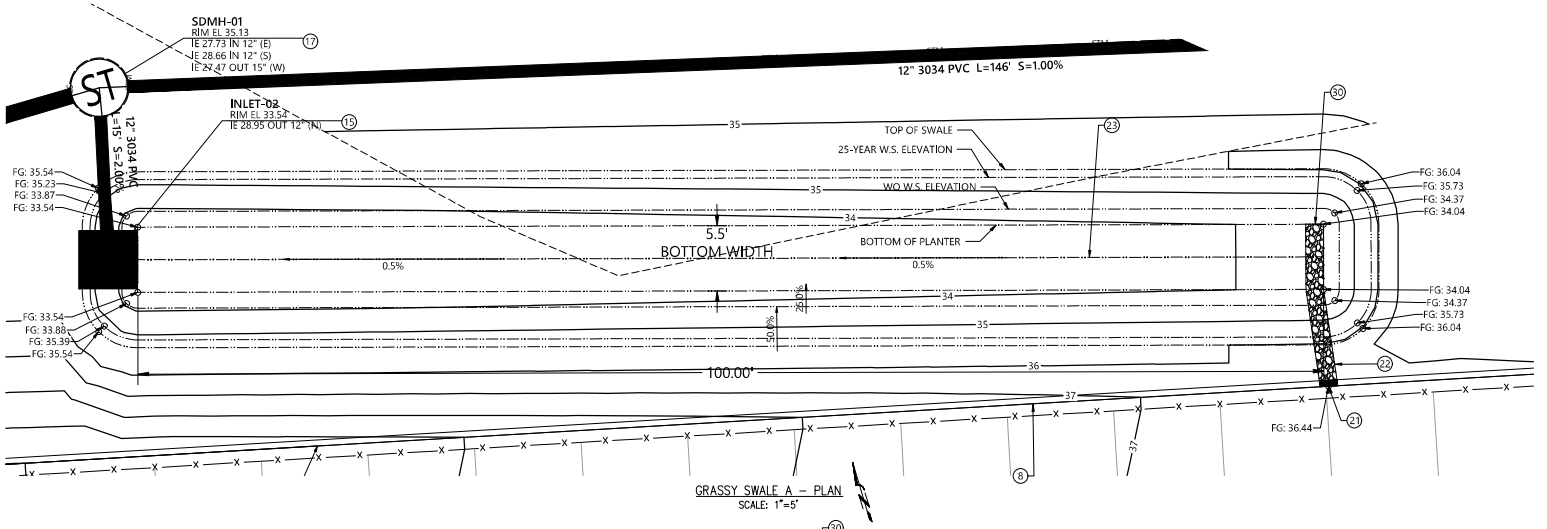
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

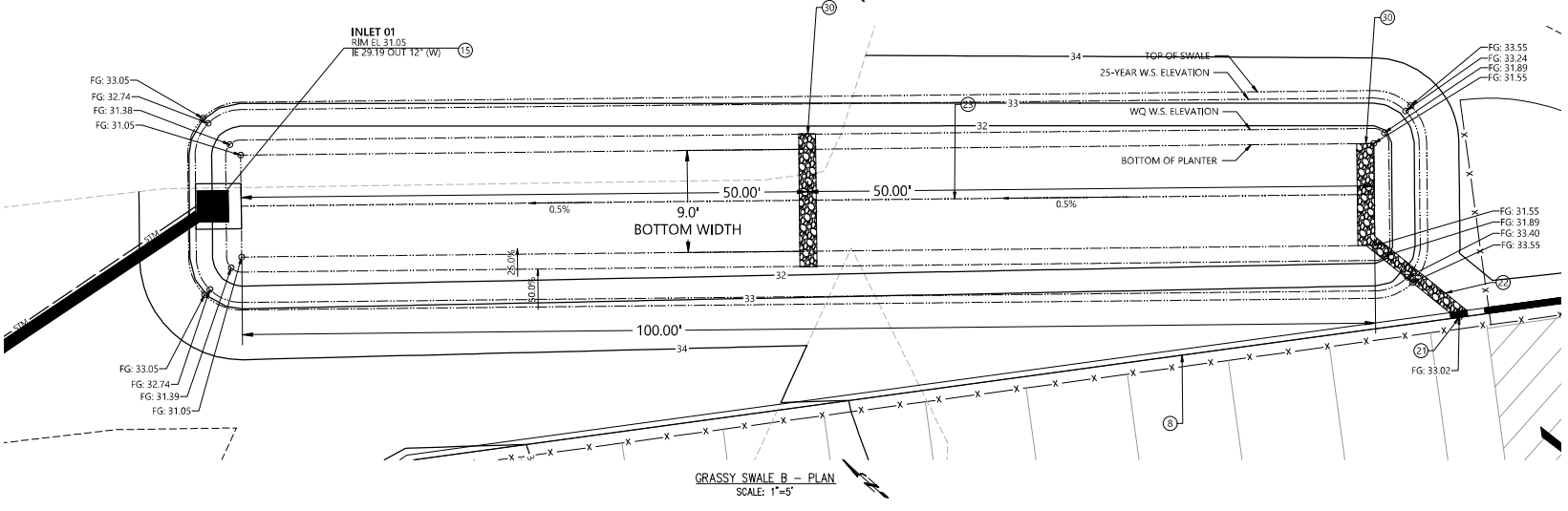
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 1985
STEVEN WELLS HANSEN
Steve Hansen
7/29/2024
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

GRADING PLAN - SOUTH

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C05
07 OF 12





CONSTRUCTION NOTES:

8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540
19. DITCH INLET PER DETAIL P-212, SEE SHEET C08
17. SEDIMENTATION MAINTENANCE HOLE PER DETAIL P-161, SEE SHEET C08
21. PROVIDE 2 FT KNOCKOUT IN CURB FOR DRAINAGE OUTFALL TO SWALE
22. INSTALL CLASS 50 RIPRAP CHANNEL TO SWALE
23. CONSTRUCT LINED GRASSY SWALE PER DETAIL ON SHEET C08
30. INSTALL A FLOW-SPREADING DEVICCE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6-FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50-FT

SCALE
5 0 2.5 5 10
SCALE FEET

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C06.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED: 0493 017 Prop Lines0493 017 Site Files0493 017 Xbase0493 017 xTopo Text0493 017
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DESIGNED BY:
DRAWN BY:
CHECKED BY:
RES DESIGN LEAD:

DATE APPROVED:
Site Plan UPDATE
ENGR. SUPV.
ENGR. DIV. MGR.
CONST. DIV. MGR.
QAQC

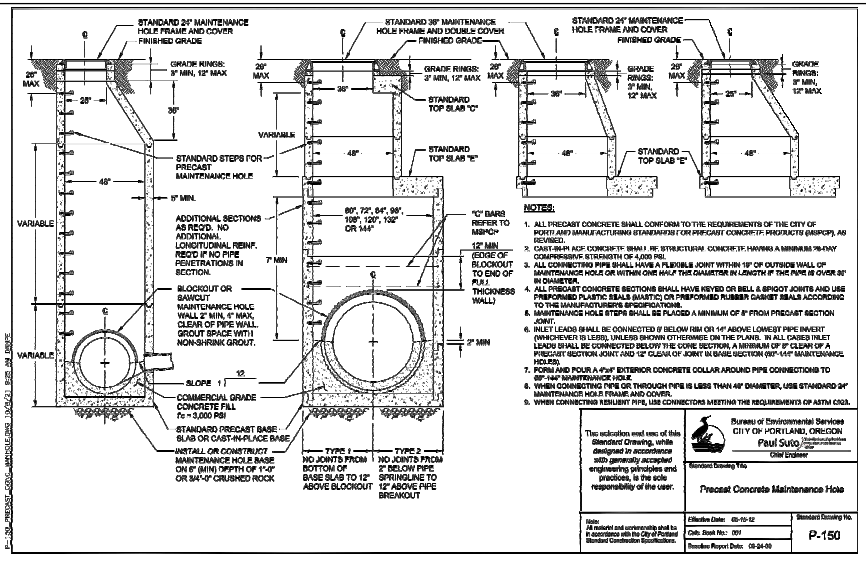
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
7/29/15
Steve Hansen
OREGON
JULY 29, 1994
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

SWALE GRADING PLAN - 1

1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: C06
08 OF 12

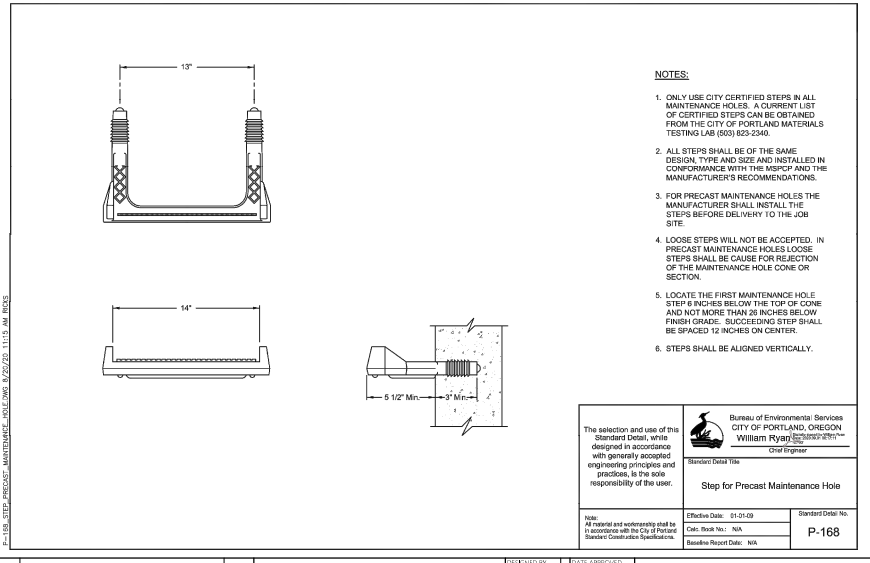


NOTES:

1. ALL PRECAST CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. CAST-IN-PLACE CONCRETE SHALL BE STRUCTURAL CONCRETE HAVING A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
3. ALL CONNECTING PIPE SHALL HAVE A FLEXIBLE JOINT WITHIN 18" OF OUTSIDE WALL OF MAINTENANCE HOLE OR WITHIN ONE HALF THE DIAMETER IN LENGTH IF THE PIPE IS OVER 36" IN DIAMETER.
4. ALL PRECAST CONCRETE SECTIONS SHALL HAVE KEYED OR BELL & SPIGOT JOINTS AND USE PREFORMED PLASTIC SEALS (MASTIC) OR PREFORMED RUBBER GASKET SEALS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
5. MAINTENANCE HOLE STEPS SHALL BE PLACED A MINIMUM OF 8" FROM PRECAST SECTION JOINT.
6. INLET LEADS SHALL BE CONNECTED 6" BELOW RIM OR 14" ABOVE LOWEST PIPE INVERT (WHICHEVER IS LESS), UNLESS SHOWN OTHERWISE ON THE PLANS. IN ALL CASES INLET LEADS SHALL BE CONNECTED BELOW THE CORE SECTION, A MINIMUM OF 9" CLEAR OF A PRECAST SECTION JOINT AND 12" CLEAR OF JOINT IN BASE SECTION (607-1/4" MAINTENANCE HOLES).
7. FORM AND POUR A 4"x4" EXTERIOR CONCRETE COLLAR AROUND PIPE CONNECTIONS TO 60"-144" MAINTENANCE HOLE.
8. WHEN CONNECTING PIPE OR THROUGH PIPE IS LESS THAN 48" DIAMETER, USE STANDARD 24" MAINTENANCE HOLE FRAME AND COVER.
9. WHEN CONNECTING RESILIENT PIPE, USE CONNECTORS MEETING THE REQUIREMENTS OF ASTM C923.

This publication and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON Paul Suto, Chief Engineer
Standard Drawing Title	Precast Concrete Maintenance Hole
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 03-15-12 / Standard Drawing No. P-150
	Calc. Book No.: 009
	Baseline Report Date: 09-24-09

P-150_PRECAST_CONC_MANHOLE.DWG 10/5/21 8:55 PM DMPE

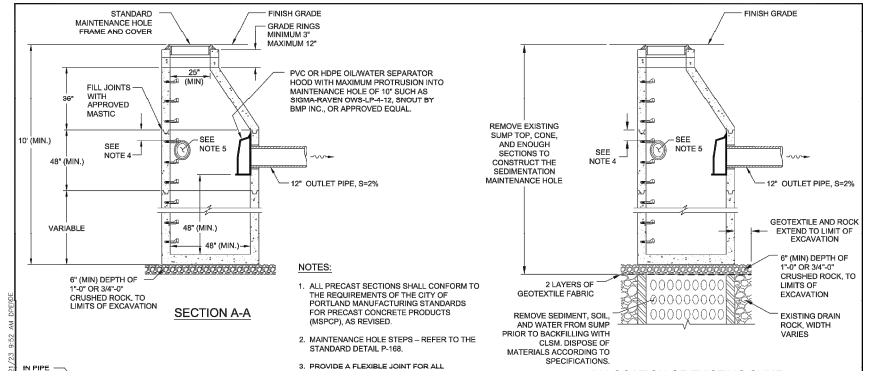


NOTES:

1. ONLY USE CITY CERTIFIED STEPS IN ALL MAINTENANCE HOLES. A CURRENT LIST OF CERTIFIED STEPS CAN BE OBTAINED FROM THE CITY OF PORTLAND MATERIALS TESTING LAB (503) 823-2340.
2. ALL STEPS SHALL BE OF THE SAME DESIGN, TYPE AND SIZE AND INSTALLED IN CONFORMANCE WITH THE MSPCP AND THE MANUFACTURER'S RECOMMENDATIONS.
3. FOR PRECAST MAINTENANCE HOLES THE MANUFACTURER SHALL INSTALL THE STEPS BEFORE DELIVERY TO THE JOB SITE.
4. LOOSE STEPS WILL NOT BE ACCEPTED. IN PRECAST MAINTENANCE HOLES LOOSE STEPS SHALL BE CAUSE FOR REJECTION OF THE MAINTENANCE HOLE CONE OR SECTION.
5. LOCATE THE FIRST MAINTENANCE HOLE STEP 6 INCHES BELOW THE TOP OF CONE AND NOT MORE THAN 26 INCHES BELOW FINISH GRADE. SUCCEEDING STEP SHALL BE SPACED 12 INCHES ON CENTER.
6. STEPS SHALL BE ALIGNED VERTICALLY.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON William Ryan, Chief Engineer
Standard Detail Title	Step for Precast Maintenance Hole
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 01-01-09 / Standard Detail No. P-168
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-168_STEP_PRECAST_MAINTENANCE_HOLE.DWG 8/20/20 11:15 AM RICKS

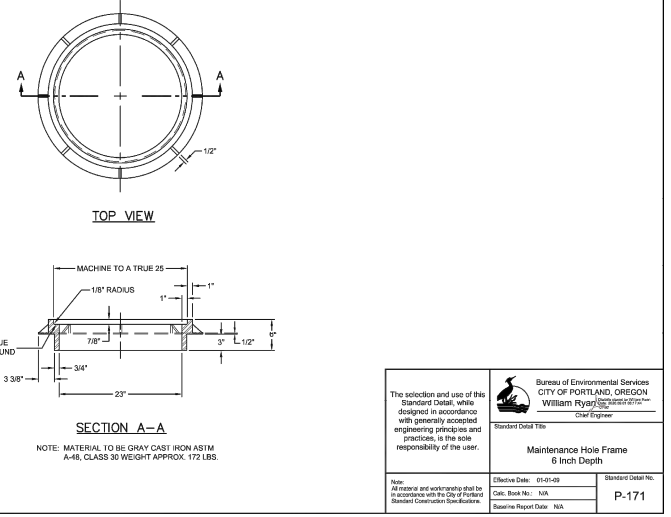


NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. MAINTENANCE HOLE STEPS – REFER TO THE STANDARD DETAIL P-168.
3. PROVIDE A FLEXIBLE JOINT FOR ALL CONNECTED PIPES:
   - RIGID PIPE < 36 INCHES – 18 INCHES (MAX.) FROM OUTSIDE WALL
   - FLEXIBLE PIPE – 18 INCHES (MAX.) FROM THE OUTSIDE WALL UNLESS A FLEXIBLE JOINT FITTING IS INSTALLED AND ACCEPTED.
4. PROVIDE 6 INCHES (MIN.) OF SEPARATION BETWEEN A SECTION JOINT AND THE OUTER EDGE OF ANY OPENING.
5. LOCATE INVERT OF ANY PIPE 6 INCHES (MIN.) ABOVE THE OUTLET PIPE INVERT.
6. CONTACT THE CSA PROGRAM BEFORE CONVERTING AN EXISTING SUMP TO A SEDIMENTATION MAINTENANCE HOLE.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON Chief Engineer
Standard Detail Title	Sedimentation Maintenance Hole and Sedimentation Maintenance Hole in Location of Existing Sump
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 04-01-23 / Standard Detail No. P-161
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-161_SEDIMENTATION_MAINTENANCE_HOLE.DWG 3/21/23 9:52 AM DMPE



NOTE: MATERIAL TO BE GRAY CAST IRON ASTM A-48, CLASS 30 WEIGHT APPROX. 172 LBS.

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON William Ryan, Chief Engineer
Standard Detail Title	Maintenance Hole Frame 6 Inch Depth
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 01-01-09 / Standard Detail No. P-171
	Calc. Book No.: N/A
	Baseline Report Date: N/A

P-171_MH_FRAME_6-INCH_DEPTH.DWG 8/20/20 12:22 PM DMPE

P:\0493--017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXX_C07.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP(S) USED:
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY _____ CHECKED BY _____
FINAL MAP DATA
DRAWING NAME: EXXXXX_C07.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

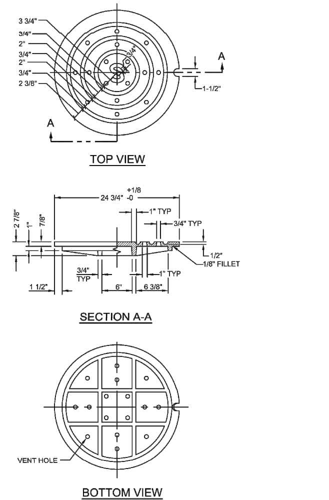
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
21152
Steve Hansen
RENEWAL: 12-31-2025
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

CIVIL DETAILS - 1

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C07
09 OF 12



NOTES:

1. MATERIAL TO BE GRAY CAST IRON, ASTM A48, CLASS 30, WEIGHT APPROX. 139 LBS.
2. MACHINE TO A TRUE BEARING ALL AROUND.

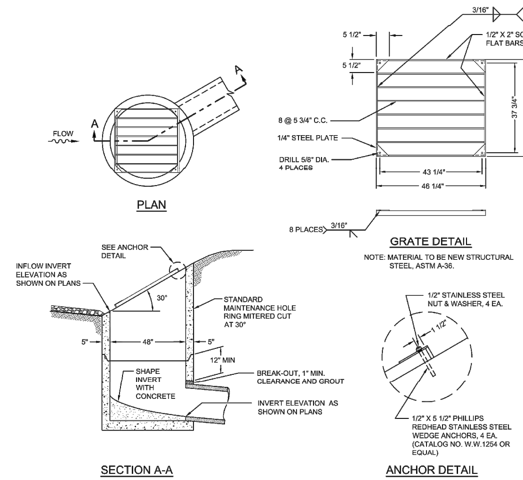
The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan
Chief Engineer

Standard Detail Title: Maintenance Hole Cover

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 01-01-09
Calc. Book No.: N/A
Baseline Report Date: N/A
Standard Detail No. P-176



NOTES:

1. ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
2. CONCRETE SHALL BE COMMERCIAL GRADE.

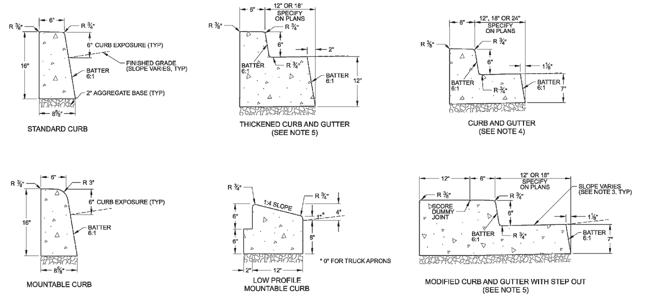
The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

Bureau of Environmental Services
CITY OF PORTLAND, OREGON
William Ryan
Chief Engineer

Standard Detail Title: 48" Precast Field Inlet

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 01-01-09
Calc. Book No.: N/A
Baseline Report Date: N/A
Standard Detail No. P-212



GENERAL NOTES:

1. TRANSITION CURBS OF DIFFERENT EXPOSURES OVER A LENGTH EQUAL TO 2' FOR EACH INCH IN DIFFERENCE OF EXPOSURE.
2. TOPS OF ALL CURBS SHALL SLOPE TOWARD THE ROADWAY AT 2% MAX.
3. GUTTER PAN SLOPE TO MATCH EXISTING STREET CROSS SLOPE UP TO A MAXIMUM OF 5% AND PER P-549 AT CURB RAMPS.
4. 18" GUTTER PAN TYPICAL. USE 12" GUTTER PAN WHEN ADJACENT TO BIKE LANES. USE 24" GUTTER PAN FOR GRADE BREAK DIFFERENCE AT CURB RAMPS (SEE STD. DRG. NO. P-549).
5. MODIFIED CURB AND GUTTER, AND THICKENED CURB AND GUTTER FOR USE ADJACENT TO SURFACE STORMWATER FACILITIES.

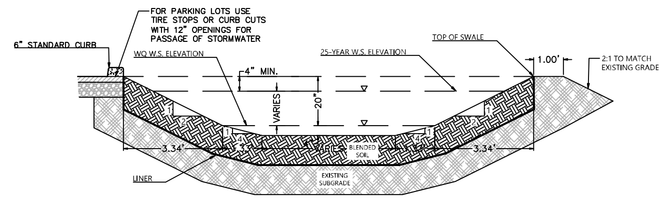
The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.

PBOT PORTLAND BUREAU OF TRANSPORTATION
City Engineer

Standard Drawing Title: CURBS

Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.

Effective Date: 05/18/2022
Calc. Book No.: N/A
Std. Drg. Report Date: 02/18/2022
Standard Drawing No. P-540



1. Detail intended as an example. Detail must match PAC assumptions and/or design report.
2. Setbacks: 5' from property lines except next to right-of-way; 10' from building foundations.
3. Rock Gallery/Storage Layer, as required: Size per the PAC. Construct rock galleries of ¾" washed drain rock overlain by a 3–4" filter layer of ¼" No.10 washed angular aggregate. Alternative configurations and materials such as cellular storage systems, drainage mats, and non-standard aggregates may be used under the Performance Approach, with BES approval.
4. Overflow: Overflow elevation must allow for 4" of freeboard, minimum. Protect from debris and sediment with strainer or grate.
5. Blended Soil: Use BES standard soil blend for stormwater facilities (SWMM Section 6.3) unless otherwise approved. Install minimum of 12" on native soil. Install minimum of 24" if there's a drainage layer or storage layer below the imported soil. WATERPROOF LINER: 30 MIL EPDM, HDPE OR APPROVED EQUIVALENT.
6. Vegetation: PLANT THE ENTIRE SURFACE AREA OF THE GRASSY SWALE WITH NATIVE GRASS OR SWALE SEED MIX TO PROVIDE 100% COVERAGE OF BOTH THE SWALE BOTTOM AND THE SIDE SLOPES. FOR BES-MAINTAINED FACILITIES, SELECT NATIVE WILDFLOWERS AND GRASSES THAT REQUIRE MINIMAL MOWING (I.E., NO MORE THAN ONCE OR TWICE ANNUALLY). BES DOES NOT ALLOW LAWN-TYPE AREAS IN BES-MAINTAINED FACILITIES AND EXCEPTIONS REQUIRE BES APPROVAL. GRASSY SWALES IN ENVIRONMENTAL ZONES MUST MEET REQUIREMENTS ESTABLISHED BY PCC TITLE 33 FOR GRASS SPECIES IN ENVIRONMENTAL ZONES.
7. Entrance Erosion Control: Install river rock, flagstone, or similar to dissipate the energy of incoming water at entrances and ends of downspout extensions.
8. FLOW SPREADER: INSTALL A FLOW-SPREADING DEVICE AT THE INLET TO DISTRIBUTE FLOWS EVENLY ACROSS THE BOTTOM OF THE SWALE. IN SWALES WITH A BOTTOM WIDTH GREATER THAN 6 FT, INSTALL A FLOW SPREADER AT LEAST EVERY 50 FT.
9. Inspections: Call BDS IVR Inspection Line, (503) 823-7000, request 487. 3 inspections required.

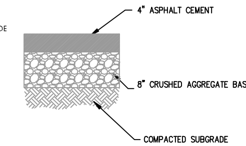
CONSTRUCTION REQUIREMENTS

Mark the location of future facilities, and fence or cover facility locations after excavation. Do not allow vehicular traffic, foot traffic, material storage, or heavy equipment within 10 feet of the infiltration area except as needed to excavate, grade, and construct the facility. Do not allow entry of runoff or sediment during construction.

SEED NATIVE GRASS MIXES IN THE SWALE FLOW PATH. APPLY SEED AT THE RATES SPECIFIED BY THE SUPPLIER. PLANTS MUST BE ESTABLISHED BY THE TIME THE FACILITY IS COMPLETED AND AT LEAST 3 MONTHS AFTER SEEDING. ESTABLISH GRASSES AS SOON AS POSSIBLE AFTER THE SWALE IS COMPLETED AND BEFORE WATER IS ALLOWED TO ENTER THE FACILITY. DO NOT ALLOW ENTRY OF CONCENTRATED STORMWATER FLOWS UNTIL THE VEGETATION IS FULLY ESTABLISHED.

UNLESS VEGETATION IS ESTABLISHED PRIOR TO COMPLETION OF CONSTRUCTION, INSTALL BIODEGRADABLE EROSION CONTROL MATTING THAT IS APPROPRIATE FOR LOW-VELOCITY FLOWS (APPROXIMATELY 1 FT/S) IN THE FLOW PATH BEFORE ALLOWING WATER INTO THE FACILITY.

GRASSY SWALE DTAIL
NTS



ASPHALT PAVEMENT SECTION
NTS

NOTE: REFER TO GEOTECHNICAL REPORT PREPARED BY XX ON XXX FOR MORE INFORMATION. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER TO DETERMINE ACCEPTABLE COMPACTION.

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

XREF(S) USED:
ROTATION ANGLE: 0d0'0"
CONSTRUCTED BY
PROJECT COMPLETED
MAP CORRECTED BY / CHECKED BY
FINAL MAP DATA
DRAWING NAME: EXXXXXX_C08.dwg

DESIGNED BY / DATE APPROVED
DRAWN BY / ENGR. SUPV.
CHECKED BY / ENGR. DIV. MGR.
BES DESIGN LEAD / CONST. DIV. MGR.

CITY OF PORTLAND
ENVIRONMENTAL SERVICES

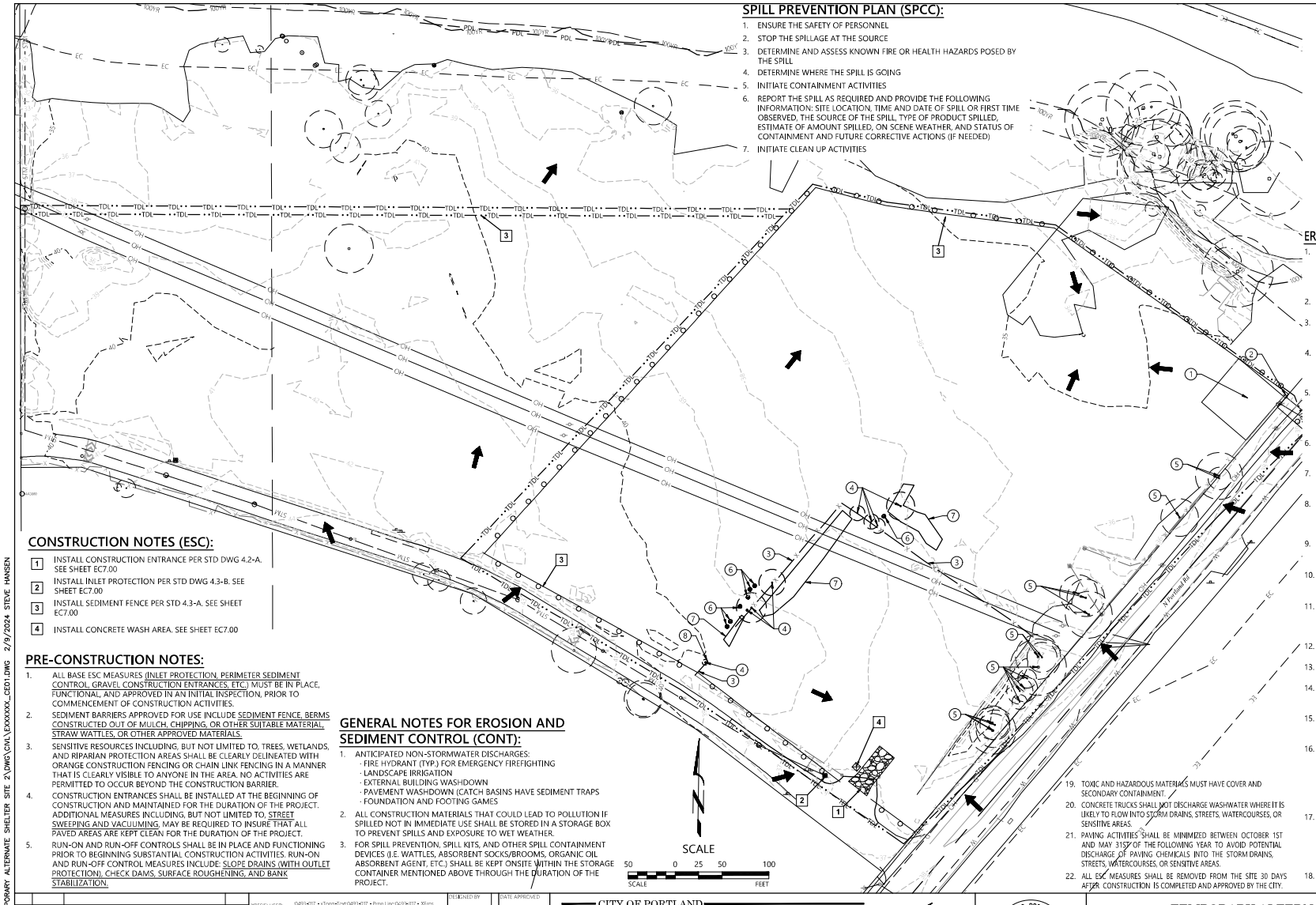
REGISTERED PROFESSIONAL ENGINEER
82915PE
OREGON
MAY 12 2009
STEVEN WELLS HANSEN
Steve Hansen
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

CIVIL DETAILS - 2

1/4 SECTION
JOB NO. Exxxxx
SHEET NO. C08
10 OF 12

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXXX_C08.DWG 2/9/2024 STEVE HANSEN



SPILL PREVENTION PLAN (SPCC):

1. ENSURE THE SAFETY OF PERSONNEL
2. STOP THE SPILLAGE AT THE SOURCE
3. DETERMINE AND ASSESS KNOWN FIRE OR HEALTH HAZARDS POSED BY THE SPILL
4. DETERMINE WHERE THE SPILL IS GOING
5. INITIATE CONTAINMENT ACTIVITIES
6. REPORT THE SPILL AS REQUIRED AND PROVIDE THE FOLLOWING INFORMATION: SITE LOCATION, TIME AND DATE OF SPILL OR FIRST TIME OBSERVED, THE SOURCE OF THE SPILL, TYPE OF PRODUCT SPILLED, ESTIMATE OF AMOUNT SPILLED, ON SCENE WEATHER, AND STATUS OF CONTAINMENT AND FUTURE CORRECTIVE ACTIONS (IF NEEDED)
7. INITIATE CLEAN UP ACTIVITIES

CONSTRUCTION NOTES:

1. DEMOLISH BUILDING. FOUNDATION PAD TO REMAIN
2. EXISTING HYDRANT TO BE REMOVED AND REPLACED.
3. DEMOLISH CHAIN LINK FENCE.
4. REMOVE TREE.
5. PROTECT TREE.
6. REMOVE VEGETATION.
7. DEMOLISH GATE.
8. CONSTRUCT STANDARD CURB ALONG ENTIRE NORTH EDGE WITH 2-FOOT KNOCK OUTS AT DRAINAGE SWALE OUTFALLS PER STD. DWG. P-540

EROSION CONTROL GENERAL NOTES:

1. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED, APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
2. THE ESC PLAN, ANY REVISIONS, AND INSPECTION LOGS SHALL BE KEPT ONSITE AT ALL TIMES.
3. THE ESC MEASURES SHOWN ON THE PLAN ARE THE MINIMUM REQUIREMENTS FOR THE PROJECT SITE AND SHALL BE UPGRADED AS NEEDED TO MAINTAIN COMPLIANCE WITH ALL REGULATIONS.
4. ALL ESC MEASURES SHALL BE APPROVED, IN PLACE, AND FUNCTIONAL PRIOR TO ANY GROUND DISTURBANCE OF THE SITE. CONTRACTOR SHALL MAINTAIN ALL ESC MEASURES THROUGHOUT CONSTRUCTION.
5. CLEARING LIMITS, CRITICAL RIPARIAN AREAS, BUFFER ZONES, AND PRESERVED VEGETATION (INCLUDING IMPORTANT TREES AND ASSOCIATED CRITICAL ROOT ZONES) SHALL HAVE HIGH VISIBILITY FENCE INSTALLED BEFORE GRADING OR CONSTRUCTION TO IDENTIFY, MARK, AND PROTECT THE AREAS.
6. CONSTRUCTION ACTIVITIES WILL AVOID OR MINIMIZE ANY EXCAVATION OR OTHER SOIL DESTABILIZATION FROM OCTOBER 1ST TO MAY 31ST OF THE FOLLOWING YEAR.
7. TEMPORARY SITE STABILIZATION MEASURES WILL BE INSTALLED AT THE END OF THE SHIFT BEFORE A HOLIDAY OR WEEKEND OR AT THE END OF EACH WORKDAY IF RAIN IS FORECAST IN THE NEXT 24 HOURS.
8. SEDIMENT CONTROLS MUST BE INSTALLED AND MAINTAINED ALONG THE SITE PERIMETER ON ALL DOWN-GRADIENT SIDES OF THE CONSTRUCTION SITE AND AT ALL ACTIVE AND OPERATIONAL INTERNAL STORMDRAINS AT ALL TIMES DURING CONSTRUCTION.
9. DRY METHODS MUST BE USED TO REMOVE SEDIMENT AND CONCRETE SWEEPINGS FROM AREAS WHERE DISCHARGE IS LIKELY TO THE STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
10. ALL DIRT AND DEBRIS TRACKED ONTO STREETS MUST BE REMOVED IMMEDIATELY IF IT CAN BE SPREAD BY TRAFFIC OR OTHERWISE REACH STORM DRAINS, WATERCOURSES, OR SENSITIVE AREAS.
11. SEDIMENT DISCHARGED OFFSITE MUST BE PLACED BACK ONSITE WITHIN 24 HOURS AND STABILIZED. IN-STREAM WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROCEDURES AND TIMEFRAMES OF THE OREGON DEPARTMENT OF STATE LANDS.
12. NO SEDIMENT-LADEN WATER MAY BE PUMPED, DIVERTED, OR OTHERWISE DISCHARGED OFFSITE UNLESS APPROVED BY THE ESC PLAN.
13. SEDIMENT MUST BE REMOVED WHEN IT HAS REACHED THE LEVEL SPECIFIED IN THE STANDARD DETAIL.
14. SEDIMENT MUST BE REMOVED FROM SUMPED STRUCTURES WHEN THE SEDIMENT RETENTION CAPACITY HAS BEEN REDUCED BY 1/3RD AND WITHIN 30 DAYS OF PROJECT COMPLETION.
15. WHEN REMOVING SATURATED SOILS FROM THE SITE, EITHER WATERTIGHT TRUCKS MUST BE USED OR LOADS MUST BE DRAINED ONSITE UNTIL DRIPPING HAS BEEN REDUCED TO MINIMIZE SPILLAGE.
16. EROSION CONTROL MEASURES WILL BE INSPECTED ON ACTIVE SITES AT LEAST WEEKLY OR AFTER PRECIPITATION IN EXCESS OF 0.5 INCHES IN 24 HOURS. IF A SITE WILL BE INACTIVE MORE THAN CITY OF NEWBERG EROSION CONTROL MANUAL 2014 PAGE 30 FOURTEEN (14) DAYS, EROSION CONTROL MEASURES WILL BE INSPECTED PRIOR TO THE INACTIVE PERIOD AND EVERY TWO (2) WEEKS DURING THE INACTIVE PERIOD.
17. ALL CONSTRUCTION SITES MUST FOLLOW PROPER STORAGE, APPLICATION, AND DISPOSAL PROCEDURES OF CONSTRUCTION MATERIALS. NO DUMPING OR DISPOSAL OF CONSTRUCTION DEBRIS, WASTE, OR SPOIL MATERIAL WILL OCCUR IN ANY STREAM, STORMWATER SYSTEM, WETLANDS, SURFACE WATERS, OR OTHER WATERCOURSES OR SENSITIVE AREAS.
18. WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES ARE REQUIRED FOR ALL SITES.
19. TOXIC AND HAZARDOUS MATERIALS MUST HAVE COVER AND SECONDARY CONTAINMENT.
20. CONCRETE TRUCKS SHALL NOT DISCHARGE WASHWATER WHERE IT IS LIKELY TO FLOW INTO STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
21. PAVING ACTIVITIES SHALL BE MINIMIZED BETWEEN OCTOBER 1ST AND MAY 31ST OF THE FOLLOWING YEAR TO AVOID POTENTIAL DISCHARGE OF PAVING CHEMICALS INTO THE STORM DRAINS, STREETS, WATERCOURSES, OR SENSITIVE AREAS.
22. ALL ESC MEASURES SHALL BE REMOVED FROM THE SITE 30 DAYS AFTER CONSTRUCTION IS COMPLETED AND APPROVED BY THE CITY.

CONSTRUCTION NOTES (ESC):

1. INSTALL CONSTRUCTION ENTRANCE PER STD DWG 4.2-A. SEE SHEET EC7.00
2. INSTALL INLET PROTECTION PER STD DWG 4.3-B. SEE SHEET EC7.00
3. INSTALL SEDIMENT FENCE PER STD 4.3-A. SEE SHEET EC7.00
4. INSTALL CONCRETE WASH AREA. SEE SHEET EC7.00

PRE-CONSTRUCTION NOTES:

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. SEDIMENT BARRIERS APPROVED FOR USE INCLUDE SEDIMENT FENCE, BERMS CONSTRUCTED OUT OF MULCH, CHIPPING, OR OTHER SUITABLE MATERIAL, STRAW WATTLES, OR OTHER APPROVED MATERIALS.
3. SENSITIVE RESOURCES INCLUDING, BUT NOT LIMITED TO, TREES, WETLANDS, AND RIPARIAN PROTECTION AREAS SHALL BE CLEARLY DELINEATED WITH ORANGE CONSTRUCTION FENCING OR CHAIN LINK FENCING IN A MANNER THAT IS CLEARLY VISIBLE TO ANYONE IN THE AREA. NO ACTIVITIES ARE PERMITTED TO OCCUR BEYOND THE CONSTRUCTION BARRIER.
4. CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, STREET SWEEPING AND VACUUMING, MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
5. RUN-ON AND RUN-OFF CONTROLS SHALL BE IN PLACE AND FUNCTIONING PRIOR TO BEGINNING SUBSTANTIAL CONSTRUCTION ACTIVITIES. RUN-ON AND RUN-OFF CONTROL MEASURES INCLUDE: SLOPE DRAINS (WITH OUTLET PROTECTION), CHECK DAMS, SURFACE ROUGHENING, AND BANK STABILIZATION.

GENERAL NOTES FOR EROSION AND SEDIMENT CONTROL (CONT):

1. ANTICIPATED NON-STORMWATER DISCHARGES:
   - FIRE HYDRANT (TYP.) FOR EMERGENCY FIREFIGHTING
   - LANDSCAPE IRRIGATION
   - EXTERNAL BUILDING WASHDOWN
   - PAVEMENT WASHDOWN (CATCH BASINS HAVE SEDIMENT TRAPS
   - FOUNDATION AND FOOTING GAMES
2. ALL CONSTRUCTION MATERIALS THAT COULD LEAD TO POLLUTION IF SPILLED NOT IN IMMEDIATE USE SHALL BE STORED IN A STORAGE BOX TO PREVENT SPILLS AND EXPOSURE TO WET WEATHER.
3. FOR SPILL PREVENTION, SPILL KITS, AND OTHER SPILL CONTAINMENT DEVICES (I.E. WATTLES, ABSORBENT SOCKS/BROOMS, ORGANIC OIL ABSORBENT AGENT, ETC.) SHALL BE KEPT ONSITE WITHIN THE STORAGE CONTAINER MENTIONED ABOVE THROUGH THE DURATION OF THE PROJECT.

SCALE
50 0 25 50 100
SCALE FEET

P:\0493-017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVL\EXXXXXX_CE01.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP(S) USED: 0493-017 - xTopo - xSet 0493-017 - xProp Line 0493-017 - xXrefs
ROTATION ANGLE: ######
CONSTRUCTED BY:
PROJECT COMPLETED:
MAP CORRECTED BY: CHECKED BY:
FINAL MAP DATA
DRAWING NAME: EXXXXXX_CE01.dwg

DESIGNED BY | DRAWN BY | CHECKED BY | RES. DESIGN LEAD
DATE APPROVED | ENGR. SUPV. | ENGR. DIV. MGR. | CONST. DIV. MGR.

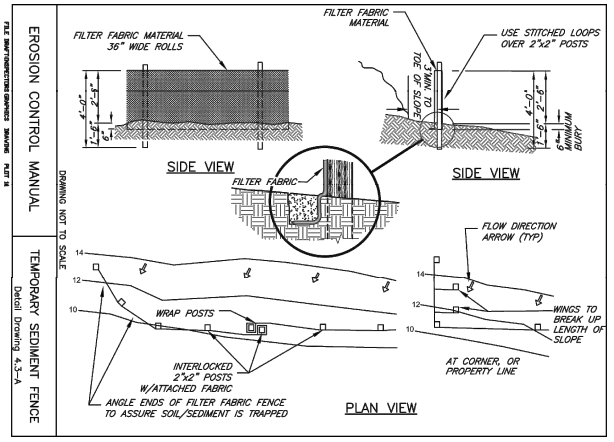
CITY OF PORTLAND
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER
OREGON
Steve Hansen
MAY 12, 1998
STEVEN WELLS HANSEN
EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER
SITE 2

EXISTING CONDITIONS, DEMOLITION, AND EROSION AND SEDIMENT CONTROL PLAN

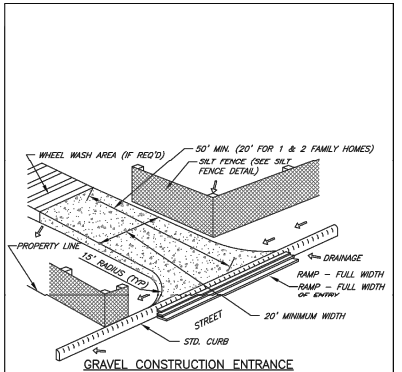
1/4 SECTION:
JOB NO.: Exxxxx
SHEET NO.: CE01
11 OF 12



EROSION CONTROL MANUAL

TEMPORARY SEDIMENT FENCE

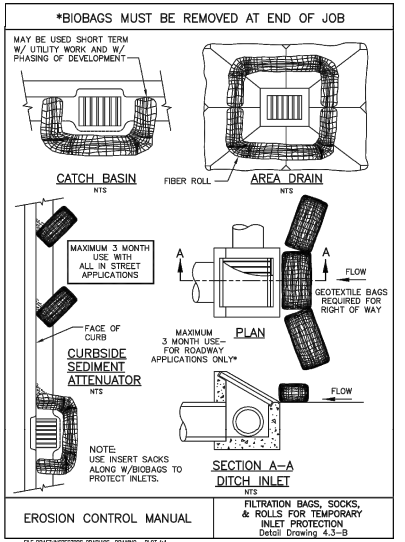
Detail Drawing 4.3–A



GRAVEL CONSTRUCTION ENTRANCE

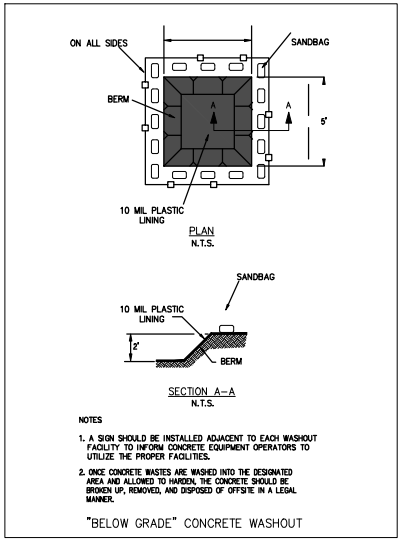
EROSION CONTROL MANUAL | GRAVEL CONSTRUCTION ENTRANCE

Detail Drawing 4.2–A

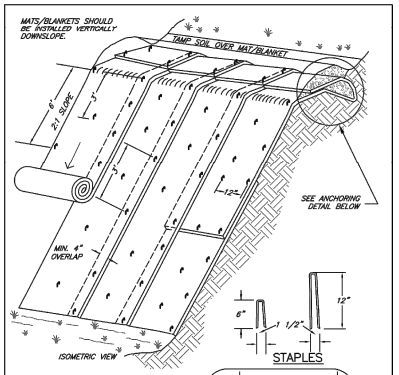


EROSION CONTROL MANUAL | FILTRATION BAGS, SOCKS, & ROLLS FOR TEMPORARY INLET PROTECTION

Detail Drawing 4.3–B

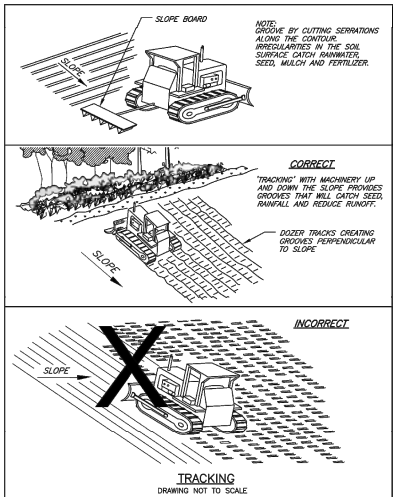


"BELOW GRADE" CONCRETE WASHOUT



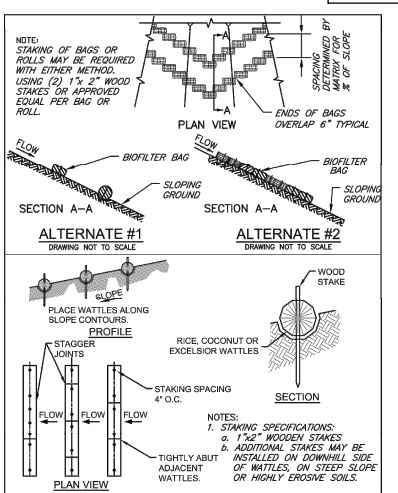
EROSION CONTROL MANUAL | EROSION BLANKETS SLOPE INSTALLATION

Detail Drawing 4.5–C



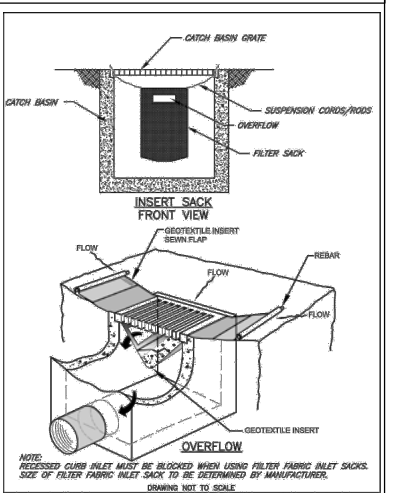
EROSION CONTROL MANUAL | SURFACE ROUGHENING

Detail Drawing 4.5–B



EROSION CONTROL MANUAL | SLOPE INSTALLATIONS: FILTRATION BAGS, SOCKS, & ROLLS

Detail Drawing 4.3–C



EROSION CONTROL MANUAL | INLET INSERT

Detail Drawing 4.3–G

P:\0493–017 TEMPORARY ALTERNATE SHELTER SITE 2\DWG\CIVIL\EXXXXX_CE02.DWG 2/9/2024 STEVE HANSEN

NO.	DATE	DESCRIPTION	APPD.
		REVISION	

ARP'D(S) USP'D:	
ROTATION ANGLE:	0d0'0"
CONSTRUCTED BY:	
PROJECT COMPLETED:	
MAP CORRECTED BY:	CHECKED BY:
	FINAL MAP DATA
DRAWING NAME:	EXXXXXX_CE02.dwg

DESIGNED BY	DATE APPROVED
DRAWN BY	ENGR. SUPV.
CHECKED BY	ENGR. DIV. MGR.
RES. DESIGN LEAD	CONST. DIV. MGR.

CITY OF PORTLAND

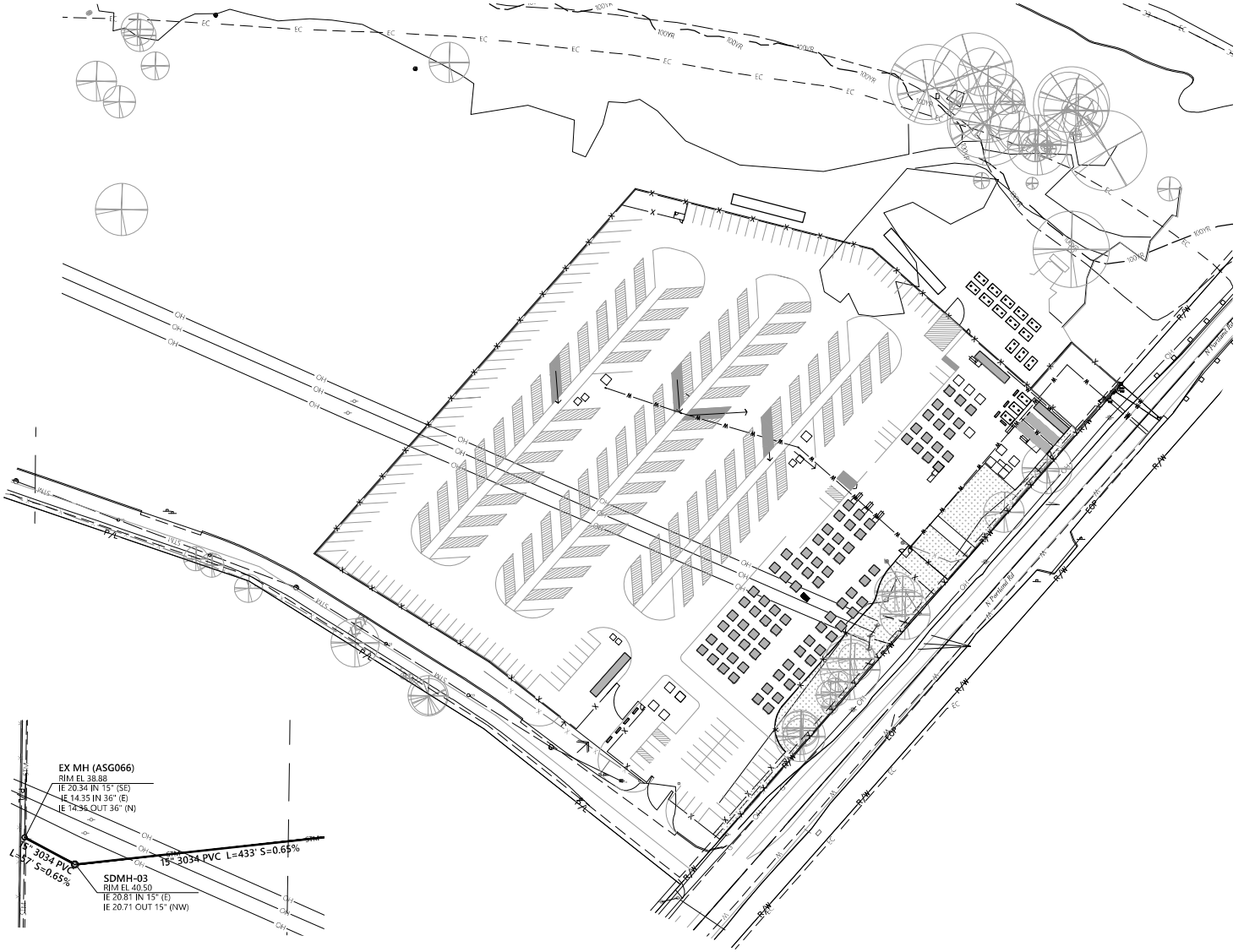
ENVIRONMENTAL SERVICES

REGISTERED PROFESSIONAL ENGINEER 9291EPE Steve Hansen MAY 12 1998 STEVEN WELLS HANSEN EXPIRES: 6/30/2025

TEMPORARY ALTERNATE SHELTER SITE 2

EROSION AND SEDIMENT CONTROL DETAILS

1/4 SECTION	
JOB NO.	Exxxxx
SHEET NO.	CE02
	12 OF 12


EX MH (ASG066)
RIM EL 38.88
IE 20.34 IN 15" (SE)
IE 14.35 IN 36" (E)
IE 14.35 OUT 36" (N)
15" 3034 PVC L=47' S=0.65%
15" 3034 PVC L=433' S=0.65%
SDMH-03
RIM EL 40.50
IE 20.81 IN 15" (E)
IE 20.71 OUT 15" (NW)
N Portland Rd
100YR
EC
OH
R/W

THIS PROJECT PERMITTED UNDER THE AUTHORITY OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)
Western Region Salem Office
4026 Fairview Industrial Dr. SE
Salem, OR 97302
503-378-8240

TASS 2

T:1N, R:1E, SEC:05, TL:1000

10505 N Portland Rd, Portland, OR 97203, USA

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Table of Contents

Page 1	Cover Sheet	Page 7	Holding Tanks (A1-5 & B1-5)
Page 2	Construction Specifications	Page 8	Equalization Tank (E1)
Page 3	System Schematic	Page 9	Recirculation Tanks (R1 & R2)
Page 4	Site Plan Overall	Page 10	Trash Tank Section
Page 5	Site Plan Tank Area	Page 11	Holding Tank Section
Page 6	Trash Tanks (T1-T3)	Page 12	Section C-C and Pump Out Basin

Project Description

A Temporary Housing and Shelter Site is proposed for 71 RV spaces, 90 living pods, and 143 cars serving an estimated 418 guests and 30 staff. The estimated peak daily flow is 15,000 gallons per day.

All wastewater will be generated by guests and staff using the First Aid office and the 2 community restroom/showers and laundry facilities. There is a kitchen to serve food prepared off-site. There are no RV hookups. There are also 6 portable toilets with hand washing stations.

Residential strength sewage will flow from each of the restrooms (designated H1-2) and the First Aid Office (O-5) into 1500 gallon tanks (designated T1-3). Effluent from these tanks will flow by gravity and comingle in a 3000 gallon dosing tank (Tank E1). This effluent will be dosed to a splitter basin equally dividing the flow into two parallel series of 1500 gallon tanks (A1-5 and B1-5). Effluent from each row of tanks will flow separately into one of two 3000 gallon tanks (R1 and R2) for storage. Tank R1 is fitted with an audible and visual alarm activated at 75% capacity, to indicate the need for pumping out the holding tank system.

Pump out will be via a remote pipe connection, with effluent pumped from tanks E1, R1 and R2 through a 3" pipe fitted with a quick disconnect for direct connection to the pumper truck's vacuum hose. Pumps in each tank will be manually operated until the tank is emptied. These controls will be located in a shed near the pump out basin.

This temporary holding tank system is designed to accommodate the future phase of onsite treatment and disposal, or as pretreatment before being released to a municipal sewer system.

ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is (503) 232-1987).

PERMITS TO NOTIFY EXCAVATOR OF REQUIREMENTS OF LAW

952-001-0030 Any entity authorized to issue permits for construction which requires excavation shall include on such permits the language set out in OAR 952-001-0020.

Site and Soils

- Domestic water supply by: Portland Water Bureau

INSTALLER: Superior Underground, LLC

LICENSE #: 39230

VICINITY MAP

Page 01
2/6/2024
City of Portland-TASS 2
T:1N, R:1E, SEC:05, TL:1000
COVER SHEET

DESIGN BY:
DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
FAX 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

CHECK OFF	
	GENERAL STANDARDS
	ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone nu
	All work and material shall conform with OAR 340 Div. 71 & 73 approved design permit, and appropriate laws. Permits relating (but not limited) to plumbing, electrical, and grading must be coordinated with the on-site system installer and designer.
	Minor modifications to accommodate stumps, boulders or other unforeseen obstacles may be needed. Major modification cannot be performed without re-design and regulatory approval.
	If the installation contractor (installer) notes any conflicts with applicable State and/or local laws, rules or requirements, he shall request a clarification before ordering or installing affected materials or work. This may include and is not limited t
	Installer is to obtain copies of all necessary permits, authorizations, licenses etc. prior to initiating construction, including that specialty design work designated to a subcontractor which is directly or indirectly related to the system construction,d
	Installer shall request and obtain utility locates by a qualified service for all potential underground utilities before excavation work commences.
	Installer shall maintain any and all survey monuments, which are affected by work and activities, related to the projects. Monuments, if damaged by the installer, shall be reset by a licensed surveyor at the installer's expense.
	All materials and equipment shall be of the type, model and brand listed for the manufacturers specified, unless otherwise authorized by the system designer. Substitution of materials and equipment shall receive pre-authorization and the contractor/insta
	Installer shall prepare, maintain and provide, at completion of the project, drawings detailing the construction "as-built" and shall provide the owner & designer with the manufacturer's current specification and operating data on all equipment installed
	TANK (S)
	Seal all joints and seams with manufacturer-approved sealants. Provide material submittal, and all means and methods for tank and accessory testing.
	Odor proof: Seal riser lid to contact with closed cell plastic foam sheet, or single-side adhesive neoprene foam tape.
	Riser: Tank must be equipped with a watertight riser, with minimum 18" inside diameter, with tank access brought to or above finish grade. Riser must be fiberglass bonded to tank adapter w/ adhesive.
	Knockouts: Perforations and unused knockouts must be grouted or otherwise sealed.
	Watertight: After installation, Tank must be subject to 24 hour test for watertightness. Fill to a maximum 2" into riser. Mark water level, time and date. There may be no more than 1 gallon leakage over 24 hour period.
	THE ABOVE SPECIFICATIONS ARE IN ADDITION TO AND DO NOT REPLACE THE MANUFACTURERS WRITTEN INSTALLATION AND TESTING PROCEDURE REQUIREMENTS.

	ELECTRICAL COMPONENTS
	Wiring of pumps and controls shall be performed by a licensed electrician under the auspices of an electrical permit secured from the local jurisdiction. For details of electrical system, pump controls, floats, and the level of the float settings see the
	Splicing of wires at the splice box inside the tank risers shall be done using the heat shrink connectors provided by the manufacturer or with an approved watertight electrical connector nut.
	Wiring from the splice box to the source or the control panel shall be protected in UL approved PVC conduit, constructed watertight. Pump line voltage shall have water proof insulation such as THW, THWN, or HHW. Wire for all connections shall be 14 gaug
	"Seal offs" shall be installed between the splice box and the power source or control panel, either in the horizontal just outside the riser or in the vertical just below the control panel or per connection. "Seal offs" shall be installed per manufacture
	Wiring shall be color coded or numbered and the schedule written inside the control panel or on the wiring diagram.
	Upon completion, the apparatus shall be tested for operation and correctness. Available voltage, pump run voltage and pump run amperage shall be measured and recorded inside the control panel.
	The wiring diagram shall be retained on site (preferably in control panel enclosure) and any as-built notes or comments entered, initialed, and dated.
	CONTROL PANEL (S)
	The electrician shall label the control panel or electrical panel with his business name and the permit number and date of installation.
	Control panel shall be installed per manufacturers written instructions; alarm shall be audible from the living/working space. Pump and alarm must be on separate circuits.
	Panel shall be in accordance with NEMA 4X rating. Panel enclosure shall meet NEMA 4X requirements.
	Panel shall be installed within 50' of tank and preferably within sight of the tank.
	OTHER
	Setbacks: Maintain required setbacks
	COLLECTION SYSTEM
	Contractor to obtain plumbing permit.
	Do not use the plumbing system for disposal of non-biodeegradable and/or toxic materials such as paints, thinners, gasoline, motor oil, drain cleaners, or other harsh chemicals.
	Do not use the plumbing system for disposal of cooking grease, diapers, sanitary napkins, rags, cigarette butts, rubber or plastic products
	Water softener backwash, storm or ground water sources, floor drains not to be connected to the septic system.
	DISTRIBUTION AND TRANSPORT LINES
	Road crossing: Sleeve transport pipe in Sch. 40 PVC, installed a minimum of 18" below grade, and bedded in ¾ minus to the surface.
	Road/Driveway crossing: Use Sch. 40 or Sch. 80 PVC, installed a minimum of 24" below grade, and bedded in ¾ minus to the surface.
	Trace wire: Provide an electrically continuous 18 gauge, green-jacketed copper wire in trench, above the pipe, for the full length of all pressure or gravity transport lines, accessible at the source end.
	DESIGNER INSPECTIONS
	During system construction, the designer, Environmental Management Systems (EMS) shall inspect all components of the installation. These inspections are to be coordinated with the installer and the Oregon Department of Environmental Quality.

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Page 02

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

CONSTRUCTION SPECIFICATIONS

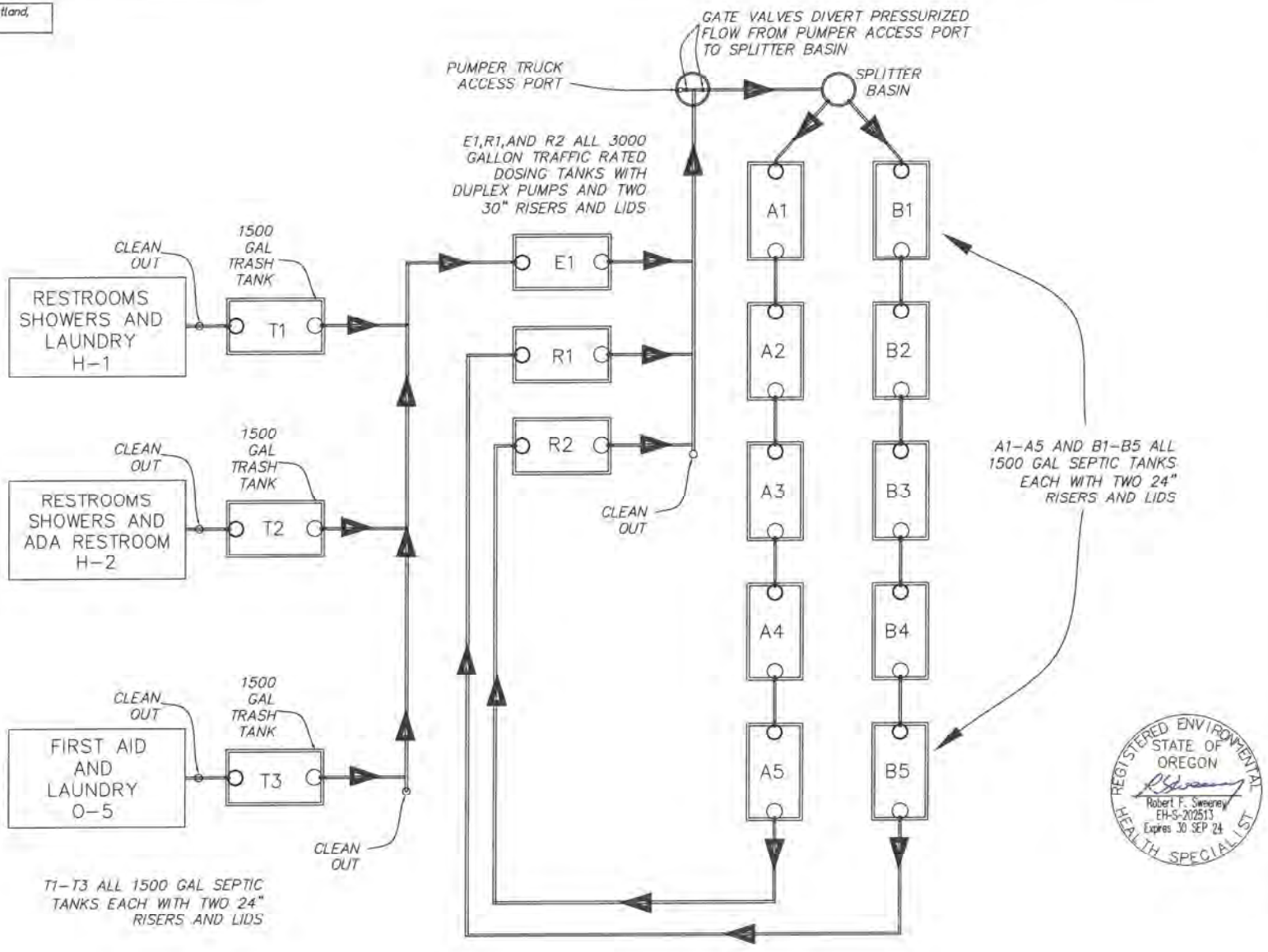
DESIGNED BY: DRAWN BY:

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
fax 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA



REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Page 03

2/6/2024

City of Portland- TASS2

T:1N, R:1E, SEC:05, TL:1000

SCHEMATIC DIAGRAM

DESIGNED BY:

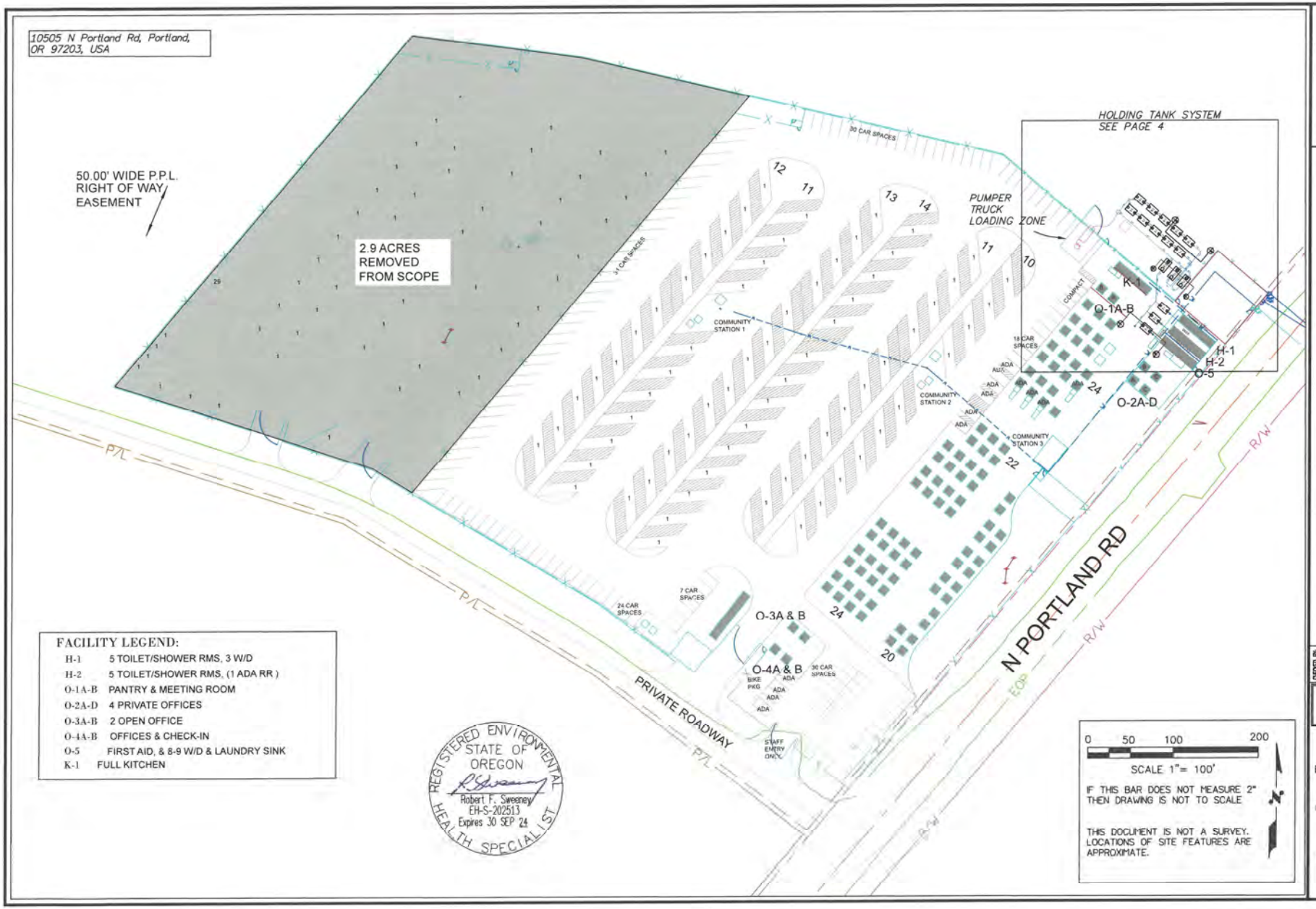
DRAWN BY:

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

tel 503-353-9691
fax 503-353-9695
www.envmgtsys.com

4080 SE International Way
Suite B112
Milwaukie, OR 97222



FACILITY LEGEND:

H-1	5 TOILET/SHOWER RMS, 3 W/D
H-2	5 TOILET/SHOWER RMS, (1 ADA RR)
O-1A-B	PANTRY & MEETING ROOM
O-2A-D	4 PRIVATE OFFICES
O-3A-B	2 OPEN OFFICE
O-4A-B	OFFICES & CHECK-IN
O-5	FIRST AID, & 8-9 W/D & LAUNDRY SINK
K-1	FULL KITCHEN

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

0 50 100 200
SCALE 1"= 100'

IF THIS BAR DOES NOT MEASURE 2" THEN DRAWING IS NOT TO SCALE

THIS DOCUMENT IS NOT A SURVEY. LOCATIONS OF SITE FEATURES ARE APPROXIMATE.

Page 04

2/6/2024

SCALE: 1"= 100'

City of Portland-TASS 2

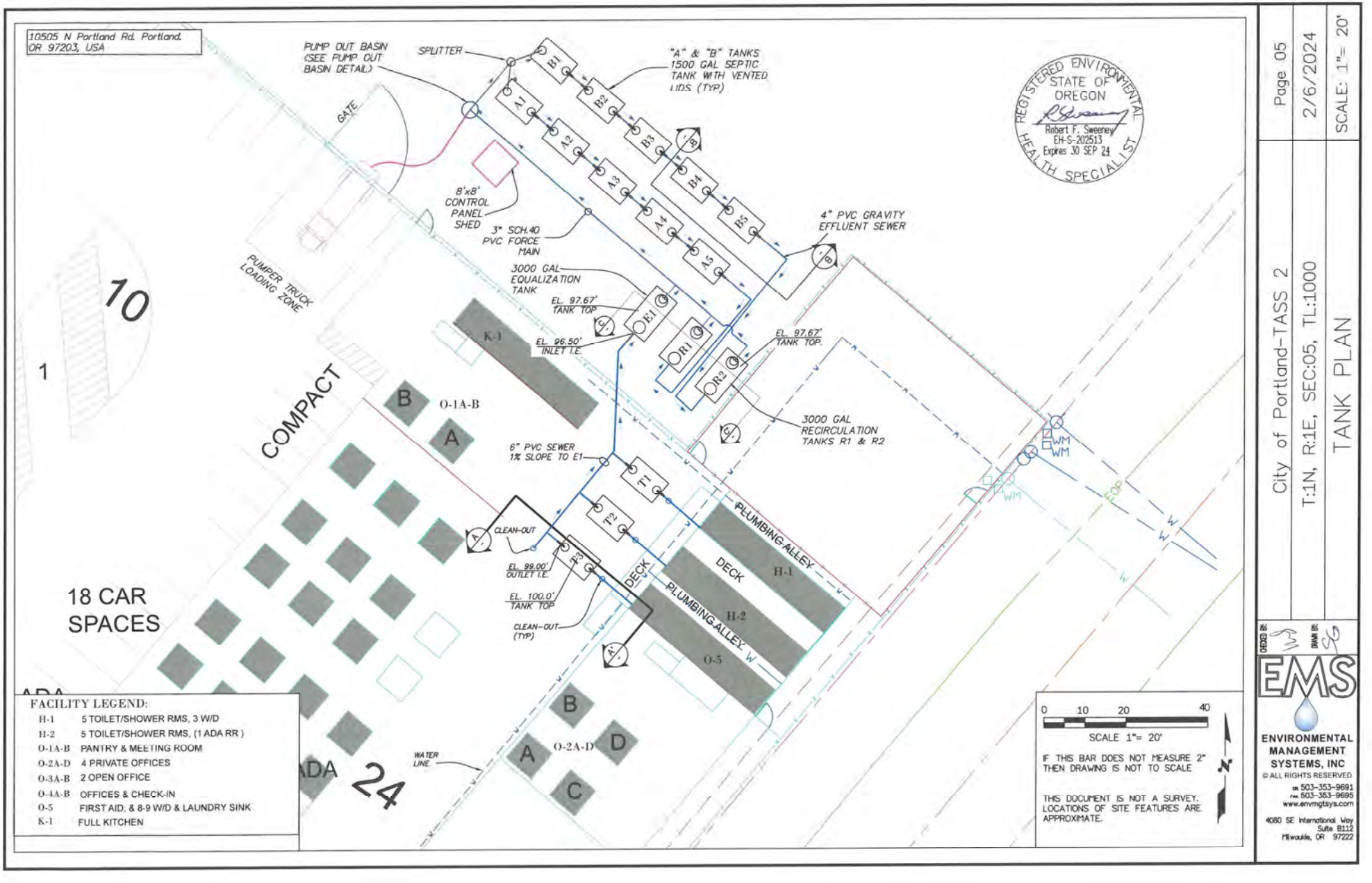
T:1N, R:1E, SEC:05, TL:1000

SITE PLAN- OVERALL

CHKD BY: DRAW BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
fax 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222



FACILITY LEGEND:

H-1	5 TOILET/SHOWER RMS, 3 W/D
H-2	5 TOILET/SHOWER RMS, (1 ADA RR)
O-1A-B	PANTRY & MEETING ROOM
O-2A-D	4 PRIVATE OFFICES
O-3A-B	2 OPEN OFFICE
O-4A-B	OFFICES & CHECK-IN
O-5	FIRST AID, & 8-9 W/D & LAUNDRY SINK
K-1	FULL KITCHEN

Page 05

2/6/2024

SCALE: 1"= 20'

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK PLAN

CHKD BY:

DWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

ph 503-353-9691
FAX 503-353-9695
www.envmgtsys.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

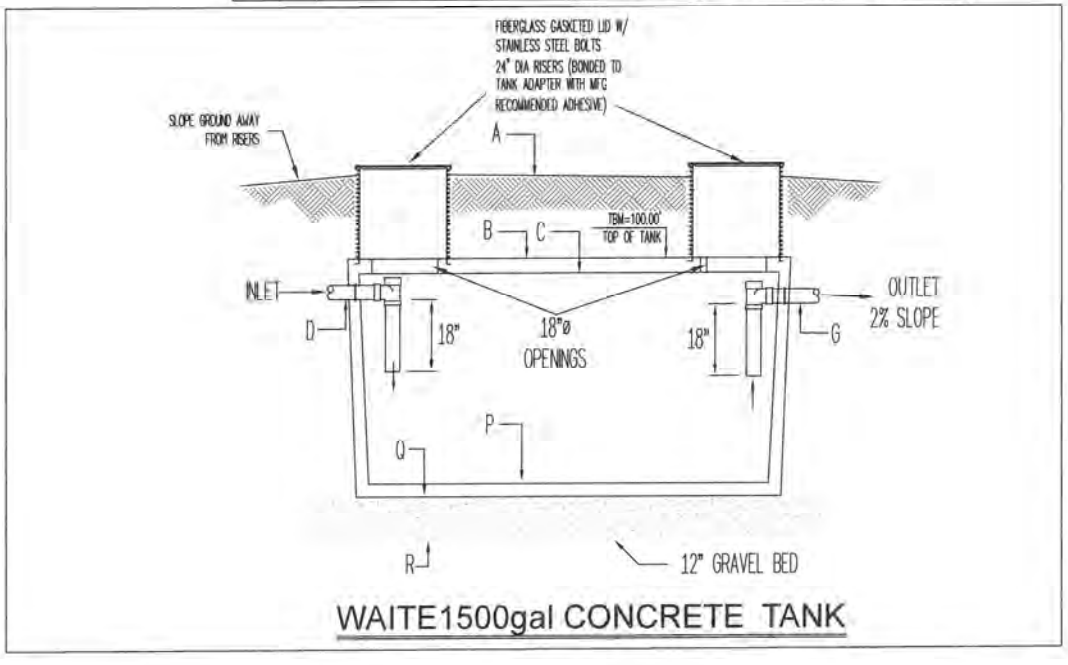
10505 N Portland Rd, Portland, OR 97203, USA

Trash TankS (T1-T3)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	84.00	22.00	101.83
B	Top of Tank	62.00	0.00	100.00
C	Ceiling of Tank	57.00	-5.00	99.58
D	Inlet Invert	50.00	-12.00	99.00
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	48.00	-14.00	98.83
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-62.00	94.83
Q	Bottom of Tank	-4.00	-66.00	94.50
R	Excavation	-16.00	-78.00	93.50

TBM= 100.00' USING TOP OF TRASH TANKS

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



WAITE1500gal CONCRETE TANK

Page 05

2/6/2024

City of Portland- TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK DETAILS (T1- T3)

DESIGN BY: WD

DRAWN BY: SG

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

4080 SE International Way
Suite B112
Milwaukie, OR 97222

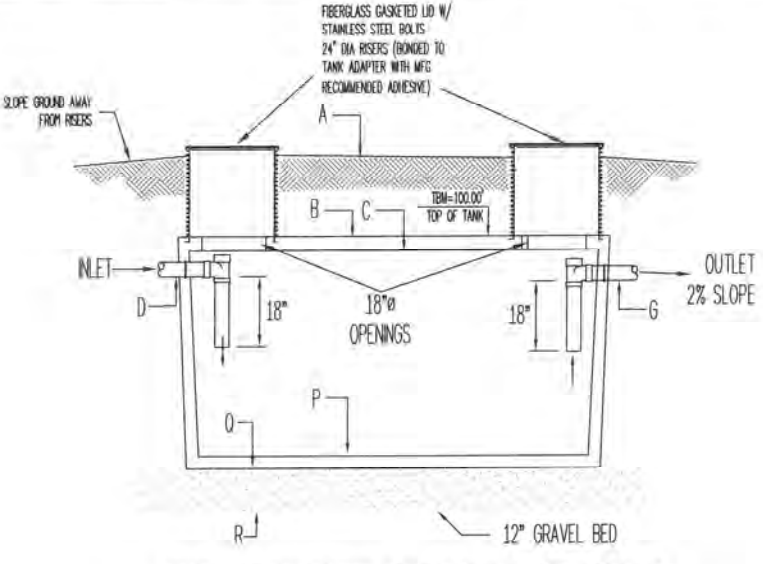
10505 N Portland Rd, Portland, OR 97203, USA

Holding Tanks A1 and B1

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	83.00	22.00	101.83
B	Top of Tank	61.00	0.00	100.00
C	Ceiling of Tank	56.00	-5.00	99.58
D	Inlet Invert	51.00	-10.00	99.16
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-61.00	94.91
Q	Bottom of Tank	-3.50	-64.50	94.62
R	Excavation	-15.50	-76.50	93.62

EACH SUBSEQUENT TANK (NUMBERS 2–5) IS SET 2" DEEPER THAN THE ONE PRECEDING IT. SEE PAGE 10.

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



WAITE1500gal CONCRETE TANK

Page 06

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

HOLDING TANK DETAILS

CHKD BY: WHD DRWN BY: SB

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

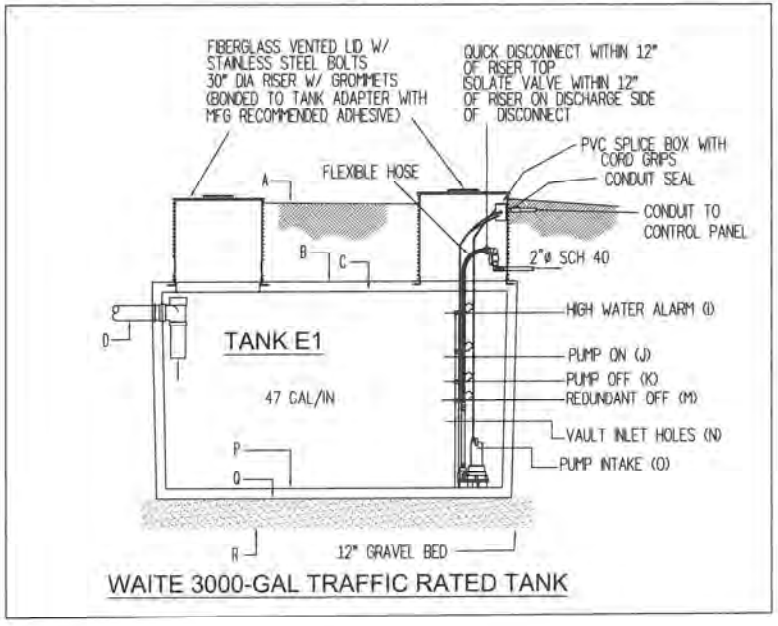
503-353-9681
503-353-9685
www.emsplc.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

Equalization Tank (E1)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	136.18	50.68	101.83
B	Top of Tank	85.50	0.00	97.61
C	Ceiling of Tank	77.50	-8.00	96.94
D	Inlet Invert	71.50	-14.00	96.44
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	na	na	na
J	Pump On / 75% Alarm	55.00	-30.50	95.07
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-85.50	90.48
Q	Bottom of Tank	-4.50	-90.00	90.11
R	Excavation	-16.50	-102.00	89.11

TBM=100.00' AT TOP OF TRASH TANKS



WAITE 3000-GAL TRAFFIC RATED TANK

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires: 30 SEP 24

Page 07

2/6/2024

City of Portland TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK DETAILS E1

DESIGN BY:

DRAWN BY:

EMS

ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

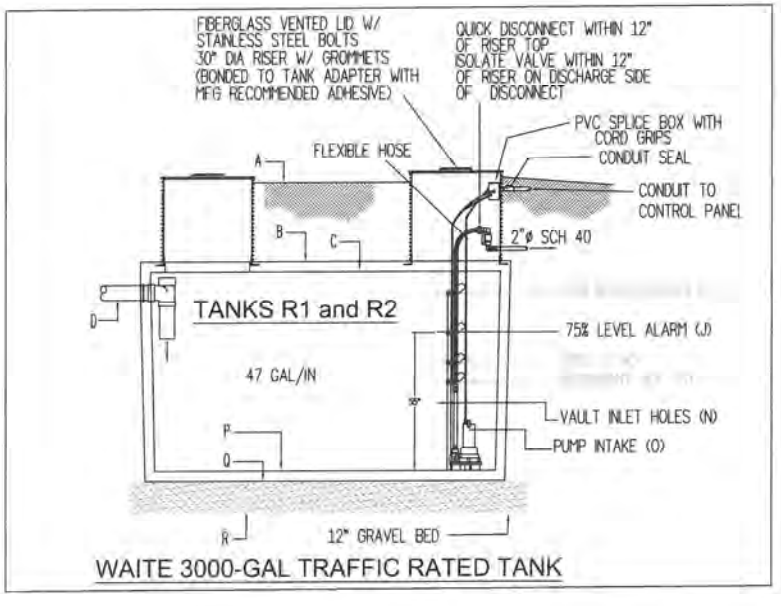
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Recirculation Tanks (R1 and R2)

Letter	Component	Elevation from Tank Floor (Inches)	Elevation from Tank Top (Inches)	Estimated Elevation from TBM (feet)
A	Ground Surface	136.18	50.68	101.83
B	Top of Tank	85.50	0.00	97.61
C	Ceiling of Tank	77.50	-8.00	96.94
D	Inlet Invert	71.50	-14.00	96.44
E	RSV Manifold	na	na	na
F	RSV Stinger Seat	na	na	na
G	Outlet Invert	na	na	na
H	Outlet Opening	na	na	na
I	Alarm (HWA)	43.22	-42.28	94.08
J	Pump On	na	na	na
K	Pump Off	na	na	na
L	na	na	na	na
M	Redundant Off	na	na	na
N	Vault Inlet Holes	na	na	na
O	Pump Intake	na	na	na
P	Floor of Tank	0.00	-85.50	90.48
Q	Bottom of Tank	-4.50	-90.00	90.11
R	Excavation	-16.50	-102.00	89.11



WAITE 3000-GAL TRAFFIC RATED TANK

Page 08

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

TANK DETAILS (R1 & R2)

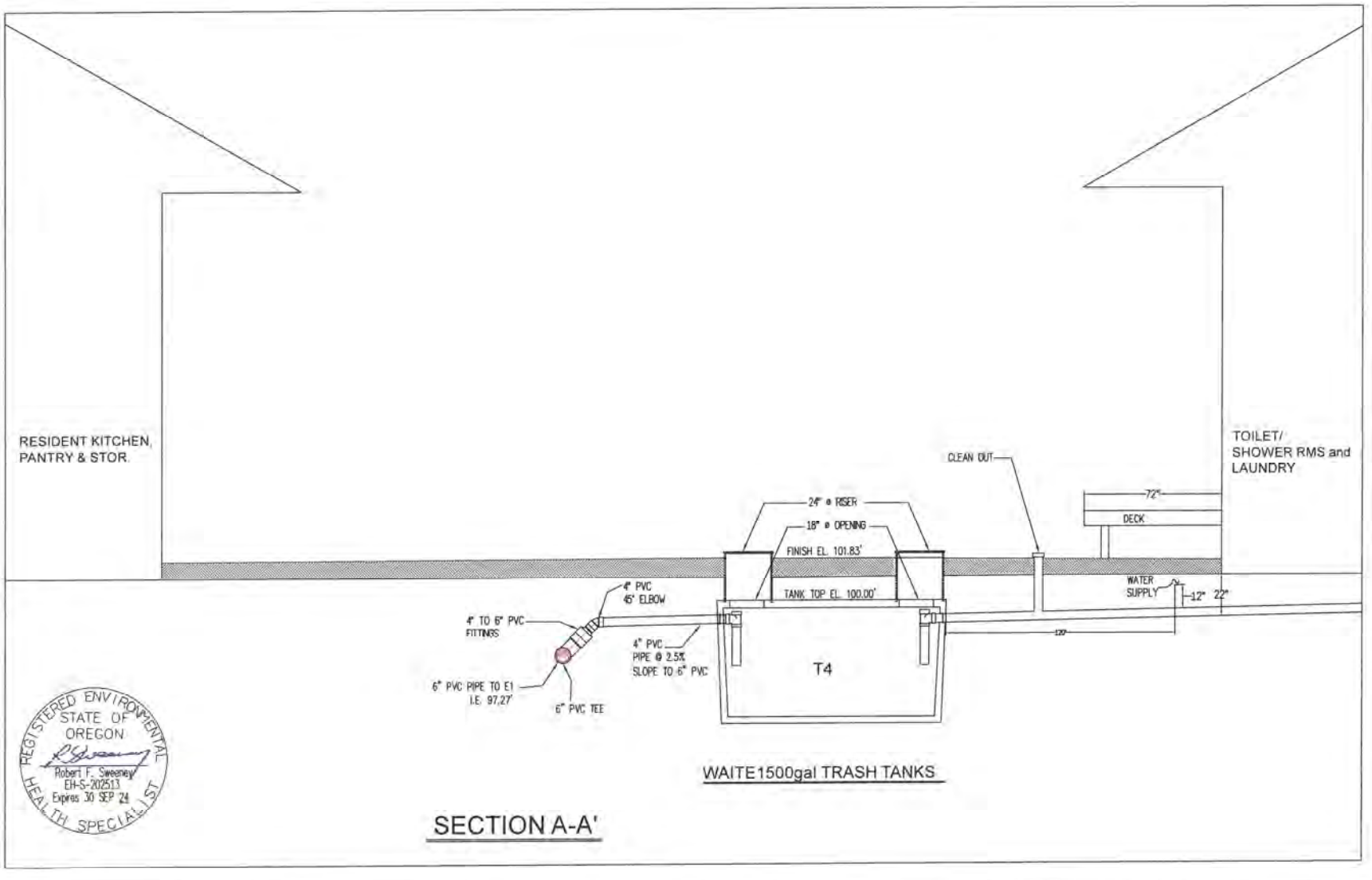
CHKD BY:

DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

503-353-9081
503-353-9085
www.emsyc.com
4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA



WAITE1500gal TRASH TANKS

SECTION A-A'

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24

Page 09

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

SECTION A-A'

CHKD BY:

DRAWN BY:

EMS

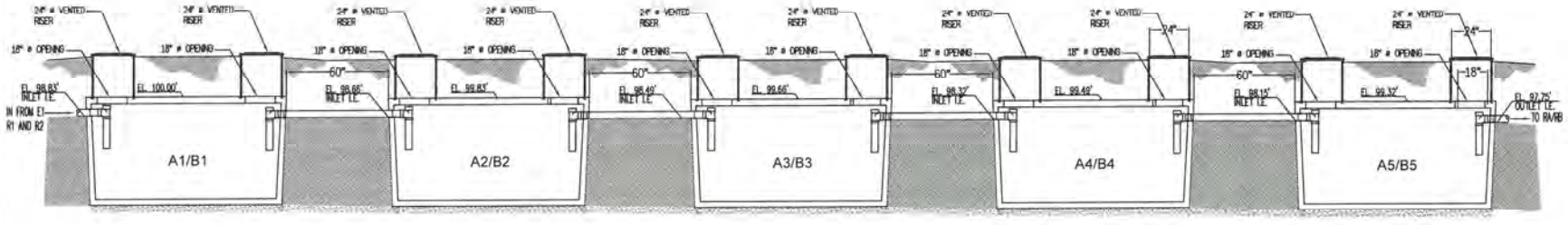
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC

4080 SE International Way
Suite B112
Milwaukie, OR 97222

10505 N Portland Rd, Portland, OR 97203, USA

NOTES
- USE WAITE CONCRETE 1500 GALLON TANKS
- TANK MINIMUM BURIAL DEPTH 24"
- TANKS TO SET ON 12" BED OF 3/4 MINUS GRAVEL
- TANKS TO BE BACKFILLED WITH 3/4 MINUS GRAVEL TO FINISH GRADE
- EACH TANK IN THE SERIES IS SET 2" LOWER THAN THE PRECEDING UPSTREAM TANK

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



SECTION B-B'

Page 10

2/6/2024

City of Portland TASS 2

T:1N, R:1E, SEC:05, TL:1000

SECTION B-B'

DESIGNED BY:

DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC
4080 SE International Way
Suite B112
Milwaukie, OR 97222

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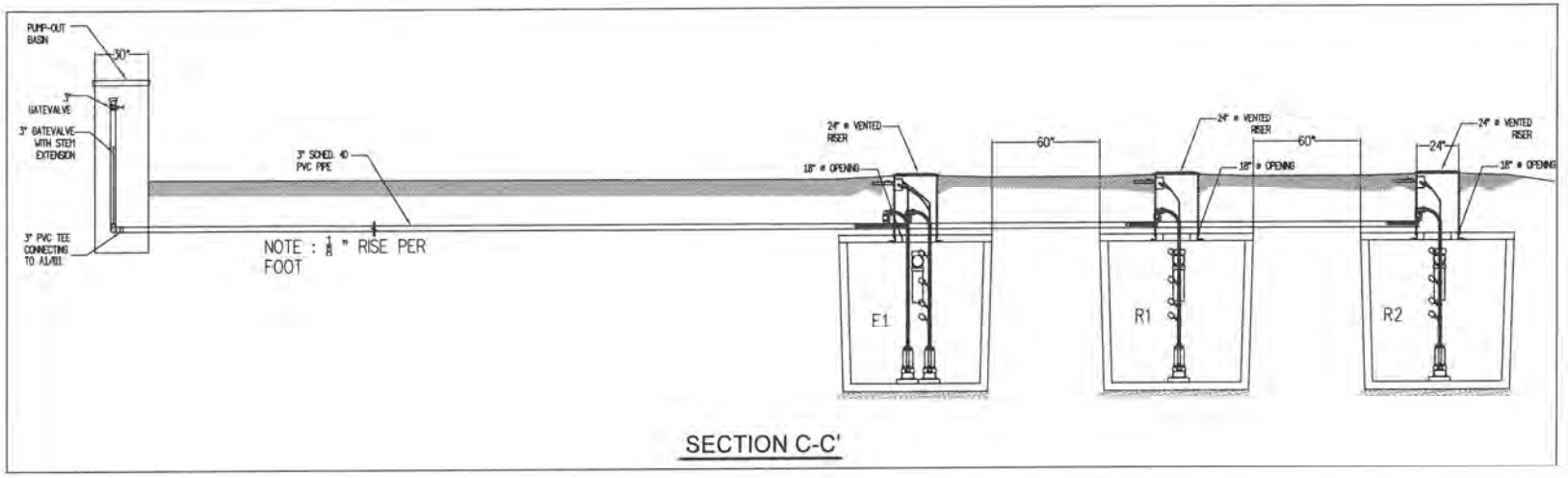
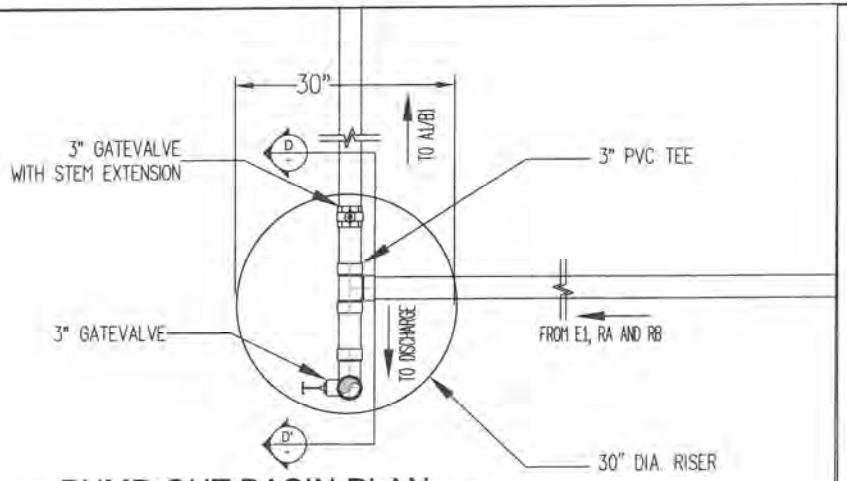
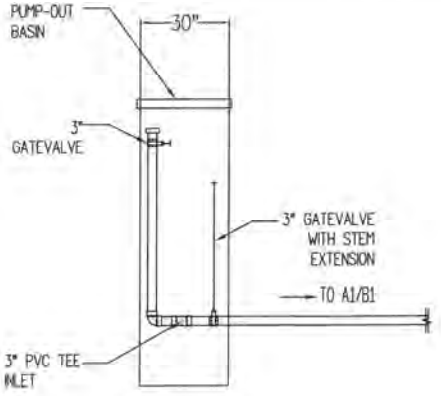


SECTION C-C'



PUMP-OUT BASIN PLAN

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
STATE OF OREGON
Robert F. Sweeney
EH-S-202513
Expires 30 SEP 24



SECTION D-D'

Page 11

2/6/2024

City of Portland-TASS 2

T:1N, R:1E, SEC:05, TL:1000

SECTION C-C' AND PUMP OUT BASIN DETAILS

DESIGN BY:

DRAWN BY:

EMS
ENVIRONMENTAL MANAGEMENT SYSTEMS, INC
4080 SE International Way
Suite B112
Milwaukie, OR 97222

APPENDIX C

Oregon Department of Environmental Quality No Longer Contained-In Determination and ECSI No. 3337 Certificate of Completion

Oregon DEQ Contained-In Determination Approval Signoff Sheet

Site Name: Larsen North – City of Portland (ECSI No. 186)
Location: 10505 North Portland Road, Portland, Oregon 97203
Media: Soil

Approved Disposal Location: Hillsboro Landfill

DEQ Project Manager: _____ Date: 12/7/2023
(Sarah Greenfield)

DEQ HW Staff: _____ Date: 12/7/2023
(Zeb Bates)

DEQ HSW Program Manager: Audrey O'Brien _____ Date: 12/07/2023
(Audrey O'Brien)

DEQ Cleanup Program Manager: _____ Date: 12/07/2023
(Kevin Parrett)

Memo

Date: **December 6, 2023**

To: **Project File, Larsen North – City of Portland, ECSI 186**
From: **Sarah Greenfield, Project Manager, NWR Cleanup Program**
Through: **Zeb Bates, Hazardous Waste Inspector**
And: **Audrey O'Brien, DEQ HW/SW Program Manager**
Kevin Parrett, NWR Cleanup Program Manager

Subject: **No Longer Contained-In Determination**
Larsen North – City of Portland (ECSI 186)
10505 North Portland Road
Portland, Oregon 97203

State of Oregon Department of Environmental Quality

Northwest Region Cleanup Program,
Address 700 NE Multnomah Street, Suite 600 Portland, OR 97232
Phone: 503-229-5245

Fax: 503-229-5696
Contact: Sarah Greenfield
Email: Sarah.Greenfield@deq.oregon.gov
www.oregon.gov/DEQ

The DEQ's Northwest Region Environmental Cleanup and Hazardous Waste programs have prepared this *No Longer Contained-In Determination* for soil and investigation derived waste (IDW) generated during well abandonment and subsurface investigations at the North Larsen voluntary cleanup site at 10505 North Portland Road, Portland Oregon (the Site). This determination was prepared in response to a request entitled *Request for No Longer Contained-In Determination for North Larsen Property* dated October 2, 2023, prepared by Parametrix on behalf of the City of Portland, Bureau of Environmental Services (BES). The request is included in this determination as Attachment 1.

The Site has been an industrial property since at least the 1940s. The Site has been used as a shingle mill, used for boat manufacture and repair, materials storage, diesel engine repair and rebuilding, and tank-truck washing companies. More recently it has been vacant, acquired by the City of Portland for potential expansion of the nearby Columbia Boulevard Wastewater Treatment Plan. Columbia Slough is located along the Site's northern property line.

The contaminants of concern (COCs) in environmental media at the Site include volatile organic compounds (VOCs), specifically 1,1-Dichloroethylene (1,1-DCE), tetrachloroethylene (PCE), Trichloroethylene (TCE), and Vinyl Chloride (VC), petroleum hydrocarbons, and metals associated with historical use. DEQ considers PCE and TCE contamination in environmental media from this Site to potentially contain listed hazardous waste with waste code of F002.

Foundry waste from the adjacent Columbia Steel property to the west was previously stored in the westernmost portion of the Site, with City of Portland approval. This waste was subsequently removed. The foundry waste stored on Site and later removed has been the subject of numerous sampling efforts, reviewed by both Cleanup and Materials Management Program personnel at DEQ. Sampling has not identified the stored foundry material to exceed characteristic waste standards.

Drums containing cuttings from the over-drilling and decommissioning of a single Site monitoring well (MW-A, located near MW-6D) were previously found to contain concentrations of PCE which designated it as a hazardous waste (> 5 ppm). These drums were disposed of in 2020 at a Subtitle C landfill and no material from this well decommissioning remains on site.

Memo

This No Longer Contained-In Determination is for the following types of waste stored on Site:

- Thirty-one 55-gallon steel drums of investigative-derived waste (IDW) soil were generated in 2016 by overdrilling and decommissioning several monitoring wells that remain on Site. The IDW drums are currently stored on Site in sealed drums labeled as non-hazardous waste.
- A pile of soil (assumed to be less than 90 tons) that was generated in 2020 by over-excavating the foundry waste that was previously stored on Site. Over-excavation of the foundry waste resulted in a soil pile and excavation pit that remain on Site. The soil pile is covered with plastic sheeting secured with sandbags.

All of the soil and IDW drums have been stored in the area of contamination (AOC) on the Site.

On behalf of the City of Portland, Parametrix collected the following samples representative of the materials subject to this determination:

- Six soil samples were collected on March 15, 2016, from drums containing cuttings from over-drilling and decommissioning monitoring wells MW-1, MW-2, MW-C, MW-6, MW-6D, MW3, MW-4, and MW-B, MW-D, and MW-5 (CUTTINGS_MWBD5, CUTTINGS_MW34, CUTTINGS_MW6D, CUTTINGS_MW2C, CUTTINGS_MW1, CUTTINGS_MW6). The six IDW drum samples were collected as composite samples generated by collecting and compositing subsamples from 3 to 4 drums representative of one or more of the abandoned wells. Soil samples collected from the IDW drums were analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method 8260D. Select IDW drum samples were also tested for a variety of metals via EPA Method 6020 as follows:
    - CUTTINGS_MWBD5 – Total Lead;
    - CUTTINGS_MW34 – Total Chromium and Total Lead; and
    - CUTTINGS_MW2C – Total RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).
- One soil sample was collected on May 28, 2020, using an excavator to scrape the bottom and sides of the pit (CS-15-Pit) created by over-excavating the foundry waste. The pit sample was tested for the following analyses:
    - VOCs – EPA Method 8260D;
    - Total metals – EPA Method 6020;
    - Toxic Characteristic Leaching Procedure (TCLP) lead – EPA Method 6020;
    - Total petroleum hydrocarbons, gasoline range – NWTPH-Gx;
    - Total petroleum hydrocarbons, diesel range – NWTPH-Dx;
    - Polycyclic aromatic hydrocarbons (PAHs) – EPA Method 8270-SIM; and
    - Polychlorinated biphyenyls (PCBs) as Aroclors – EPA Method 8082.
- One composite soil sample was collected on June 23, 2020, from the resultant soil pile (CS-17 Pile). The soil pile sample was analyzed for the following metals via EPA Method 6020:

DEQ
State of Oregon
Department of Environmental Quality

Northwest Region Cleanup Program,
Address 700 NE Multnomah Street, Suite 600 Portland, OR 97232
Phone: 503-229-5245

Fax: 503-229-5696
Contact: Sarah Greenfield
Email: Sarah.Greenfield@deq.oregon.gov
www.oregon.gov/DEQ

- Total Priority Pollutant 13 metals (antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc) – EPA Method 6020; and
- Total manganese – EPA Method 6020.

All samples were collected in laboratory-provided containers and submitted to the City of Portland Water Pollution Control Laboratory in Portland Oregon under proper chain-of-custody procedures. DEQ reviewed the laboratory results for the hazardous constituents from listed waste per DEQ guidance *Conducting Contained-In Determinations for Environmental Media* dated January 9, 2020. Low levels of PCE and TCE were detected in select IDW drums. The results of the chemical analysis for PCE and TCE are tabulated below. The complete soil analytical results are presented in Tables 1 and 2 of Attachment 1.

State of Oregon Department of Environmental Quality

Northwest Region Cleanup Program,
Address 700 NE Multnomah Street, Suite 600 Portland, OR 97232
Phone: 503-229-5245

Fax: 503-229-5696
Contact: Sarah Greenfield
Email: Sarah.Greenfield@deq.oregon.gov
www.oregon.gov/DEQ

Table 1. Media Pollutant and Applicable Risk-Based Concentrations

Sample ID	PCE Concentration (ug/Kg)	TCE Concentration (ug/Kg)
CUTTINGS_MW6D	975	111
CUTTINGS_MW2C	124	ND
CUTTINGS_MW1	57.2	ND
CS-17-Pile	NA	NA
CS-15-PIT	ND	ND
Soil Direct Contact Occupational RBC	**1,000, 000**	**51,000**
20 x TCLP Limit for Soil	**14,000**	**10,000**

A No Longer Contained-In Determination is needed to show that the soils planned for disposal are not characteristic hazardous waste; and that concentrations of PCE and TCE are below protective levels, and if applicable, Land Disposal Requirements (LDRs).

To demonstrate that the soil no longer "contains" hazardous waste, the following conditions need to be met:

1. The soil (a solid) must not exhibit a characteristic of hazardous waste (must not be reactive or toxic). The potential for soil containing a waste to exhibit the toxicity characteristic is evaluated through comparison of constituent concentrations in leachate, extracted from the waste, using the Toxicity Characteristic Leaching Procedure (TCLP), with the limits specified at Title 40, Part 261.24 of the Code of Federal Regulations (40 CFR 261.24). Only the pit soil sample (CS-15-PIT) was submitted for TCLP analysis for lead. The TCLP lead concentration was 0.029 mg/L which is well below the TCLP limit for lead (5 mg/L). TCLP Representative (total) chemical concentrations for the soil samples were compared to a value of 20 times the TCLP limit (to account for the 20 to 1

dilution inherent in the TCLP analysis method) to determine if the limits could potentially be exceeded. If the 20 times TCLP limit for any chemical is exceeded, then the waste may be a characteristic waste. The 20 times TCLP limit for PCE is 14 part per million (ppm) or 14,000 part per billion (ppb). The 20 times TCLP limit for TCE is 10 ppm or 10,000 ppb. The soil would not exceed the toxicity characteristic for PCE or TCE applying this assessment method. The soil is therefore not a characteristic hazardous waste.

2. Concentrations of hazardous constituents from listed waste must be below health-based levels. Currently, it is DEQ policy that if soil is to be taken to a lined Subtitle D facility then concentrations of hazardous constituents should be below DEQ's "Occupational" Risk-Based Concentration (RBC) for direct contact. Currently, the occupational RBCs for PCE and TCE are 1,000 ppm and 51 ppm, respectively. The concentrations of PCE and TCE detected in the pit soil and the IDW soil are well below the occupational direct contact RBC indicating the soil is a good candidate for disposal at a Subtitle C or a Subtitle D equivalent landfill.
3. RCRA Land Disposal Restrictions do not apply because the waste was not removed from the Area of Contamination before this determination.

The table above illustrates the sample results compared to the applicable DEQ RBCs and TCLP.

Underlying constituents of PCE and TCE might be present in the soil at concentrations below the minimum reporting levels (MRLs) shown in the laboratory data. Using the MRL concentrations and our knowledge of process, we can assume the following about the soil:

- It would not be ignitable, corrosive nor reactive;
- Concentrations of underlying constituents would be below Toxicity Characteristic levels;
- Concentrations of underlying constituents would be below DEQ protective levels (Occupational RBCs).

Based on the review of the data and the above findings, DEQ has determined that the pit soil and the IDW soil generated during drilling and sampling activities at the Site do not exhibit characteristics of hazardous waste. The concentrations of detected solvents in the soil samples are below the DEQ's occupational risk-based levels. The soil does not pose an unacceptable risk to industrial worker exposure under the waste management scenario proposed. Thus, the pit soil and IDW soil meet the criteria for no longer containing listed waste. The pit soil and IDW soil may be disposed of at a permitted Subtitle C or Subtitle D landfill. Parametrix or BES should contact the applicable landfill facility(ies) to verify that they are willing to accept the soil and IDW waste. If the soil or IDW waste is not managed and disposed of following these conditions of approval, this NLCI Determination does not apply, the waste remains hazardous waste and must be managed and disposed of in compliance with applicable hazardous waste laws.

DEQ
State of Oregon
Department of
Environmental
Quality

Northwest Region
Cleanup Program,
Address 700 NE
Multnomah Street, Suite
600 Portland, OR 97232
Phone: 503-229-5245

Fax: 503-229-5696
Contact: Sarah Greenfield
Email:
Sarah.Greenfield@deq.oregon.gov
www.oregon.gov/DEQ

Oregon
John A. Kitzhaber, MD, Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
FAX (503) 229-6945
TTY (503) 229-5471

August 16, 2011

Gerald Breunig
North Portland Road LLC
609 NE Repass Road
Vancouver, Washington 98655

Re: Certification of Completion
North Portland Road, LLC (former South Larsen)
ECSI No. 3337

Dear Mr. Breunig:

Enclosed is an original copy of the DEQ Certification of Completion documenting the satisfactory completion of the scope of work at the North Portland Road, LLC (NPR) site located at 10145 North Portland Road in Portland, Oregon (specified in the Consent Judgment between DEQ and NPR, Multnomah County Case Number 0512-13315). As noted in the Certification, DEQ has concluded based on the information presented to date, that the NPR site is protective of public health and the environment and requires no further action provided the land and water use restrictions outlined in the Certificate of Completion are observed.

The NPR site was placed on DEQ's Inventory of sites that have a confirmed release and need additional investigation on December 17, 2002 as required by ORS 465.225. The facility will remain on the list because of potential future risk related to development in the vicinity of the residual chlorinated solvent plume and related to potential future use of the on-site groundwater supply well. DEQ will update the Environmental Cleanup Site Information System (ECSI) database to reflect the Certificate of Completion and the future use restrictions.

The Site Management Plan was submitted to DEQ on May 4, 2011 and was revised in August. A revised report was received August 15, 2011. The final Site Management Plan will be received after completion of the Soil Placement Cell and will include the As-Built drawings. The final Closeout Memorandum was received May 13, 2011.

Please note that NPR is still required to reimburse DEQ for its response costs associated with issuance of the Certification of Completion and project close out administrative tasks including: the ECSI database updates, the project filing, and receipt of the final Site Management Plan containing the As-Built diagrams. DEQ will invoice NPR for its response costs incurred through completion of these tasks.

In closing, DEQ would like to thank NPR for their cooperation with DEQ in the performance of investigation and cleanup actions at the site under the Consent Judgment. Should you have any questions or comments concerning administrative close out activities or your final invoice, please contact me at (503) 229-5213.

Sincerely;

Anna Coates, R.G.
Hydrogeologist/Project Manager
Cleanup and Emergency Response Section

Enclosure: Certification of Completion

cc: Bruce Gilles, DEQ
Dawn Ismero, DEQ
Charlie Landman, DEQ
Lynne M. Paretchan, Attorney at Law
John Foxwell, Ash Creek
Project File

STATE OF OREGON

DEPARTMENT OF ENVIRONMENTAL QUALITY

In the Matter of:	**) Consent Judgment, Multnomah County**
	) Oregon, Case Number 0512-13315
North Portland Road, LLC	**)**
	) CERTIFICATION OF COMPLETION
	)
	)
	)

1. Findings

A. On December 23, 2005, the Oregon Department of Environmental Quality (DEQ) entered into a *Prospective Purchaser Agreement (PPA)* in the form of a *Stipulation and Consent Judgment (Consent Judgment)* with North Portland Road, LLC (NPR), concerning the property at 10145 North Portland Road in Portland, Oregon (the Site). The Site is also known as the "South Larsen Site" and is separated from the Columbia Slough by the parcel known as "North Larsen," currently owned by the City of Portland. Under the terms of the Consent Judgment, NPR agreed to: 1) Pay $60,000 to *Oregon Department of Environmental Quality, Hazardous Substances Remedial Action Fund* for investigation, removal, and remedial actions in the Columbia Slough; 2) Perform all actions described in the *Consent Judgment Scope of Work (SOW)*; and 3) abide by DEQ's determination of whether institutional or engineering controls are required at the property to protect human health and the environment, and agree to an Easement and Equitable Servitude if necessary.

B. The *Consent Judgment SOW* designated the following work items:

1. Remove or cap surface soils to a depth of two feet that exceed the risk-based concentrations (RBC) for occupational worker direct contact exposure pathways

as defined in the current *DEQ Risk-Based Decision Making for Remediation of Petroleum Contaminated Sites* (RBDM guidance.

2. Decommission stormwater catch basins along the western property boundary by removal or by filling with concrete if located during property development.
3. Install a stormwater drainage swale or berm along northern property boundary to minimize discharge of suspended sediments in storm water from northern property line ditch to the Columbia Slough.
4. Sample the on-Site water supply well, reassess future use of the well for irrigation in accordance with applicable DEQ requirements, and decommission the well in accordance with Oregon Water Resources requirements if continued use is not protective of human health and the environment.
5. Complete a focused beneficial water use determination to identify (current and potential future) groundwater uses both on-Site (if water supply well used for irrigation) and down gradient of the Site within the locality of the facility.
6. Treat the chlorinated solvent plume source area (groundwater) on the South Larsen Site, and perform groundwater monitoring within and downgradient of the source zone on the South Larsen Site to assess remediation effectiveness and residual risks to human health and the environment. Successful remediation would be determined based on the results of the beneficial water use determination, and a groundwater to surface water pathway evaluation that documents that groundwater dissolved phase solvent concentrations would not exceed applicable ambient water quality criteria adjacent to the Columbia Slough. Compliance concentrations are 3.3 ug/L for tetrachloroethene (PCE); 30 ug/L

trichloroethene (TCE); and 2.4 ug/L vinyl chloride (VC) in groundwater. Maximum detected groundwater concentrations in the source zone are 1,110 ug/L PCE; 17,200 ug/L TCE; and 3,870 ug/L VC. Groundwater fate and transport modeling using off-the-shelf programs (e.g. Biochlor) may be utilized to verify that residual solvent concentrations in groundwater are not predicted to exceed remediation goals adjacent to the Slough.

7. Evaluate risk to occupational workers from volatilization of chlorinated solvents to outdoor air in the event TCE concentrations in groundwater following remediation continue to exceed the DEQ generic occupational RBCs for volatilization to outdoor air exposure pathway specified in the DEQ RBDM guidance.
8. Evaluate solvent vapor intrusion into buildings if facility development includes placement of buildings within 20 feet of the source zone and concentrations of TCE and vinyl chloride in groundwater following remediation continue to exceed DEQ occupational vapor intrusion RBC as specified in the DEQ RBDM guidance. In lieu of evaluation, the applicant will install engineering controls, such as a liner or horizontal venting, for Site buildings in the vicinity of the solvent plume.

C. Work completed by NPR to fulfill the Consent Judgment work items is documented in the plans and reports in the Administrative Record included as Attachment A to this Certification of Completion and summarized below:

1. NPR's contractor, Ash Creek Associates, prepared a work plan to characterize concentrations of hazardous substances in surface soil, which was subsequently

approved by DEQ. The surface soil sampling was completed in 2010 as described in the DEQ approved work plan. Concentrations of polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs) and some metals (primarily lead) were detected in surface soils. The data were evaluated consistent with Oregon risk assessment guidance, and human health risks were found to be acceptable. Consequently, no excavation or capping was required.

2. Ash Creek prepared a work plan describing the stormwater system upgrades to remove the stormwater pathway to the Columbia Slough, which was subsequently approved by DEQ. The stormwater system upgrades were completed in 2009 and 2010. This included changing the City's grated top manhole covers to solid top, removing the west side catch-basins to prevent flow into the City storm sewer system, constructing an infiltration swale on the north side, and removing the four north side catch-basins and plugging the north stormwater line to prevent flow to the City storm sewer system. Approximately 2,400 cubic yards of soil were excavated to construct the infiltration swale. The soil contained petroleum hydrocarbons and lead at concentrations below applicable human health risk concentrations. Ash Creek's Site Management Plan provides that the soil will be placed in an on-Site cell and covered with 12 inches of gravel pursuant to the cell design prepared by reviewed and approved by DEQ. The location and grade of the soil placement cell will be surveyed after construction.
3. Ash Creek completed a beneficial water use determination for the facility and did not identify any current beneficial groundwater water uses within the locality of

facility. As part of the beneficial use determination, the on-Site supply well was sampled and tested for volatile organic compounds, metals, pesticides, herbicides and PAHs. No VOCs were detected above Method Detection Limits. Groundwater use, through operation of the on-Site water well for industrial or agricultural water supply, is a potential future beneficial use. The evaluation of groundwater-surface water interactions did not identify a connection between the chlorinated solvent source and the Columbia Slough.

4. Ash Creek completed a pilot test for the enhanced reductive dechlorination treatment of the solvent source zone, and prepared a report documenting the results of the pilot test. In addition, the report described a full scale design for injecting an emulsified oil substrate for treatment of the source area. Using EPA's Biochlor Model, the pilot test included baseline modeling of source area migration to develop conservative treatment goals that were protective of the Columbia Slough. Following full scale implementation, Ash Creek prepared a report describing the implementation of the enhanced bioremediation treatment injections, remedial effectiveness modeling, and performance evaluation. In all, a total of 73,000 gallons of emulsified oil and water mixture were injected at 29 injection locations within the source area. Two on-Site down gradient compliance monitoring wells were installed by NPR. The City of Portland also installed five wells on the adjacent off-Site North Larsen Site, three of which were between the South Larsen Site and the Columbia Slough. The enhanced bioremediation program resulted in a significant decrease in the concentrations of the chlorinated solvent source. The new wells provided water level data to determine the

hydraulic gradient, and chemical data to better estimate biotransformation factors. The baseline Biochlor model was subsequently updated using this information. The results of the updated model indicated that contamination from the Site would migrate no more than 300 feet from the source area, and would not intersect the Columbia Slough. Based on the treatment results and the findings that chlorinated solvents from the Site would not migrate to the Columbia Slough, DEQ has determined that treatment goals for the source zone have been satisfied.

5. Ash Creek completed an evaluation of the potential risk to occupational workers with respect to occupational vapor intrusion and volatilization to outdoor air. Concentrations of residual TCE and vinyl chloride do not pose a significant outdoor air exposure risk. TCE and vinyl chloride concentrations in one shallow well in the source area, MW-6s, remain above occupational vapor intrusion RBCs indicating a potential risk to workers through vapor intrusion and inhalation of indoor air. Since there are currently no buildings constructed over the source area this is a potential future human health risk. This potential exposure pathway is addressed in the Site Management Plan as outlined below.
6. Ash Creek prepared a closeout memorandum to summarize the activities completed under the Consent Judgment, which was approved by DEQ.
7. Ash Creek prepared a Site Management Plan to document the procedures by which the Property's owners will continue to exercise due care with respect to the Property. The Site Management Plan describes procedures for visual inspection of the swale and soil placement cell, considerations for construction in the vicinity of the chlorinated solvent source area, and provisions for evaluating future use of

the on-Site supply well to avoid impact to the residual VOC plume. Performance of Site controls is a condition of this *Certification of Completion* and will be recorded on the DEQ ECSI database.

D. On June 1, 2011, DEQ provided public notice and opportunity to comment on a proposed "No Further Action" determination for the NPR facility and, in accordance with ORS 465.320 and 465.325(10)(b), a proposed Certification of Completion. Copies of work plans and reports completed for the project, and a public review draft of the DEQ *Certification of Completion*, dated May 13, 2011, were available to review at DEQ's Northwest Region offices. The public notice was published on June 1, 2011, in the *Oregon Secretary of State's Bulletin*, and in *The Oregonian* newspaper. The comment period was June 1, 2011 through June 30, 2011. Written comments were received from the City of Portland Bureau of Environmental Services on July 25, 2011. DEQ's responses were dated August 4, 2011.

E. Based on the reports and other information submitted by NPR and based on DEQ's inspection and oversight of activities, DEQ finds that NPR has satisfactorily completed the Consent Judgment scope of work.

2. <u>Conclusions</u>

A. NPR has satisfactorily completed the investigation and cleanup of soil and groundwater at the NPR facility located at 10145 North Portland Road, Portland, Oregon, required under the Consent Judgment, Multnomah County Oregon Case No. 0512-13315.

B. No further remedial actions are required at the Site to protect public health, safety, and welfare or the environment, except as provided under Subsection 3.B. of this Certification.

3. **Conditions**

A. This Certification of Completion applies only to the satisfactory completion of the work conducted by NPR pursuant to the Consent Judgment.

B. Conditions include: 1) A prohibition on development within the vicinity of the source area (see Figure 4 of the Site Management Plan) where residual TCE and vinyl chloride concentrations exceed DEQ occupational RBCs for vapor intrusion, unless (a) DEQ-approved engineering controls are integrated into the construction, or (b) reevaluation of VOCs within the Building Exclusion Zone demonstrates to DEQ's satisfaction that concentrations of VOCs are below DEQ occupational RBCs for vapor intrusion ; 2) A prohibition on use of the on-Site water supply well unless a capture zone analysis demonstrates to DEQ's satisfaction that future well use would not mobilize residual contamination; and 3) Maintenance of the soil cell constructed to hold soil excavated for the stormwater swale.

C. DEQ's determination that no further action is required at the Site may be withdrawn upon discovery that Site controls have not been maintained, or discovery of new information showing that public health, safety, and welfare or the environment are not being protected.

D. DEQ does not, by this Certification, assume liability for any claim arising from acts or omissions of NPR or its officers, employees, agents, successors, subsidiaries, or assigns relating to actions pursuant to the Consent Judgment.

4. **Notice**

This order constitutes Certification of Completion under ORS 465.325(10), and may be appealed by any aggrieved person in accordance with ORS 465.325(10)(c).

Issued By:

State of Oregon

Department of Environmental Quality

By: _____
for Nina DeConcini
Administrator, Northwest Region

8/15/11
Date

CERTIFICATE OF SERVICE

I certify that I served a true copy of the above Certification of Completion by depositing it in the United States mail, postage prepaid, and addressed to the following persons:

Gerald Breunig
North Portland Road LLC
609 NE Repass Road
Vancouver, Washington 98655

Lynne Paretchan, Attorney at Law
PO Box 309, Lake Oswego, Oregon 97034
Tel: 503.957.3341
Email: Lynne@Paretchan.com

_____
(Name)

_____
(Date)

Appendix A – Administrative Record Index

1. *Proposed Surface Soil Sampling*, Ash Creek Associates, 2009
2. *Results of Surface Soil Sampling*, Ash Creek Associates, 2010.
3. *Work Plan for Stormwater System Upgrades*, Ash Creek Associates, 2009.
4. *Stormwater System Upgrades*, Ash Creek Associates, 2010
5. *Beneficial Use Determination*, Ash Creek, 2008; *Revised Beneficial Water Use Determination*, Ash Creek, 2011.
6. *Pilot Testing and Design Report*, Ash Creek, 2008.
7. *Enhanced Bioremediation Report and Updated Hydrogeologic Model*, Ash Creek, 2011.
8. *Occupational Air Evaluation Report*, Ash Creek Associates, 2011.
9. *Closeout Memorandum*, Ash Creek Associates 2011
10. *Site Management Plan*, Ash Creek Associates, 2011.

Site Management Plan
North Portland Road, LLC
10145 North Portland Road
Portland, Oregon

Prepared for:
North Portland Road, LLC

May 4, 2011
1392-00

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Site Management Plan
North Portland Road, LLC
10145 North Portland Road
Portland, Oregon

Prepared for:
North Portland Road, LLC

May 4, 2011
1392-00

John Foxwell, R.G.
Senior Associate Hydrogeologist, Ash Creek Associates

3015 SW First Avenue
Portland, Oregon 97201-4707
(503) 924-4704 Portland
(360) 567-3977 Vancouver
(503) 943-6357 Fax
wwwashcreekassociates.com

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4 Former Chlorinated Solvent Source Area

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A Vegetated Infiltration Swale O&M Plan
B As-built Figure Showing Soil Placement Cell

1.0 Introduction

This Site Management Plan (SMP) has been prepared for the North Portland Road, LLC for its property located at 10145 North Portland Road, in Portland, Oregon (the Property). From 2005 to 2011, North Portland Road, LLC conducted a range of environmental remediation and management activities as part of a Consent Judgment and Prospective Purchaser Agreement (PPA) with the Oregon Department of Environmental Quality (DEQ). The work items required by the Consent Judgment were completed in early 2011. The owner of the Property will be responsible for the implementation the SMP.

1.1 Limitations

The SMP is not intended to provide health and safety recommendations for the protection of site workers or construction personnel. Persons involved in construction activities or site operations that could result in exposure to site soil should be familiar with the content of this SMP and have a Health and Safety Plan (HASP) prepared specific to their work.

2.0 Property Description

The Property is an approximately 15-acre parcel located approximately 600 feet south of the Columbia Slough (Figures 1 and 2). It is also known as the "South Larsen" property and is separated from the Columbia Slough by the parcel known as "North Larsen," currently owned by the City of Portland. The topography of the Property is relatively flat, with an elevation of approximately 20 feet above mean sea level (MSL). The ground surface of the Property is mainly unpaved, with interspersed paved areas.

3.0 Management Plan

The SMP addresses the following areas:

- Monitoring of constructed infiltration swale;
- Performance monitoring of soil placement cell;
- Construction limitations near chlorinated solvent source area; and
- Production well capture zone analysis.

Two environmental management items that are not specific requirements of the Consent Judgment Scope of Work, but are applicable to the Property, are discussed in Section 4. These items are soil management and protection of monitoring wells.

3.1 Stormwater Infiltration Swale

One stormwater infiltration swale was constructed in the northeast portion of the Property in 2010 (Figure 2). A second swale was pre-existing in the southwest corner of the Property. These swales do not have a discharge connection to the City system, nor do they discharge or overflow to a surface water body. The design report for the constructed swale includes an operations and maintenance plan (O&M plan) that describes the frequency and scope of the reporting requirements, which is included in Appendix A.

Actions Required:

1. Inspect the constructed swale according to the O&M plan and as follows:
   - Quarterly through 2012;
   - Twice a year thereafter; and
   - Within 48 hours of major rainfall events (1 inch of rain over a 24-hour period).
2. Maintain the O&M plan logbook on site and make it available in the event of future inspections by City of Portland.
3. Provide swale maintenance according to the O&M plan.

3.2 Soil Placement Cell Management and Inspection

Approximately 2,400 cubic yards of mildly contaminated soil were generated during construction of the infiltration swale (Ash Creek, 2010b). These soils will be placed in a new soil placement cell constructed by summer 2011 (Figure 2). Thereafter, the surface of the placement cell area will be used for truck and equipment parking and staging. Figure 3 shows a schematic of the soil placement cell construction and a grading plan. As-constructed figures will be included in Appendix B after construction.

Actions Required:

1. The property owner shall maintain a soil placement cell inspection logbook that documents quarterly inspections and any maintenance or repairs completed on the soil placement cell, and includes pictures documenting the current condition of the soil placement cell. The soil cell inspection log will be maintained on site and made available to DEQ as requested.
2. Quarterly inspections of the soil placement cell shall document in the logbook whether:
   - The gravel cover is in place and washouts or other erosion is not apparent;
   - The demarcation layer is not exposed;
   - Surface water does not collect over an area larger than 25 square feet; and
   - Any repairs are made to soil placement cell, including its surface.

3. Additional clean gravel will be added and graded as needed to repair surface of soil cell.

3.3 Limits on Construction Near Chlorinated Solvent Source Area

A chlorinated solvent source area is present as a result of prior operations at the Property (Figure 4). In 2009, an enhanced bioremediation project was completed to treat the source area. The project resulted in a significant decrease of the chlorinated solvent source (Ash Creek, 2011a). The current soil and groundwater data set indicate that the remaining concentrations of VOCs do not result in unacceptable occupational risks from volatilization to outdoor air (Ash Creek 2011b). Risks to site workers from volatilization to outdoor air are acceptable, so no additional actions are required due to any volatilization to outdoor air pathway.

With respect to the indoor air pathway, concentrations of residual trichloroethene (TCE) and vinyl chloride currently remain above occupational vapor intrusion risk-based concentrations (RBCs) at one location in the source area (at shallow well MW-6s). Figure 4 shows the former chlorinated solvent source area, highlighting both the extent of VOCs in groundwater, as well as the estimated extent of VOCs that exceed DEQ's vapor intrusion RBC (DEQ, 2007a). The vapor intrusion management area will be defined by the limits of the contour on Figure 4.

Actions Required:

1. The property owner shall ensure that no buildings or other inhabitable structures (temporary or permanent) are built within the vapor intrusion management area, unless engineering controls (vapor barriers and/or a venting system) are incorporated into construction;
2. If construction is planned, the property owner shall provide the building plans, including the design for engineering controls, to DEQ prior to permitting and construction. Design for engineering controls will include a startup and performance monitoring plan; or
3. If a reevaluation of TCE and vinyl chloride concentrations determines that the concentrations of volatile organic compounds (VOCs) in shallow groundwater no longer result in vapor intrusion risks, then the property owner shall submit documentation to DEQ prior to permitting and construction. No engineering controls (vapor barriers and/or a venting system) would then be required for construction of structures in the current vapor intrusion management area.

3.4 Production Well Capture Zone Analysis

An on-site production well is present at the location shown on Figure 2 and its well construction log is included in Appendix C. The well was sampled in 2008 for a comprehensive list of hazardous substances and the results were either "non-detect" or below DEQ risk-based concentrations for drinking water (Ash Creek, 2011c). There are no current plans for use and the well is reserved for future use. Prior to bringing the well back into use, the property owner shall determine the capture zone (radius of influence of the well

during pumping). Capture zones are dependant on pumping rates and site geology. The following procedures will be used to evaluate whether future well use would mobilize residual contamination in the former chlorinated solvent source area.

Action Required:

1. If property owner proposes to use existing well, a capture zone analysis will be completed by either an Oregon Registered Geologist or Professional Engineer and provided to DEQ for review prior to initiating use of the well. The capture zone analysis shall be completed using a 2-dimensional analytical model, or a similar hydrogeologic evaluation tool. An aquifer test will not be required

4.0 Additional Management Items

This section describes additional environmental management considerations for current and future operations at the property. These items are not a specific requirement of the Consent Judgment; however, since the condition of the property may implicate regulatory requirements that current and future property managers and operators will be required to follow, including soil management procedures and protection of monitoring wells, those particular items are discussed here.

4.1 Soil Management

No surface soil sources were identified that require excavation or capping (Ash Creek, 2010a). The only area on the site where with soil concentrations are known to exceed DEQ occupational RBCs is the area within the soil placement cell and soils located at depth at the former chlorinated solvent source area (Figure 2). Soil management procedures will be put in place to ensure that waste soils that are generated during future construction or maintenance activities are characterized in accordance with state and federal regulations.

Actions Required:

1. If excavated soils are re-used on-site: Unless there are field indications of contamination (e.g., odors or staining), soils that are excavated for utility or other construction that will be replaced in their original excavation or used elsewhere on the site can be completed without characterization by North Portland Road, LLC.

2. If excavated soils are removed from the site: Soils excavated and stockpiled for off-site transport will be characterized prior to off-site transport to document that the concentrations of any hazardous substances do not exceed DEQ's unrestricted soil re-use criteria (commonly referred to as clean fill criteria; DEQ, 2007b).

- If soil concentrations are less than unrestricted use criteria, then this plan places no restrictions on the use of the soil.

- If soil concentrations exceed the unrestricted use criteria, then the soil may be re-used at the Property or disposed of at a licensed disposal facility.
- If at least one concentration exceeds occupational screening levels, then the soil shall be properly designated and disposed of at a licensed disposal facility.

4.2 Maintenance of Monitoring Wells

The site contains a network of monitoring wells (Figure 2). These wells will be left in place to support any future monitoring activities. The property owner will take steps to protect the monitoring wells in order to prevent surface water from entering the wells.

Actions Required:

1. Repairs of site monitoring wells will be completed by an Oregon-licensed well driller.
2. Operations, maintenance, and construction activities conducted on the Property shall be done so as not to damage the monitoring wells.
3. If wells are inadvertently damaged, they shall be repaired as soon as practicable, but in no case shall the repair require more than two months to complete. Damaged wells will be appropriately secured so that surface water cannot enter the subsurface through the well casing or annulus while the well is awaiting repair. If the damage is too extensive to repair, the well will be decommissioned in accordance with applicable state regulations.

5.0 References

Ash Creek Associates, Inc. (Ash Creek), 2009. Work Plan for Stormwater System Upgrades, North Portland Road, LLC, 10145 North Portland Road. October 5, 2009.

Ash Creek, 2010a. Results of Surface Soil Sampling, Ash Creek Associates, North Portland Road, LLC, 10145 North Portland Road. December 16, 2010.

Ash Creek, 2010b. Stormwater System Upgrades, North Portland Road, LLC, 10145 North Portland Road. December 27, 2010.

Ash Creek, 2011a. Enhanced Bioremediation Report and Updated Hydrogeologic Model; North Portland Road, LLC, 10145 North Portland Road. January 13, 2001.

Ash Creek, 2011b. Occupational Air Quality Evaluation, North Portland Road, LLC, 10145 North Portland Road. April 1, 2011.

Ash Creek, 2011c. Revised Beneficial Water Use Determination, North Portland Road, LLC, 10145 North Portland Road. April 8, 2011.

DEQ, 2007a. Risk-based Decision Making for the Remediation of Petroleum-Contaminated Sites. Oregon Department of Environmental Quality, Land Quality Division, Environmental Cleanup and Tanks Program. Updated March 2007.

DEQ, 2007b. Guidelines for Soil Management Determinations (DRAFT). July 3, 2007.

Base map prepared from USGS 7.5-minute quadrangle of Portland, OR-WA, dated 1990 as provided by Topozone.

0 2000 4000

Scale in Feet

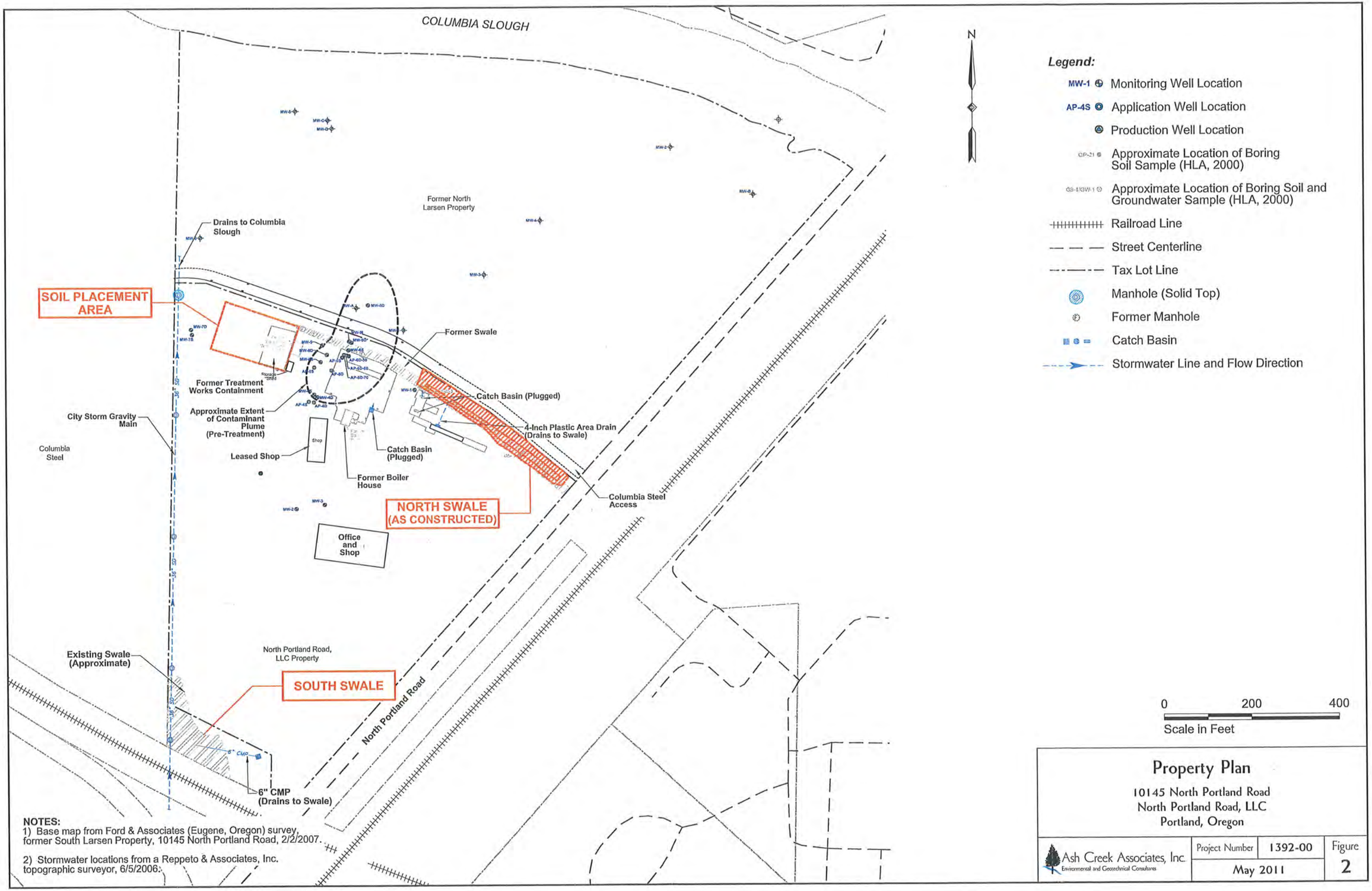
N

Site Location Map

10145 North Portland Road
North Portland Road, LLC
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1392-00	Figure
May 2011		1



NOTES:
1) Base map from Ford & Associates (Eugene, Oregon) survey, former South Larsen Property, 10145 North Portland Road, 2/2/2007.

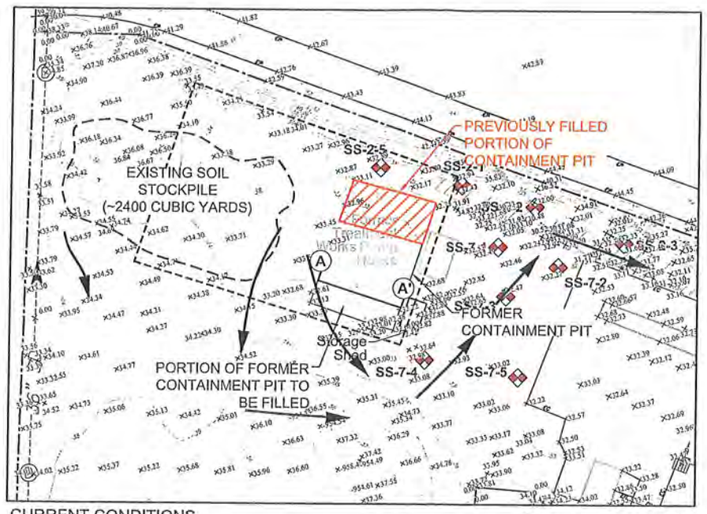
2) Stormwater locations from a Reppeto & Associates, Inc. topographic surveyor, 6/5/2006.

Property Plan

10145 North Portland Road
North Portland Road, LLC
Portland, Oregon

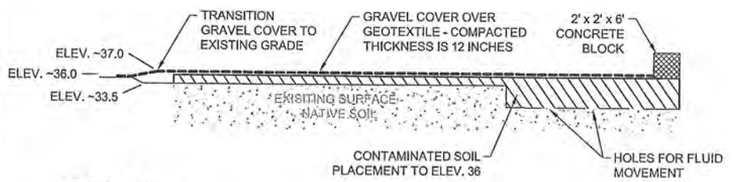
Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1392-00	Figure
May 2011		2



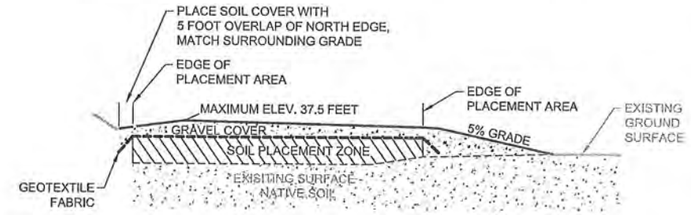
CURRENT CONDITIONS

0 100



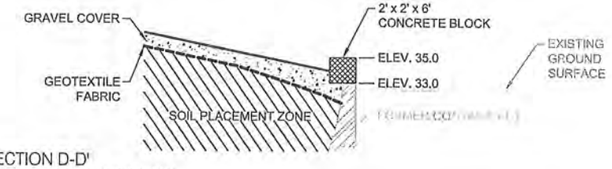
SECTION B-B'
SOIL PLACEMENT

SCALE: NTS



SECTION C-C'
SOIL PLACEMENT

SCALE: NTS



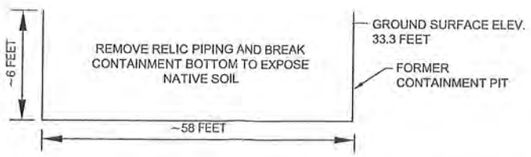
SECTION D-D'
FORMER CONTAINMENT

SCALE: NTS

NOTES:

1) Base map from Ford & Associates (Eugene, Oregon) survey, former South Larsen Property, 10145 North Portland Road, 2/2/2007.

2) Stormwater locations from a Reppeto & Associates, Inc. topographic survey, 6/5/2006.



SECTION A-A'
FORMER CONTAINMENT: CURRENT CONDITIONS AND RELATED ACTIONS

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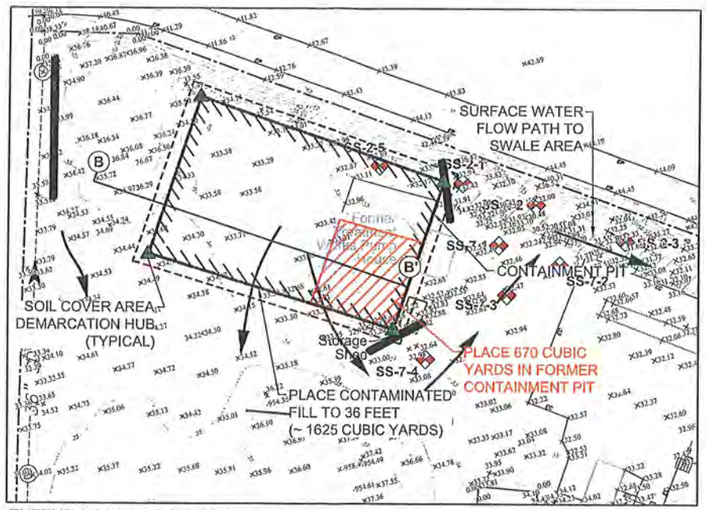
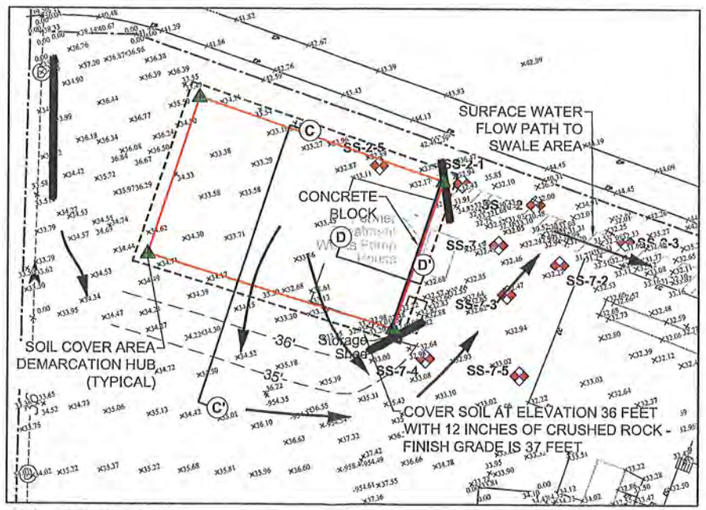


EXTENT OF SOIL PLACEMENT

0 100



SOIL COVER EXTENT

0 100

LEGEND:

- PROPERTY LINE
- CONTOUR LINE AND NUMBER
- MANHOLE (SOLID TOP)
- CATCH BASIN
- CITY STORMWATER LINE AND FLOW DIRECTION
- DEMARCATION HUB
- STORMWATER FLOW DIRECTION
- BIOFILTER BAGS

EXCAVATION AND BACKFILL NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES.
2. STOCKPILED SOIL IS CONTAMINATED SOIL.
3. REMOVE ALL PLASTIC LINERS UNDER STOCKPILE BEFORE PLACING SOIL.
4. PRIOR TO FILLING, PERFORATE PIT FLOOR TOALLOW FOR DRAINAGE. PERFORATION SHOULD BE COMPLETED USING A HYDRO-HAMMER OR THROUGH CORING.
5. PLACE CONTAMINATED SOIL IN 12-INCH LIFTS. COMPACT AND/OR TRACK SOIL UNTIL A DENSE, NON-YIELDING CONDITION IS ACHIEVED.
6. PLACE GEOTEXTILE FABRIC ACROSS SOIL COVER AREA FOR DEMARCATION OF CONTAMINATED ZONE FROM GRAVEL CAP.
7. PLACE IRON RODS OR OTHER SURVEY HUB AT CORNERS OF SOIL PLACEMENT AREA.
8. SURVEY ELEVATIONS OF COMPACTED SOIL PLACEMENT AREA.
9. PLACE 12 INCHES (MINIMUM) OF CRUSHED ROCK OVER SOIL COVER AREA. COMPACT AND ADD ADDITIONAL CRUSHED ROCK AS NEEDED TO MAINTAIN FINISHED, COMPACTED THICKNESS OF 12 INCHES.
10. SLOPE AS SHOWN FOR SURFACE DRAINAGE AND SMOOTH TRANSITION TO EXISTING SURFACES.
11. SURVEY FINISH GRADE.

EROSION AND TURBIDITY CONTROL NOTES:

NOTE: *THERE ARE NO CONNECTIONS TO OFFSITE DRAINAGES OR WATER BODIES. NO OFFSITE STORMWATER TRANSPORT IS POSSIBLE. EROSION AND TURBIDITY CONTROLS WILL BE ESTABLISHED TO PROTECT STORMWATER SWALE.*

1. IMPLEMENTATION, CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF ALL EROSION CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED. EROSION CONTROL MEASURES TO BE REMOVED BY CONTRACTOR AT END OF CONTRACT
2. THE EROSION CONTROL FACILITIES ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL GRADING ACTIVITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT LEAVE WORK AREA OR ENTER THE SITE INFILTRATION SWALE.
3. DURING THE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL UPGRADE AND MAINTAIN ALL EROSION CONTROL FACILITIES AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER SWALE.
4. ALL EROSION CONTROL FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR.
5. DURING INACTIVE PERIODS ON THE SITE, THE CONTRACTOR MUST INSPECT AND MAINTAIN EROSION CONTROL FACILITIES ONCE EVERY 14 DAYS OR WITHIN 24 HOURS FOLLOWING A STORM EVENT (GREATER THAN 0.5 INCH).
6. MEASURES MUST BE TAKEN BY THE CONTRACTOR WHEN NECESSARY TO ENSURE THAT ALL EXISTING PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
7. THE MEANS AND METHODS OF THE CONTRACTOR MAY DICTATE THAT ADDITIONAL EROSION CONTROL MEASURES ARE NECESSARY. THESE ADDITIONAL MEASURES SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE SITE.
8. A SPILL KIT IS REQUIRED TO BE MAINTAINED ON SITE TO PREVENT SPILLS OF HAZARDOUS OR HARMFUL SUBSTANCES FROM ENTERING THE STORMWATER MANAGEMENT SYSTEM. CREWS MUST BE TRAINED ON THE LOCATION AND USE OF THE KIT.

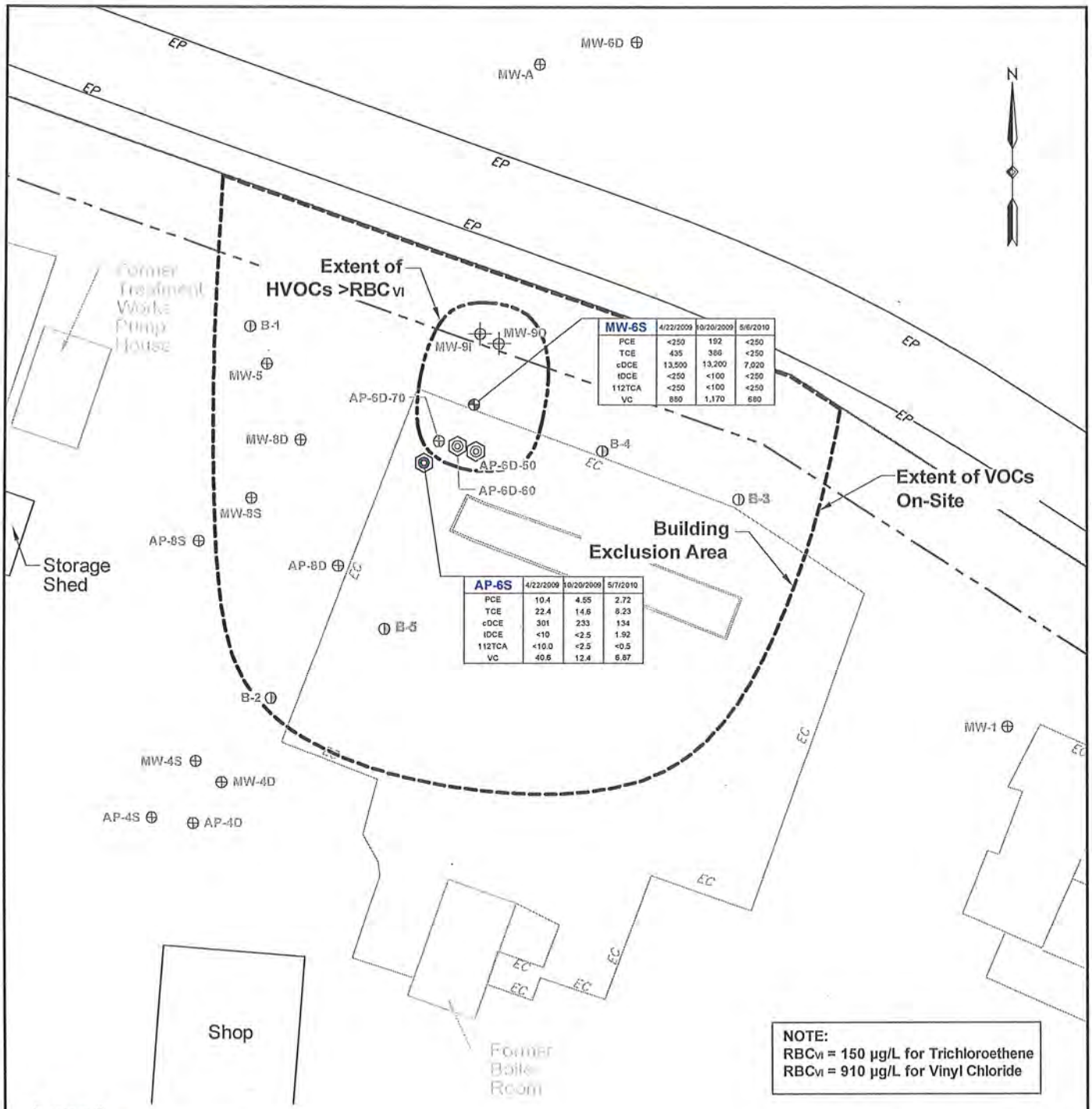
N

Grading and Erosion Control Details

10145 North Portland Road
North Portland Road, LLC
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number	1392-00	Figure
May 2011		3



NOTE:
RBC$_{VI}$ = 150 µg/L for Trichloroethene
RBC$_{VI}$ = 910 µg/L for Vinyl Chloride

Legend:

- MW-1 — Monitoring Well Location
- AP-6S — Remedial Performance Monitoring Well
- MW-9D — Intermediate Zone Compliance Well
- B-1 — Push-Probe Location

MW-6S	4/22/2009
PCE	<250
TCE	435
cDCE	13,500
tDCE	<250
112TCA	<250
VC	880

Sample Identification
Date Sampled
Concentration in µg/L
Analyte Identification

PCE = Tetrachloroethene
TCE = Trichloroethene
cDCE = cis-1,2-Dichloroethene
tDCE = trans-1,2-Dichloroethene
112TCA = 1,1,2-Trichloroethane
VC = Vinyl Chloride
NS = Not Sampled

0 40 80
Scale in Feet

NOTE:
Base map from Ford & Associates (Eugene, Oregon) survey, former South Larsen Property, 10145 North Portland Road, 2/2/2007.

Former Chlorinated Solvent Source Area

10145 North Portland Road
North Portland Road, LLC
Portland, Oregon

Ash Creek Associates, Inc.
Environmental and Geotechnical Consultants

Project Number 1392-00
August 2011
Figure 4

Appendix A

Vegetated Infiltration Swale O&M Plan

STORMWATER MANAGEMENT FACILITIES
OPERATIONS & MAINTENANCE PLAN

FOR

WCT YARD DEVELOPMENT
STORMWATER QUALITY INFILTRATION SWALE

10145 N. Portland Road
Portland, Oregon
Multnomah County

September 15, 2009

I DESCRIPTION

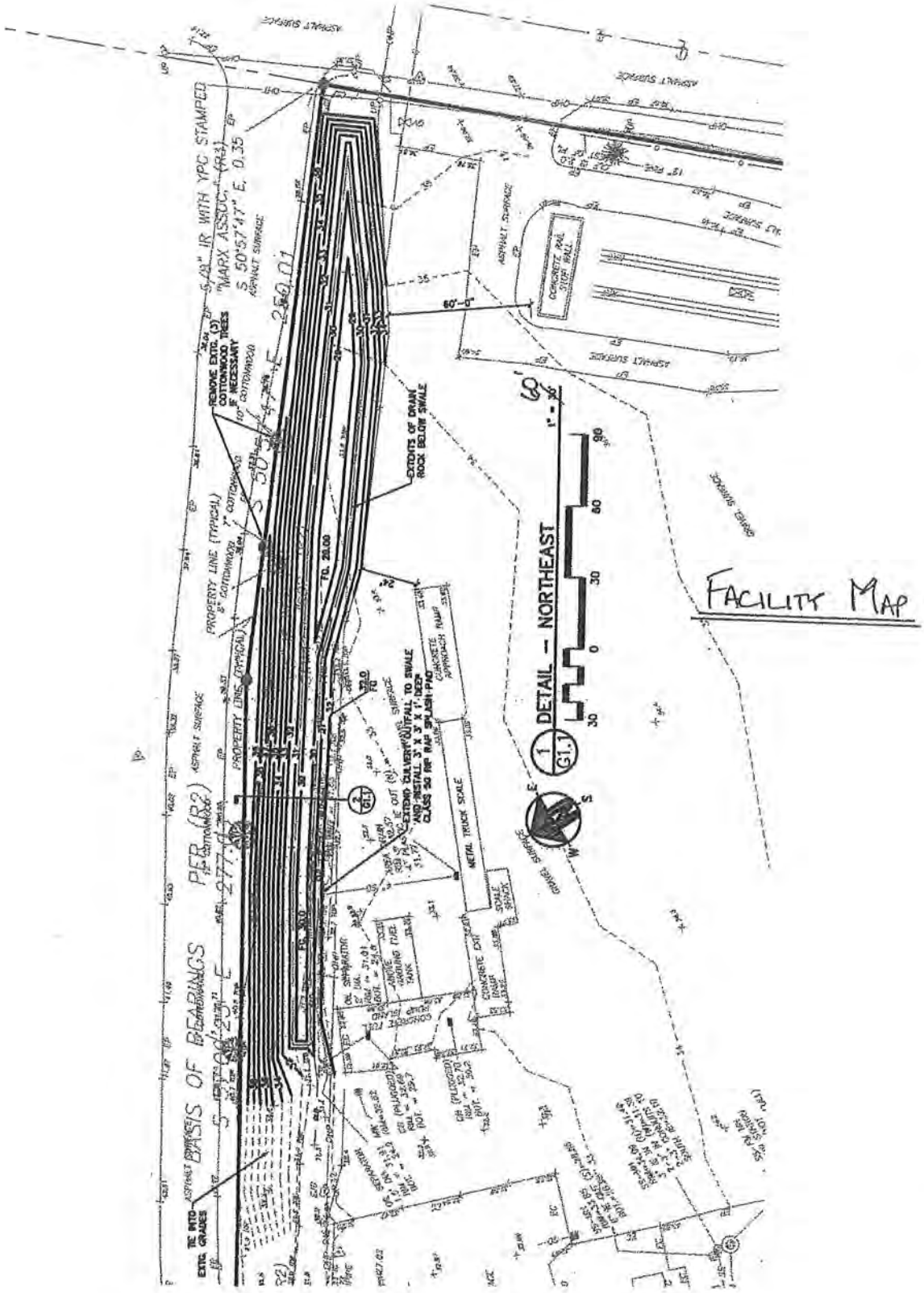
This Stormwater Management Plan describes the operations and maintenance procedures necessary for the stormwater facilities to function properly. Vegetated Infiltration facilities are planted with low maintenance, native vegetation. However, as an infiltration facility, it needs some maintenance in order to continually infiltrate runoff into the ground.

The vegetated infiltration swale receives stormwater runoff that carries sediment and other pollutants from the site. The topsoil in the facility traps sediments and pollutants, filtering the stormwater before it infiltrates to the native soil beneath the site. As the topsoil traps sediments, the void spaces near the surface fill up and become clogged, slowing down and eventually preventing runoff from infiltrating underground. Vigorous and healthy grassy vegetation helps to break up sediment layers and promote infiltration. If not properly maintained as outlined in this plan, clogged soils will lead to significant ponding in the facility.

This facility is designed to infiltrate all runoff up to a 10-year storm event (3.4" over 24-hours) with 12" freeboard. A 25-year storm event will infiltrate all runoff (3.9" over 24-hours) with 2" freeboard.

One facility will be built, at the northeast property line, near N. Portland Road. See map, next page. The facility will be maintained by the property owner.

WCT YARD
207467



II SCHEDULE

Facility must be inspected at least:

- Quarterly for the first 2 years
- Twice a year thereafter
- Within 48 hours of major rainfall events (more than 1 inch of rain over a 24-hour period)

For at least the first 2 years, inspections should be conducted with the facility drawings and the O&M Plan in hand to help the inspector understand how the facility is supposed to function. The O&M Plan will help the inspector recognize signs that indicate diminished performance (for example, sediment accumulation, vegetation die-off, or ponding water for more than 24 hours after a storm).

III PROCEDURES

The vegetated infiltration swale will require periodic maintenance during the first two years (establishment period) to ensure proper functioning and plant survival. The swale shall be inspected and maintained as stated:

Source Control measures prevent pollutants from mixing with stormwater. Typical non-structural control measures include raking and removing leaves, removing grass clippings, street sweeping, vacuum sweeping, and limited and controlled application of pesticides, herbicides, and fertilizers.

Impervious (paved) surface areas are significant sources of stormwater pollution. Parking lots, because of their large impervious surfaces, are one such source. During dry weather, parking lots accumulate pollutants associated with exhaust emissions, brake pad wear, fluid leaks from vehicles, atmospheric dryfall, and lack of maintenance. During wet weather, these and other pollutants (e.g., pesticides and fertilizers from landscaped areas) may be mobilized and transported into the storm drain system via rainwater. Thus, runoff from parking lots can contain metals, hydrocarbons, organic pollutants, and many other constituents. Pollution prevention (source control) is one of the most cost-effective long-term solutions to stormwater management.

Vegetated Infiltration Swale

- Vegetation or roots from large shrubs and trees that limit access or interfere with swale operations shall be prevented.
- Water shall be provided to ensure plant establishment and survival during the establishment period. Beyond the establishment period, established native vegetation should survive on precipitation (except during extreme conditions).
- Nuisance and prohibited vegetation of all species shall be removed biannually. Invasive vegetation shall be removed and replaced with native vegetation per the plans.
- Vegetation that dies shall be replaced within 3 months or immediately if the season is appropriate, in order to maintain cover density and control erosion where soils are exposed.
- Any trash, plant debris, or sediment that collects in the planter may inhibit swale function, and shall be removed.
- Vegetated infiltration swales remove heavy sediment by letting it settle out of the stormwater. Many pollutants attach to sediment and are removed from stormwater in this way.
- The infiltration swale is designed to infiltrate within 48 hours of a storm event. If water continues to pond after that time, it is likely that sediment has settled over most of the swale. Remove collected sediment. Till and amend with compost the top 3"± of topsoil; if this is not sufficient, remove and replace the top 3"± with new freely draining growing medium. Replant vegetation & water to ensure establishment.
- Sediment can fill a swale over time. Healthy vegetation may keep stormwater infiltrating as normal. If the swale depth decreases by 1' or more, sediment and vegetation needs to be removed. Grades and vegetation shall be replaced per the original construction documents.
- Vacuum sweeping of paved vehicle traffic areas will reduce the amount of sediment that enters the swale.

• Repair any areas of erosion damage more than 2" deep.

Spill Prevention measures shall be exercised when handling substances that can contaminate stormwater. Virtually all sites, including residential and commercial, present dangers from spills. It is important to exercise caution when handling substances that can contaminate stormwater and migrate into the groundwater. Activities that pose the chance of hazardous material spills shall not take place near stormwater collection facilities.
• The proper authority and the property owner shall be contacted immediately if a spill is observed.
• A spill kit shall be kept near spill-prone operations and refreshed annually.
• Employees shall be trained on spill control measures.
• Releases of pollutants shall be corrected within 12 hours.

Insects and Rodents shall not be harbored in any part of the stormwater system.
• Pest control measures shall be taken when insects/rodents are found to be present. Food sources shall be prevented.
• Holes in the ground located in and around the storm system shall be filled.

IV WHO SHARES FINANCIAL RESPONSIBILITY

The facilities will be maintained by the property owner.

V INSPECTION AND MAINTENANCE LOGS

Keep inspection and maintenance records to track the development of the systems over time. The inspection records shall include:

- General condition of the systems, inflow pipes and vegetation.
- Sediment condition and depth. Installing a sediment gauge is recommended.
- Water elevation and observations (sheen, smell, etc.).
- Unscheduled maintenance needs.
- General observations and aesthetic conditions.

See next page for an example maintenance log.

Date:_____ Initials:_____

Work performed by:_____

Work performed:_____

_____

Details:_____

_____

Date:_____ Initials:_____

Work performed by:_____

Work performed:_____

_____

Details:_____

_____

Date:_____ Initials:_____

Work performed by:_____

Work performed:_____

_____

Details:_____

_____

Date:_____ Initials:_____

Work performed by:_____

Work performed:_____

_____

Details:_____

_____

Date:_____ Initials:_____

Work performed by:_____

Work performed:_____

_____

Details:_____

_____

WCT YARD
207467

INFILTRATION TOPSOIL MIX IN SWALE SHALL BE:	
•	60% SAND
•	30% ORGANIC COMPOST
•	10% TOPSOIL (NO CLAY)

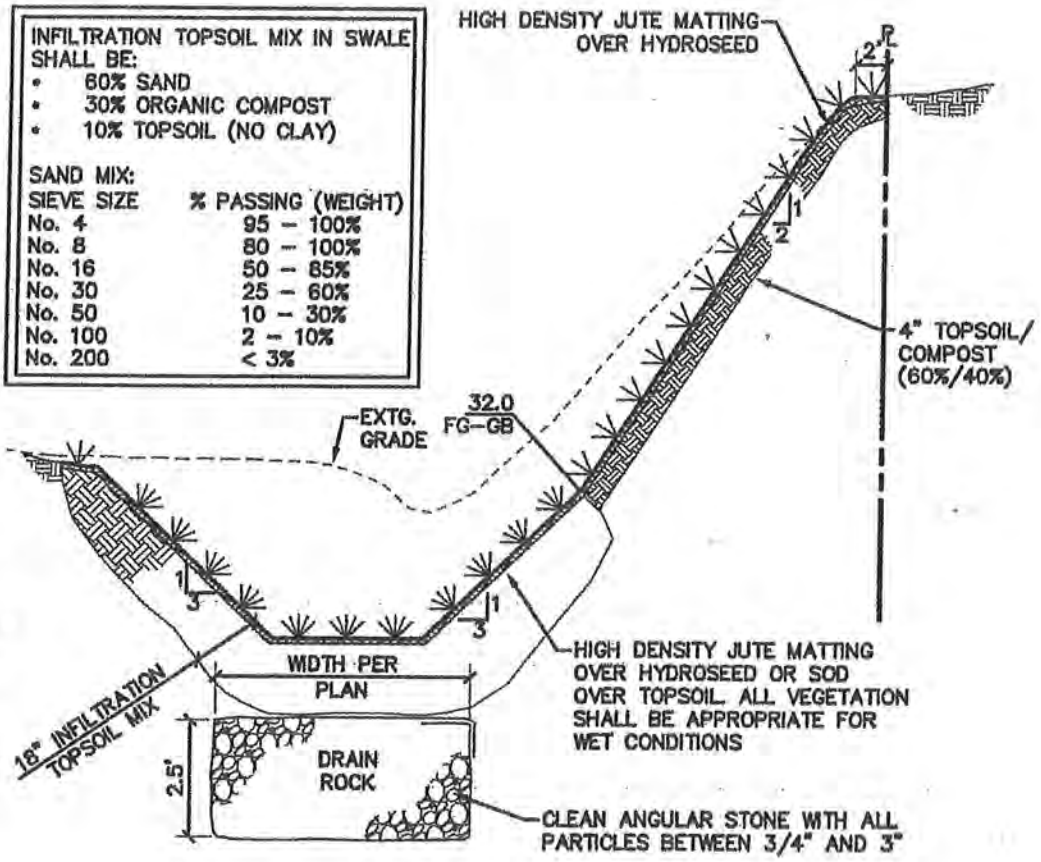
SAND MIX:	
SIEVE SIZE	% PASSING (WEIGHT)
No. 4	95 – 100%
No. 8	80 – 100%
No. 16	50 – 85%
No. 30	25 – 60%
No. 50	10 – 30%
No. 100	2 – 10%
No. 200	< 3%

SEED MIX ABOVE SWALE ON THE NORTH SLOPE SHALL BE APPROXIMATELY 60% PERENNIAL RYEGRASS, 15% EUREKA HARD FESCUE, AND 20% HERBACEOUS PLANTS AND CLOVER (HOBBS AND HOPKINS PRO–TIME 705 PDX). SOW AT 2 LBS. PER 1,000 SQ. FT.

SEED MIX WITHIN SWALE SHALL BE APPROXIMATELY 40% DWARF TALL FESCUE, 30% DWARF PERENNIAL RYE "BARCLAY", 25% FESCUE AND 5% COLONIAL BENTGRASS. SOW AT 5 LBS. PER 1,000 SQ. FT.

ALL SWALE SIDE SLOPES SHALL BE 3H:1V (MAXIMUM) BELOW ELEVATION 32.0.

ALL SIDE SLOPES ABOVE ELEVATION 32.0 SHALL BE 2H:1V.



2 / G1.1 SWALE SECTION

G11–2.dwg N.T.S.

Appendix B

As-Built Figure Showing Soil Placement Cell

To be included at later date

Appendix C

Well Log for On-Site Water Well

STATE ENGINEER
Salem, Oregon

MULT 938

Well Record

STATE WELL NO. 1N/1-6J(1)
COUNTY Multnomah
APPLICATION NO. G-2988

OWNER: Louis F. Larsen

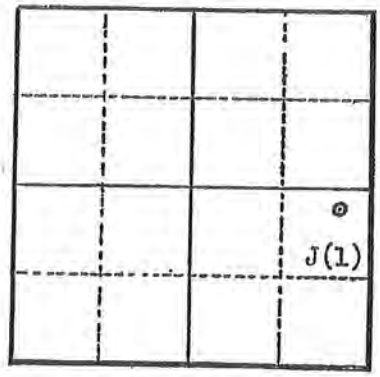
MAILING ADDRESS: 8233 N. Willamette Blvd.

LOCATION OF WELL: Owner's No.

CITY AND STATE: Portland, Oregon

NE ¼ SE ¼ Sec. 6 T. 1 ~~N.~~ S., R. 1 ~~E.~~ W., W.M.

Bearing and distance from section or subdivision corner 180' S. & 389' W. of E¼ cor. of sec. 6



Section 6

Altitude at well

TYPE OF WELL: Drilled Date Constructed 1946

Depth drilled 65' Depth cased 65'

CASING RECORD:
8 inch

FINISH:

AQUIFERS:
Gravel

WATER LEVEL:
26 feet

PUMPING EQUIPMENT: Type Turbine H.P. 10
Capacity G.P.M.

WELL TESTS:
Drawdown ft. after hours G.P.M.
Drawdown ft. after hours G.P.M.

USE OF WATER Irrigation & Commercial Temp. °F. 19
SOURCE OF INFORMATION G- 2779
DRILLER or DIGGER
ADDITIONAL DATA:
Log X Water Level Measurements Chemical Analysis Aquifer Test

REMARKS:

Sandy loam	0 to 42
Sand	42 to 55
Sand & gravel	55 to 61
Gravel, WB	61 to 65

State Printing 89316

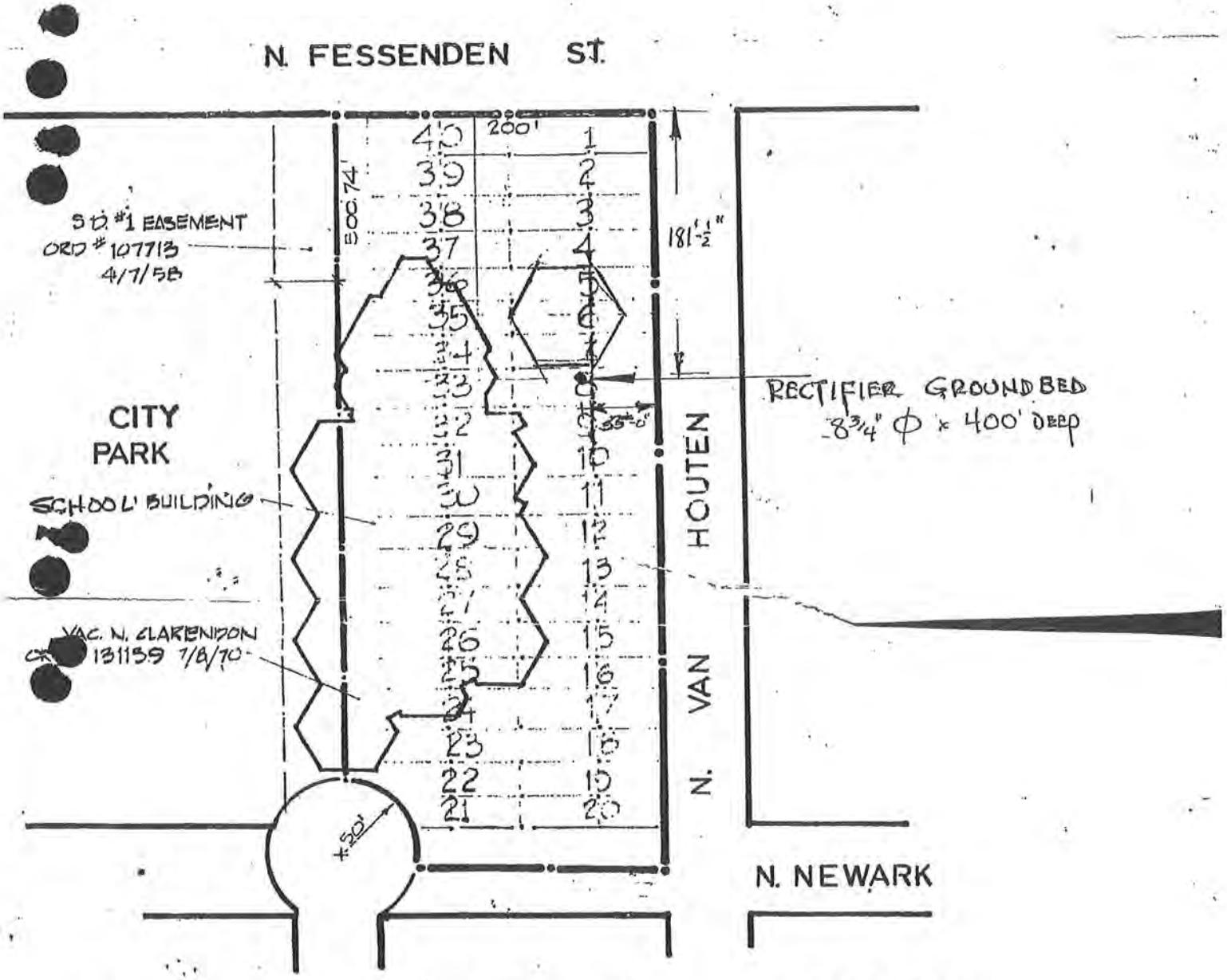
[redacted]LARENDON

AREA OF GROUND: 100,148 sq. ft. (2.3A)

RECEIVED
JAN 31 1972
STATE ENGINEER
SALEM. OREGON

RECEIVED
FEB 28 1972
STATE ENGINEER
SALEM. OREGON

1" = 100'



MULTNOMAH COUNTY
SECT. 7 T1N - R1E W.M.

MAR 22 1971

1/4 SECT. № 2125
2124 ←

APPENDIX D

City of Portland Bureau of Environmental Services
Soil Sample Data Tables 1 through 6

Table 1 - Summary of Soil Analytical Results- Total Petroleum Hydrocarbons (TPH)

Sample ID	Sample Date	Sampled By	Sample Depth	Laboratory Analytical Testing Results (mg/kg)					
				NWTPH- HCID	NWTPH-Gx	NWTPH-Dx		EPA 8260	EPA 8270
					Gasoline	Diesel	Lube Oil	VOCs	SVOCs/PAHs
Kleinfelder & PNG Test Pits			(ft. bgs)						
TP3-13	5/18/99	PNG	13	--	**4.77**	ND	**1,000**	**Table 2**[4]	ND
TP-1-7	5/17/00	Kleinfelder	7	--	--	--	--	ND[4]	ND
TP-1-19	5/17/00	Kleinfelder	19	--	--	--	--	ND[4]	ND
TP-2-5	5/17/00	Kleinfelder	5	--	--	--	--	ND[4]	**Table 3**
TP-2-19	5/17/00	Kleinfelder	19	--	--	--	--	**Table 2**[4]	ND
BES Test Pits			(ft. bgs)						
T-Pit-1 0-18"	10/5/23	BES	0-1.5	**Oil**	--	**28**	**520**	--	**Table 3**
T-Pit-2 0-5'	10/5/23	BES	0-5	**Oil**	--	**30**	**480**	--	**Table 3**
T-Pit-3 0-18"	10/5/23	BES	0-1.5	**Oil**		ND	**280**	--	**Table 3**
T-Pit-4 0-5'	10/5/23	BES	0-5	**Diesel, Gasoline, Oil**	ND	**190**	**2,100**	--	**Table 3**
T-Pit-5 0-18"	10/5/23	BES	0-1.5	**Diesel, Oil**	--	**64**	**1,700**	--	**Table 3**
T-Pit-6 0-18"	10/5/23	BES	0-1.5	**Oil**	--	ND	**390**	--	**Table 3**
T-Pit-6 0-5'	10/5/23	BES	0-5	**Oil**	--	**43**	**600**	--	**Table 3**
T-Pit-7 0-5'	10/5/23	BES	0-5	**Oil**	--	ND	**390**	--	**Table 3**
T-Pit-8 0-18"	10/5/23	BES	0-1.5	**Oil**	--	ND	**1,400**	--	**Table 3**
T-Pit-9 0-5'	10/5/23	BES	0-5	**Oil**	--	**27**	**550**	--	**Table 3**
T-Pit-10 0-18"	10/5/23	BES	0-1.5	**Oil**	--	ND	**450**	--	**Table 3**
T-Pit-11 0-5'	10/5/23	BES	0-5	**Oil**	--	ND	**200**	--	**Table 3**
T-Pit-12 0-18"	10/5/23	BES	0-1.5	**Oil**	--	ND	**410**	--	**Table 3**
BES Geoprobe Samples			(ft. bgs)						
WP-1 0-5	11/21/23	BES	0-5	--	--	--	**--**	--	**Table 3**
WP-1 5-10	11/21/23	BES	5-10	**Oil**	--	ND	**190**	--	**Table 3**
WP-2 0-5	11/21/23	BES	0-5	**Oil**	-	ND	**340**	--	**Table 3**
WP-2 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-3 0-5	11/21/23	BES	0-5	--	--	--	**--**	--	**Table 3**
WP-3 5-10	11/21/23	BES	5-10	**Oil**	--	ND	**260**	--	**Table 3**
WP-4 0-5	11/21/23	BES	0-5	**Diesel, Oil**	--	**93**	**740**	--	**Table 3**
WP-4 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-5 0-5	11/21/23	BES	0-5	--	--	--	**--**	--	**Table 3**
WP-5 5-10	11/21/23	BES	5-10	ND	--	--	**--**	--	--
WP-6 0-5	11/21/23	BES	0-5	**Oil**	--	ND	**96**	--	**Table 3**
WP-6 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-7 0-5	11/21/23	BES	0-5	**Oil**	--	**26**	**490**	--	**Table 3**
WP-7 5-10	11/21/23	BES	5-10	**Oil**	--	ND	**220**	--	**Table 3**
WP-9 0-5	11/21/23	BES	0-5	**Oil**	--	**100**	**910**	--	**Table 3**
WP-9 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-10 0-5	11/21/23	BES	0-5	**Oil**	--	ND	**180**	--	**Table 3**
WP-10 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-11 0-1	11/21/23	BES	0-1	--	ND	--	**--**	**Table 2**	--
WP11 0-5	11/21/23	BES	0-5	ND	--	--	**--**	--	--
WP-11 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-11 10-15	11/21/23	BES	10-15	ND	--	--	**--**	--	--
WP-12 0-5	11/21/23	BES	0-5	**Oil**	--	ND	**1,000**	--	**Table 3**
WP-12 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-13 0-5	11/21/23	BES	0-5	**Diesel, Oil**	--	**150**	**1,000**	--	**Table 3**
WP-13 5-10	11/21/23	BES	5-10	--	--	--	**--**	--	**Table 3**
WP-13 10-15	11/21/23	BES	10-15	**Oil**	--	ND	**180**	--	**Table 3**
ODEQ Cleanfill									
Clean Fill Screening Value				--	--	--	--	--	--
ODEQ Risk Based Concentrations									
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				--	9,700	4,600	--	--	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				--	>Max	>Max	--	--	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Occupational				--	20,000	14,000	--	--	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Residential				--	1,200	1,100	--	--	--
ODEQ Ecological Risk Based Concentrations									
Freshwater Sediment				--	--	--	--	--	--

Notes

DEQ - Department of Enviornmental Quality
EPA - Enviornmental Protection Agency
RBCs - Risk-Based Concentrations
NWTPH-HCID - Total petroleum hydrocarbon identification
NWTPH-Dx - Diesel-range hydrocarbon quantification
NWTPH-Gx - Gasoline-range hydrocarbon quantification
VOCs- Volatile organic compounds
PAHs - Polycyclic aromatic hydrocarbons
PCBs- Polychlroinated biphenyls

bgs - Below ground surface
mg/kg - Milligrams per kilogram
ND - Analyte not deteced in the sample
-- - Analyte not analyzed, or no screening value for this analyte in this scenario
>Max - Substance is deemed not to pose risks in this scenario
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Lev
- Analyte detected at a concentration at or above ODEQ Risk-Based Concentratic
4 - 2-Butatnone detection attributed to laboratory contamination

Table 2 - Summary of Soil Analytical Results: Volatile Organic Compounds (VOCs)

Sample ID	Sample Date	Sampled By	Sample Depth	**Analytical Testing Results** (ug/kg) Volatile Organic Compounds by EPA 8260															
				1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Acetone	Benzene	Chlorobenzene	iso-Propylbenzene	p-Isopropyltoluene	m,p-Xylene	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	sec-Butylbenzene	Total Xylenes
Kleinfelder & PNG Test Pits			(ft. bgs)																
TP3-13	5/18/99	PNG	13	--	ND	ND	ND	ND	**956**	ND	ND	--	--	--	--	--	--	--	--
TP-2-5	5/17/00	Kleinfelder	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TP-2-19	5/17/00	Kleinfelder	19	ND	ND	ND	ND	ND	ND	ND	ND	**126**	ND	**408**	ND	ND	ND	ND	ND
BES Geoprobe Samples			(ft. bgs)																
WP-11 0-1	11/21/23	BES	0-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**44**	ND	ND	ND	ND	ND
ODEQ Cleanfill																			
Clean Fill Screening Value				4	200	920	57	1,200	23	2,400	--	--	11,000	77	190,000	72,000	1,000	350,000	1,400
ODEQ Risk Based Concnetrations																			
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				54,000	2,900,000	20,000	1,300,000	--	380,000	4,700,000	27,000,000	--	20,000,000	580,000	--	--	20,000,000	--	20,000,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				1,500,000	81,000,000	560,000,000	36,000,000	--	11,000,000	130,000,000	750,000,000	--	560,000,000	16,000,000	--	--	560,000,000	--	560,000,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Occupational				26,000	6,900,000	36,000,000	64,000	--	37,000	8,700,000	57,000,000	--	25,000,000	23,000	--	--	25,000,000	--	25,000,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Residential				3,200	430,000	2,200,000	14,000	--	8,200	530,000	3,500,000	--	--	5,300	--	--	--	--	1,400,000
Freshwater Sediment																			
Oregon DEQ Ecological Sediment SLVs				--	--	--	--	--	--	--	--	--	--	176	--	--	--	--	--

Notes
DEQ - Departement of Enviornmental Quality
EPA - Environmental Protection Agency
RBCs - Risk-Based Concentrations
bgs - Below ground surface
ug/kg - Micrograms per kilogram
ND - Analyte not detected in the sample
>Csat - Substance RBC exceeds the limit of the three-phase equilibrium partitioning
-- - Analyte not analyzed, or no screening value for this analyte in this scenario
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Levels
- Analyte detected at a concentration at or above ODEQ RBCs

Table 3 - Summary of Soil Analytical Results: Polycyclic Aromatic Hydrocarbons (PAHs)

Sample ID	Sample Date	Sampled By	Sample Depth	**Laboratory Analytical Testing Results** (ug/kg) Polycyclic Aromatic Hydrocarbons (PAHs) by EPA 8270-SIM																
				Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Butyl benzyl phthalate	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
Kleinfelder & PNG Test Pits			(ft. bgs)																	
TP-3-13	5/18/99	PNG	13	--	**4.77**	ND	**1,000**	**Table 2[4]**	ND											
TP-2-5	5/17/00	Kleinfelder	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**3,830**	ND	ND	ND	ND	**3,980**
TP-2-19	5/17/00	Kleinfelder	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BES Test Pits			(ft. bgs)																	
T-Pit-1 0-18"	10/5/23	BES	0-1.5	ND	ND	ND	**35**	**72**	**93**	**100**	**23**	--	**52**	ND	**69**	ND	**79**	ND	ND	**91**
T-Pit-2 0-5'	10/5/23	BES	0-5	**50**	**430**	**250**	**490**	**1,400**	**1,100**	**1,400**	**390**	--	**700**	**160**	**580**	ND	**1,300**	ND	**130**	**960**
T-Pit-3 0-18"	10/5/23	BES	0-1.5	ND	**80**	**83**	**95**	**220**	**260**	**300**	**100**	--	**160**	**49**	**140**	ND	**270**	ND	ND	**180**
T-Pit-4 0-5'	10/5/23	BES	0-5	ND	ND	ND	**43**	**66**	**77**	**69**	**29**	--	**77**	ND	**57**	ND	**58**	ND	**85**	**88**
T-Pit-5 0-18"	10/5/23	BES	0-1.5	ND	ND	ND	ND	**120**	**170**	**210**	ND	--	**65**	ND	**78**	ND	**150**	ND	ND	**150**
T-Pit-6 0-18"	10/5/23	BES	0-1.5	ND	**48**	**65**	**180**	**190**	**210**	**170**	**79**	--	**190**	**42**	**290**	ND	**160**	ND	**150**	**400**
T-Pit-6 0-5'	10/5/23	BES	0-5	ND	**88**	**110**	**150**	**220**	**230**	**320**	**68**	--	**170**	**48**	**250**	ND	**240**	ND	**100**	**370**
T-Pit-7 0-5'	10/5/23	BES	0-5	ND	ND	**66**	**62**	**91**	**110**	**140**	**36**	--	**89**	**22**	**160**	ND	**120**	ND	**110**	**180**
T-Pit-8 0-18"	10/5/23	BES	0-1.5	ND	ND	ND	ND	**52**	**80**	**130**	ND	--	ND	ND	**52**	ND	**60**	ND	ND	**80**
T-Pit-9 0-5'	10/5/23	BES	0-5	ND	**100**	**110**	**110**	**260**	**300**	**370**	**100**	--	**200**	**69**	**230**	ND	**360**	ND	**110**	**290**
T-Pit-10 0-18"	10/5/23	BES	0-1.5	ND	ND	ND	ND	**40**	**58**	**95**	ND	--	**19**	ND	**42**	ND	**52**	ND	ND	**62**
T-Pit-11 0-5'	10/5/23	BES	0-5	ND	**49**	**52**	**31**	**110**	**100**	**160**	**27**	--	**36**	**35**	**63**	ND	**150**	ND	ND	**92**
T-Pit-12 0-18"	10/5/23	BES	0-1.5	ND	ND	ND	ND	**46**	**48**	**76**	ND	--	**22**	ND	**28**	ND	**50**	ND	ND	**43**
BES Geoprobe Samples			(ft. bgs)																	
WP-1 0-5	11/21/23	BES	0-5	ND	ND	ND	ND	**26**	**28**	**35**	ND	--	ND	ND	**42**	ND	**28**	ND	ND	**61**
WP-1 5-10	11/21/23	BES	5-10	ND	ND	ND	**66**	**100**	**120**	**80**	**40**	--	**89**	ND	**120**	ND	**78**	ND	**68**	**140**
WP-2 0-5	11/21/23	BES	0-5	ND	ND	ND	ND	**35**	**39**	**53**	ND	--	**24**	ND	**51**	ND	**33**	ND	ND	**71**
WP-2 5-10	11/21/23	BES	5-10	**50**	**190**	**140**	**180**	**430**	**350**	**390**	**100**	--	**240**	**31**	**490**	**80**	**360**	ND	**390**	**660**
WP-3 0-5	11/21/23	BES	0-5	ND	ND	ND	ND	**29**	**29**	**42**	ND	--	ND	ND	ND	ND	ND	ND	ND	**38**
WP-3 5-10	11/21/23	BES	5-10	ND	ND	ND	**130**	**170**	**180**	**130**	**66**	--	**150**	**26**	**240**	ND	**130**	ND	**120**	**260**
WP-4 0-5	11/21/23	BES	0-5	ND	ND	ND	**24**	ND	**34**	**29**	ND	--	**28**	ND	**85**	ND	**23**	ND	ND	**100**
WP-4 5-10	11/21/23	BES	5-10	**570**	**42**	**450**	**730**	**950**	**1,000**	**660**	**310**	--	**800**	**110**	**1,700**	**480**	**730**	**270**	**1,400**	**1,600**
WP-5 0-5	11/21/23	BES	0-5	ND	ND	**53**	**39***	**57**	**80**	**73**	**28**	--	**110**	ND	**56**	ND	**62**	ND	ND	**75**
WP-6 0-5	11/21/23	BES	0-5	ND	ND	ND	ND	**13**	**17**	ND	ND	--	**14**	ND	**25**	ND	ND	ND	ND	**27**
WP-6 5-10	11/21/23	BES	5-10	ND	ND	ND	**61**	**69**	**79**	**58**	**25**	--	**78**	ND	**110**	ND	**48**	ND	**79**	**140**
WP-7 0-5	11/21/23	BES	0-5	ND	ND	ND	**54**	**110**	**110**	**120**	**28**	--	**57**	**24**	**100**	ND	**96**	ND	**54**	**150**
WP-7 5-10	11/21/23	BES	5-10	**54**	**1,200**	**620**	**2,700**	**2,800**	**2,500**	**1,600**	**830**	--	**2,700**	**340**	**5,000**	**180**	**1,800**	**190**	**2,300**	**6,500**
WP-9 0-5	11/21/23	BES	0-5	**370**	**4,300**	**1,900**	**5,000**	**8,400**	**6,500**	**6,400**	**2,100**	--	**5,800**	**780**	**18,000**	**290**	**5,900**	ND	**10,000**	**24,000**
WP-9 5-10	11/21/23	BES	5-10	**1,900**	**110**	**1,100**	**530**	**480**	**550**	**300**	**180**	--	**630**	**74**	**2,100**	**1,400**	**330**	**3,800**	**3,800**	**2,100**
WP-10 0-5	11/21/23	BES	0-5	ND	ND	ND	**360**	**680**	**880**	**540**	**270**	--	**600**	**150**	**350**	ND	**600**	ND	**83**	**470**
WP-10 5-10	11/21/23	BES	5-10	ND	ND	ND	ND	**14**	**14**	**15**	ND	--	**11**	ND	**16**	ND	**13**	ND	ND	**22**
WP-11 5-10	11/21/23	BES	5-10	ND	ND	ND	ND	**16**	**16**	**18**	ND	--	**13**	ND	**20**	ND	**17**	ND	ND	**26**
WP-12 0-5	11/21/23	BES	0-5	ND	**47**	**23**	**94**	**230**	**240**	**850**	**89**	--	**210**	**100**	**130**	ND	**730**	ND	**57**	**210**
WP-12 5-10	11/21/23	BES	5-10	ND	ND	ND	**16**	**34**	**33**	**66**	**11**	--	**24**	ND	**30**	ND	**56**	ND	ND	**45**
WP-13 0-5	11/21/23	BES	0-5	**3,408**	**2,600**	**1,200**	**3,100**	**5,300**	**4,800**	**5,300**	**1,500**	--	**4,400**	**670**	**8,800**	**820**	**4,900**	**1,100**	**7,300**	**12,000**
WP-13 5-10	11/21/23	BES	5-10	ND	ND	ND	**80**	**78**	**110**	**72**	ND	--	**150**	ND	**170**	ND	ND	ND	**320**	**280**
WP-13 10-15	11/21/23	BES	10-15	**120**	**700**	**560**	**1,200**	**1,700**	**1,400**	**1,300**	**450**	--	**1,500**	**190**	**3,900**	**420**	**1,300**	**400**	**4,300**	**4,500**
ODEQ Cleanfill																				
Clean Fill Screening Value				250	120,000	6,800	730	110	1,100	25,000	11,000	14,000	3,100	110	10,000	3,700	1,100	77	5,500	10,000
ODEQ Risk Based Concentrations																				
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				21,000,000	--	110,000,000	170,000	17,000	4,900,000	--	49,000,000	--	490,000,000	490,000	280,000,000	390,000,000	4,900,000	16,000,000	--	210,000,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				590,000,000	--	>Max	4,900,000	490,000	170,000	--	1,700,000	--	17,000,000	17,000	10,000,000	14,000,000	170,000	580,000	--	7,500,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Occupational				70,000,000	--	350,000,000	21,000	2,100	21,000	--	210,000	--	2,100,000	2,100	30,000,000	47,000,000	21,000	23,000	--	23,000,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Residential				4,700,000	--	23,000,000	1,100	110	1,100	--	11,000	--	110,000	110	2,400,000	3,100,000	1,100	5,300	--	1,800,000
ODEQ Ecological Risk Based Concentrations																				
Freshwater Sediment				290	160	57	32	32	--	300	27	--	57	33	111	77	17	176	42	53

Notes
DEQ - Department of Environmental Quality
EPA - Environmental Protection Agency
RBCs - Risk-Based Concentrations
bgs - Below ground surface
ug/kg - Mircograms per kilogram
ND - Analyte not detected in the sample
-- - Analyte not analyzed, or no screening value was found for this analyte in this scenario
>Max - Substance is deemed not to pose risks in this scenario
>Csat - Substance RBC exceeds the limit of the three-phase equilibrium partitioning
NV - Substance is not volatile
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Levels
- Analyte detected at a concentrations at or above ODEQ RBCs

Table 4 -Summary of Soil Analytical Results: Total Metals

Sample ID	Sample Date	Sampled By	Sample Depth	Laboratory Analytical Testing Results (mg/kg) Total Metals EPA 6020									
				Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Mercury	Selenium	Silver	Zinc
Kleinfelder & PNG Test Pits			(ft. bgs)										
TP-1-7	5/17/00	Kleinfelder	7	**2.62**	**120**	**0.078**	**24**	--	**7.8**	**0.0075**	ND	ND	--
TP-1-19	5/17/00	Kleinfelder	19	**7.19**	**220**	**0.26**	**24**	--	**74**	**0.030**	ND	ND	--
TP-2-5	5/17/00	Kleinfelder	5	**6.93**	**110**	**0.40**	**22**	--	**24**	**0.030**	ND	ND	--
TP-2-19	5/17/00	Kleinfelder	19	**6.45**	**120**	**0.19**	**14**	--	**76**	**4.88**	ND	ND	--
BES Test Pits			(ft. bgs)										
T-Pit-1 0-18"	10/5/23	BES	0-1.5	**4.44**	--	**0.449**	**113**	**34.4**	**84.1**	**0.0670**	--	--	**142**
T-Pit-2 0-5'	10/5/23	BES	0-5	**5.00**	--	**0.352**	**51.8**	**30.6**	**59.2**	**0.1610**	--	--	**127**
T-Pit-3 0-18"	10/5/23	BES	0-1.5	**9.27**	--	**0.893**	**169**	**82.4**	**123**	**0.0719**	--	--	**232**
T-Pit-4 0-5'	10/5/23	BES	0-5	**3.63**	--	**0.252**	**21.3**	**21.6**	**69.9**	**0.0484**	--	--	**112**
T-Pit-5 0-18"	10/5/23	BES	0-1.5	**2.62**	--	**0.166**	**20.4**	**24.5**	**27.7**	**0.0226**	--	--	**84.1**
T-Pit-6 0-18"	10/5/23	BES	0-1.5	**5.15**	--	**0.193**	**29.0**	**25.4**	**30.9**	**0.0391**	--	--	**90.4**
T-Pit-6 0-5'	10/5/23	BES	0-5	**6.44**	--	**0.270**	**27.5**	**34.0**	**74.7**	**0.101**	--	--	**138**
T-Pit-7 0-5'	10/5/23	BES	0-5	**5.09**	--	**0.291**	**23.3**	**28.2**	**51.8**	**0.0639**	--	--	**145**
T-Pit-8 0-18"	10/5/23	BES	0-1.5	**2.72**	--	**0.165**	**18.9**	**30.9**	**16.0**	**0.0213**	--	--	**81.2**
T-Pit-9 0-5'	10/5/23	BES	0-5	**3.70**	--	**0.168**	**24.3**	**26.2**	**29.0**	**0.0252**	--	--	**93.9**
T-Pit-10 0-18"	10/5/23	BES	0-1.5	**2.22**	--	**0.138**	**447**	**28.7**	**25.1**	**0.0180**	--	--	**70.8**
T-Pit-11 0-5'	10/5/23	BES	0-5	**4.27**	--	**0.171**	**330**	**29.8**	**32.6**	**0.0246**	--	--	**104**
T-Pit-12 0-18"	10/5/23	BES	0-1.5	**3.12**	--	**0.153**	**19.7**	**19.9**	**16.1**	**0.0273**	--	--	**78.1**
BES Geoprobe Samples			(ft. bgs)										
WP-1 0-5	11/21/23	BES	0-5	**6.57**	--	**0.174**	**26.8**	**24.9**	**89.6**	**0.0246**	--	--	**79.2**
WP-1 5-10	11/21/23	BES	5-10	**6.46**	--	**0.261**	**27.1**	**26.6**	**62.3**	**0.0579**	--	--	**114**
WP-2 0-5	11/21/23	BES	0-5	**11.0**	--	**0.165**	**32.2**	**25.0**	**28.8**	**0.0249**	--	--	**84.9**
WP-2 5-10	11/21/23	BES	5-10	**11.8**	--	**0.167**	**27.4**	**18.0**	**19.6**	**0.0224**	--	--	**75.5**
WP-3 0-5	11/21/23	BES	0-5	**4.69**	--	**0.102**	**27.4**	**22.7**	**15.8**	**0.0212**	--	--	**62.1**
WP-3 5-10	11/21/23	BES	5-10	**9.59**	--	**0.239**	**34.0**	**46.4**	**46.2**	**0.0431**	--	--	**98.3**
WP-4 0-5	11/21/23	BES	0-5	**2.91**	--	**0.141**	**24.9**	**16.8**	**14.5**	**0.0251**	--	--	**55.3**
WP-4 5-10	11/21/23	BES	5-10	**14.3**	--	**0.267**	**33.4**	**115**	**84.0**	**0.0683**	--	--	**121**
WP-5 0-5	11/21/23	BES	0-5	**8.22**	--	**0.167**	**118**	**26.6**	**18.2**	**0.0410**	--	--	**72.1**
WP-5 5-10	11/21/23	BES	5-10	**3.65**	--	**0.125**	**25.3**	**20.2**	**21.7**	**0.0323**	--	--	**69.4**
WP-6 0-5	11/21/23	BES	0-5	**7.59**	--	**0.149**	**27.7**	**19.7**	**20.1**	**0.0347**	--	--	**81.2**
WP-6 5-10	11/21/23	BES	5-10	**5.93**	--	**0.155**	**30.5**	**31.6**	**28.1**	**0.0780**	--	--	**84.0**
WP-7 0-5	11/21/23	BES	0-5	**8.32**	--	**0.170**	**26.5**	**24.4**	**23.8**	**0.0305**	--	--	**76.1**
WP-7 5-10	11/21/23	BES	5-10	**6.17**	--	**0.157**	**25.5**	**35.9**	**39.4**	**0.0884**	--	--	**82.3**
WP-9 0-5	11/21/23	BES	0-5	**4.56**	--	**0.110**	**25.4**	**19.6**	**18.5**	**0.0243**	--	--	**63.6**
WP-9 5-10	11/21/23	BES	5-10	**4.75**	--	**0.204**	**24.9**	**28.5**	**27.1**	**0.0420**	--	--	**88.9**
WP-10 0-5	11/21/23	BES	0-5	**4.51**	--	**0.249**	**28.1**	**28.7**	**30.7**	**0.0340**	--	--	**95.3**
WP-10 5-10	11/21/23	BES	5-10	**5.48**	--	**0.241**	**26.6**	**22.4**	**51.5**	**0.0574**	--	--	**117**
WP11 0-5	11/21/23	BES	0-5	**6.74**	--	**0.268**	**27.0**	**29.8**	**34.1**	**0.0289**	--	--	**120**
WP-11 5-10	11/21/23	BES	5-10	**10.4**	--	**0.230**	**27.5**	**19.2**	**32.7**	**0.2790**	--	--	**111**
WP-11 10-15	11/21/23	BES	10-15	**7.29**	--	**0.333**	**31.8**	**40.6**	**137**	**0.0296**	--	--	**170**
WP-12 0-5	11/21/23	BES	0-5	**5.19**	--	**0.255**	**23.7**	**27.0**	**101**	**0.0389**	--	--	**127**
WP-12 5-10	11/21/23	BES	5-10	**3.18**	--	**0.182**	**18.1**	**27.3**	**31.6**	**0.0272**	--	--	**91.2**
WP-13 0-5	11/21/23	BES	0-5	**3.19**	--	**0.307**	**23.3**	**38.5**	**71.0**	**0.0295**	--	--	**118**
WP-13 5-10	11/21/23	BES	5-10	**4.18**	--	**0.284**	**23.3**	**19.7**	**45.0**	**0.112**	--	--	**137**
WP-13 10-15	11/21/23	BES	10-15	**5.94**	--	**0.310**	**26.8**	**21.4**	**141**	**0.0379**	--	--	**173**
ODEQ Cleanfill													
Clean Fill Screening Value				8.8	790	0.63	76	34	28	0.23	0.71	0.82	180
ODEQ Risk Based Concentraions													
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				15	69,000	350	530,000	14,000	800	110	--	1,800	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				420	>Max	9,700	>Max	390,000	800	2,900	--	49,000	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Occupational				1.9*	220,000	1,100	>Max	47,000	800	350	--	5,800	--
Soil Ingestion, Dermal Contact, and Inhalation RBC - Residential				0.43*	15,000	78	120,000	3,100	400	23	--	390	--
ODEQ Ecological Risk Based Concentrations													
Freshwater Sediment				6*	--	0.6	37	36	35	0.2	--	4.5	123

Notes

DEQ - Department of Environmental Quality
EPA - Environmental Protection Agency
RBCs - Risk-Based Concentrations
bgs - Below ground surface
mg/kg - Milligrams per kilogram
ND - Analyte not detected in the sample
-- - Analyte not analyzed, or no screening value was found for this analyte in this scenario
>Max - Substance is deemed not to pose risks in this scenario
NV - Substance is not volatile
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Levels
- Analyte detected at a concentrations at or above ODEQ RBCs
* - Arsenic screening level values are below the naturally occuring background level of 8.8 mg/kg for this region

Table 5 - Summary of Soil Analytical Results: Polychlorinated Biphenyls (PCBs)

Sample ID	Sample Date	Sampled By	Sample Depth	**Laboratory Analytical Testing Results** (ug/kg)						
				Polychorinated Bipheynyls (PCBs) by EPA 8082						
				Aroclor 1016/1242	Aroclor 1221	Aroclor 1232	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total PCBs
BES Test Pits			(ft. bgs)							
T-Pit-6 0-5'	10/5/23	BES	0-5	ND	ND	ND	ND	ND	ND	ND
BES Geoprobe Samples			(ft. bgs)							
WP-3 0-5	11/21/23	BES	0-5	ND	ND	ND	ND	**19.3**	ND	**19**
WP-10 5-10	11/21/23	BES	5-10	ND	ND	ND	ND	ND	ND	ND
ODEQ Cleanfill										
Clean Fill Screening Value				41	4.8	4.8	7.3	41	240	230
ODEQ Risk Based Concnetrations										
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				--	--	--	--	--	--	4,900
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				--	--	--	--	--	--	140,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Occupational				--	--	--	--	--	--	590
Soil Ingestion, Dermal Contact, and Inhalation RBC - Residential				--	--	--	--	--	--	230
ODEQ Ecological Risk Based Concentrations										
Freshwater Sediment				--	--	--	21	7	--	34

Notes
DEQ - Department of Environmental Quality
EPA - Environmental Protection Agency
RBCs - Risk-Based Concentrations
bgs - Below ground surface
ug/kg - Mircograms per kilogram
ND - Analyte not detected in the sample
-- - Analyte not analyzed, or no screening value was found for this analyte in this scenario
>Max - Substance is deemed not to pose risks in this scenario
>Csat - Substance RBC exceeds the limit of the three-phase equilibrium partitioning
NV - Substance is not volatile
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Levels
- Analyte detected at a concentrations at or above ODEQ RBCs

Table 6 - Summary of Soil Analytical Results: Pesticides

Sample ID	Sample Date	Sampled By	Sample Depth	**Laboratory Analytical Results** (ug/kg)																					
				Pesticides 8081B																					
				Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	Chlordane	cis-Chlordane	trans-Chlordane	4-4'-DDD	4-4'-DDE	4-4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxyclor	Toxaphene
BES Test Pits			(ft. bgs)																						
T-Pit-7 0-5'	10/5/23	BES	0-5	ND	ND	ND	**0.35**	ND	ND	**3.90**	**4.80**	**120**	**91**	**150**	ND	**1.40**	ND	ND	ND	ND	ND	ND	ND	ND	ND
ODEQ Clean Fill																									
Clean Fill Screening Value				23	63	9	--	95	910	270	2,200	63	10	10	45	640	640	--	14	--	--	17	42	5,100	360
ODEQ Risk Based Concentrations																									
Soil Ingestion, Dermal Contact, and Inhalation RBC - Construction Worker				1,100	3,000	--	--	17,000	61,000	--	--	9,700	66,000	66,000	1,200	1,600,000	1,600,000	--	80,000	--	--	4,000	2,000	--	17,000
Soil Ingestion, Dermal Contact, and Inhalation RBC - Excavation Worker				30,000	83,000	--	--	470,000	1,700,000	--	--	270,000	1,800,000	1,800,000	33,000	45,000,000	45,000,000	--	2,200,000	--	--	110,000	56,000	--	470,000
Soil Ingestion, Contact, and Inhalation RBC - Occupational				130	360	--	--	2,100	7,400	--	--	12,000	8,200	8,500	140	4,900,000	4,900,000	--	250,000	--	--	450	240	--	2,100
Soil Ingestion, Contact, and Inhalation RBC - Residential				31	86	--	--	490	1,700	--	--	2,200	1,800	1,900	34	380,000		--	19,000	--	--	110	55	--	490
ODEQ Ecological Risk Based Concentrations																									
Freshwater Sediment				40	--	--	--	--	5	--	--	4	2	4	3	--	--	--	3	--	--	10	1	--	--

Notes
DEQ - Department of Environmental Quality
EPA - Environmental Protection Agency
RBCs - Risk-Based Concentrations
bgs - Below ground surface
ug/kg - Mircograms per kilogram
ND - Analyte not detected in the sample
-- - Analyte not analyzed, or no screening value was found for this analyte in this scenario
>Max - Substance is deemed not to pose risks in this scenario
>Csat - Substance RBC exceeds the limit of the three-phase equilibrium partitioning
NV - Substance is not volatile
Bolded - Analyte detected in the sample
- Analyte detected at a concentration at or above ODEQ Clean Fill Screening Levels
- Analyte detected at a concentrations at or above ODEQ RBCs

APPENDIX E

Phase II Environmental Site Assessments and Soil Vapor Investigation Report

ORIGINAL

PHASE II ENVIRONMENTAL INVESTIGATION

Larsen Property
10505 North Portland Road
Portland, Oregon

DEQ File 26-97-0558
DEQ ECSIS 186

Prepared for:

CITY OF PORTLAND
Bureau of Environmental Services
1120 Southwest Fifth Avenue, Room 400
Portland, Oregon 97204-1972

Prepared by:

PNG ENVIRONMENTAL, INC.

850-02
November 12, 1999

7130 SW Elmhurst Street
Tigard, Oregon 97223

(503) 620-2387
FAX (503) 620-2977

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Appendix B - Boring Logs
Appendix C - Groundwater Collection Forms
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1 INTRODUCTION

This report presents the results of the Phase II Environmental Investigation performed by PNG Environmental, Inc. (PNG) at the Larsen Property at 10505 North Portland Road in Portland, Oregon. This Phase II Environmental Investigation was conducted for the City of Portland Bureau of Environmental Services (BES) under a standard Work Order for CSA Services. The City of Portland is in the process of negotiating the purchase of the subject site. The proposed use of the subject site is for the expansion of the adjacent Columbia Boulevard Wastewater Treatment Plant.

The purpose of this investigation is to assess soil and groundwater quality at selected areas at the subject site to assess if the site is in compliance with applicable Oregon Department of Environmental Quality (DEQ) and US Environmental Protection Agency (EPA) regulations. The subject site is currently listed as File 26-97-0558 on the DEQ Underground Storage Tank (UST) Cleanup List and as Site 186 on the DEQ Confirmed Release List. The investigation included the excavation of five test pits, the installation of six monitoring wells, and the collection and analysis of groundwater samples from the monitoring wells during two separate sampling events.

The purpose of the Phase II Environmental Investigation is to assess only environmental concerns. The investigation does not present any engineering opinions concerning the site and presents no engineering opinions concerning the suitability of the site for development.

2 SCOPE OF WORK

The investigation consisted of the following tasks:

Task 1 - Review Existing Environmental Data

- Review the environmental reports available for the site.
- Meet with the current property owner's consultant to review underground storage tank (UST) decommissioning documents for the site.

Task 2 - Subsurface Investigation

- Prepare a Site Safety Plan.
- Excavate five test pits in identified areas of concern.
- Collect subsurface soil samples from test pits.
- Install six monitoring wells.
- Collect two rounds of water samples from the monitoring wells.
- Submit the soil and water samples to an analytical laboratory for selected chemical analyses.

Task 3 - Report Preparation

- Prepare a report summarizing field activities and findings.

3 SITE DESCRIPTION

The Larsen Property is located at 10505 North Portland Road in Portland, Oregon (Figure 1). The subject site consists of 24.02 acres in Tax Lots TL22 (13.36 acres) and TL107 (10.66 acres) in sections 5 and 6, Township 1 North, Range 1 East, Multnomah County, Oregon. The subject site is the northern portion of a 39.77-acre parcel owned by Louis and Karen Larsen of Portland, Oregon.

The subject site is bounded on the north by the Columbia Slough, on the east by North Portland Road, the Burlington Northern Railroad and the BES Columbia Boulevard Waste Water Treatment Plant, on the west by Columbia Steel Casting Company, and on the south by the Matlack Inc./Bright-Sol facility (Figure 2).

The Matlack Inc./Bright-Sol facility is located on the southern portion of the parcel owned by the Larsens. The Matlack facility is the site of the former Arrow Trucking facility and former Widing Transportation facility. The former Widing Transportation facility disposed of tanker rinse water into ponds located on the subject site. The ponds were drained, and closed with DEQ approval in 1984. Widing Transportation, Arrow Trucking, and Matlack Inc. continued to use the tanker washing facility, but with discharge to the City of Portland sewer system.

4 BACKGROUND

PNG conducted a Limited Phase II Environmental Site Assessment (ESA) at the subject site in December 1998. The results of the Limited Phase II ESA identified the following areas of concern.

4.1 UST AT FORMER PENINSULA DIESEL FACILITY

Peninsula Diesel operated a diesel engine repair and rebuilding shop at 10505 North Portland Road on the northeast portion of the subject site from 1985 to 1998. In 1997, a prospective purchaser conducted a Phase I ESA for the subject site. A gasoline UST was identified at the site during the Phase I ESA. At that time, Enviro-Comp Services, Oregon City, Oregon, decommissioned the UST and conducted remedial activities. The release was reported to DEQ (UST File 26-97-0558). At the time of the PNG Limited Phase II ESA, very little information was in the DEQ files concerning this release. As part of the PNG Limited Phase II ESA, PNG installed a soil probe (B-1) in the area of the decommissioned UST. Water samples (B1-W) from the soil probe detected gasoline constituents, with a concentration of benzene exceeding the DEQ numeric cleanup standard.

The concern from the UST area is the status of the remedial activities and the concentration of gasoline constituents remaining in the soil and groundwater. During the present investigation, the Phase I ESA, which contained the UST decommissioning information, was reviewed. In addition, one test pit was excavated in the area downgradient of the remedial activities.

4.2 MATERIALS STORAGE AREA

The surface area west of the former Peninsula Diesel shop is used for storage of various used building materials. The subsurface in this area appears to have been filled with construction debris. During the PNG Limited Phase II ESA, an open excavation was noted in this area. The excavation contained concrete rubble and metal debris. A waste drum had been placed near the excavation for excavated materials. The contents of the drum are not known. During the PNG Limited Phase II ESA, two soil borings (B-2 and B-3) were completed in this area. Soil cuttings from Boring B-3 appeared to contain foundry sand. Elevated concentrations of leachable metals (TCLP) were not detected in soil or groundwater samples from the borings during the PNG Limited Phase II ESA. However, elevated hydrocarbon constituents and solvents were detected in groundwater samples from the borings.

The concerns for this area are the source and nature of the fill material and the extent of the petroleum product and solvent contamination in groundwater. During this investigation, two test pits (TP-1 and TP-2) and four monitoring wells (MW-1, MW-2, MW-3, and MW-4) were installed to assess this area.

4.3 FORMER POND AREA

The Former Pond Area (Figure 2) has been filled since at least 1984. The pond area was used for the disposal of rinsate from the truck cleaning operation from the previous operators of the adjacent Matlack facility. The Former Pond Area portion of the subject site and the adjacent former Arrow Trucking facility were assessed by EPA in 1984. After the ponds were closed, EPA determined that "No Further Action" was required

under the Federal Superfund Program. However, DEQ conducted a Preliminary Assessment in 1993 and placed the Arrow Trucking site (Site 186) on the DEQ Confirmed Release List in 1997. DEQ recommended further assessment of the pond area.

During the PNG Limited Phase II ESA, three soil probes (B-4, B-5, and B-6) were installed in the Former Pond Area. All three probes encountered refusal and could not penetrate the fill material.

The concerns in the Former Pond Area are the type of material used as fill, the effect of the residual sludge material on groundwater quality, and the effect of the adjacent tanker washing operation on groundwater quality. Additional concerns for the Former Pond Area were the effects of the operations of the adjacent Columbia Steel facility on the soil and groundwater at the subject site. Columbia Steel stores used foundry sand on the area directly west of the Former Pond Area.

During this investigation three test pits (TP-2, TP-3, and TP-4) and three monitoring wells (MW-1, MW-5, and MW-6) were installed in the Former Pond Area.

5 FIELD INVESTIGATION

The field investigation task included a test pit exploration, the installation of monitoring wells, and two groundwater sampling events. The test pit exploration was conducted on May 18, 1999. Monitoring wells were installed on May 18, 1999 and May 24, 1999. Groundwater samples were collected on May 26, 1999 and July 28, 1999. The test pit and monitoring well locations installed during this investigation and the boring locations from the PNG Limited Phase II ESA are shown on Figure 3.

5.1 FIELD METHODS

The field methods used during the Phase II Environmental Investigation are described in the following sections.

5.2 TEST PIT EXPLORATION

Five test pits were installed with a track hoe on May 18, 1999 by Terra Hydr, Inc, Portland, Oregon. The purpose of the test pits was to expose a larger area of the subsurface fill materials to evaluate potential drilling conditions. The test pit excavations were observed by a PNG geologist. Soil samples were collected from the excavated material. Following sampling, the pits were filled with the excavated material.

5.3 SOIL SAMPLING

Soil samples were collected from four of the five test pits on May 18, 1999. All soils were field-screened for staining, odor, and the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). The samples were collected directly out of the track-hoe bucket, placed in laboratory-prepared glass jars, and sealed with Teflon-lined lids. Each sample was placed in an iced cooler and transported to the City of Portland Bureau of Environmental Services Water Pollution Control Laboratory under chain-of-custody protocol. A copy of the chain-of-custody is presented in the laboratory analytical report (Appendix A).

5.4 MONITORING WELL INSTALLATION

Track-mounted drilling equipment was initially scoped for the Phase II Environmental Investigation. The project was scheduled for early spring 1999. At that time, the Former Pond Area could not support rubber-tired drilling equipment. Monitoring Wells MW-1, MW-2, and MW-3 were completed with track-mounted, hollow-stem auger drilling equipment by GeoTech Explorations, Tualatin, Oregon on May 18, 1999. Because the monitoring wells were located near test pits or former soil-probe borings, soil samples were not collected. The cuttings were logged for lithologic contacts and field-screened for contamination. Cuttings are stored in drums on-site, pending disposal. Boring logs were prepared for each soil boring and are presented as Appendix B.

Due to the concrete debris in the subsurface, the completion of borings with hollow-stem auger drilling equipment was difficult. Well MW-3 encountered refusal at a depth of 18 feet. The results of the test pit exploration indicated abundant concrete rubble in the Former Pond Area. On May 24, 1999, Wells MW-4, MW-5, and MW-6 were installed with air-rotary drilling equipment using a 6-inch diameter, tri-cone bit with a casing hammer. The drill cuttings, collected in a cyclone, were logged for lithologic contacts

and field-screened for contaminants by a PNG geologist. No soil samples were collected from the borings. Cuttings are stored in drums on-site, pending disposal. Boring logs were prepared for each soil boring and are included in Appendix B.

The monitoring wells were constructed to Oregon standards with sand pack, seal, and above-ground monuments. The wells were constructed with 2-inch PVC schedule 40 casing and 0.010-inch machine-slot screen. Bullards were placed around the above-ground monuments to protect the wells. Details of well construction are provided in the boring logs presented in Appendix B and summarized in Table 1.

5.5 GROUNDWATER SAMPLING

The monitoring wells were developed by surging and pumping following drilling. On March 24 and 25, 1999, the wells were purged with a peristaltic pump. Purge water was placed in drums on-site pending disposal. On May 26, 1999 and July 28, 1999, PNG collected groundwater samples from the monitoring wells.

Prior to sampling, each well was measured with an oil-water interface probe to check for separate-phase hydrocarbons (SPH). No SPH were observed in any of the wells.

The volume of water in the wells was calculated and a minimum of three well volumes of water was purged with a peristaltic pump at a pumping rate of approximately one gallon per minute (gpm). Groundwater was purged from the top of the water column and the purge line was lowered in response to decreasing water levels. A new length of low-density polyethylene tubing was used in each well.

Groundwater samples from the wells were collected with new, disposable polyethylene bailers. Samples were carefully transferred into sample containers through a disposable VOA filler valve. Samples were placed in an iced cooler and delivered to the City of Portland Water Pollution Control Laboratory under chain-of-custody protocol. Groundwater collection forms documenting field activities are presented as Appendix C.

Groundwater samples were analyzed for selected chemical analysis, including:

- Total Petroleum Hydrocarbon as gasoline using the DEQ Method NWTPH-Gx.
- Total Petroleum Hydrocarbons as diesel and oil using the DEQ Method NWTPH-Dx.
- Volatile Organic Compounds using EPA Method 624.
- Semi-volatile Organic Compounds using EPA Method 625.

6 SUBSURFACE CONDITIONS

6.1 SOIL CONDITIONS

The soil encountered in the five test pits consisted of various fill materials including sand, silt, gravel, foundry sand, wood debris, concrete, and asphalt.

6.1.1 Test Pit TP-1

Test Pit TP-1 is located in the material storage area west of the former Peninsula Diesel building. The test pit encountered fill material to the total depth excavated of 17 feet. Groundwater entered the pit and stabilized at a depth of approximately eight feet below ground surface. The soil in the excavation was visibly stained and emitted a creosote-type odor. A petroleum product sheen was noted on the water in the pit. Fill material in the excavation consisted waste materials, including, tires, bottles, wood, concrete, and metal.

Soil sample TP-1-12 was collected from the excavation at a depth of 12 feet. The sample displayed a petroleum product sheen. The sample was analyzed for petroleum products by DEQ Methods NWTPH-Dx and NWTPH-Gx, semi-volatile organic compounds (SVOC) by EPA Method 8270B, and VOCs by EPA Method 8240.

6.1.2 Test Pit TP-2

Test Pit TP-2 is located in the former pond area in the northwest portion of the site. Test Pit TP-2 encountered fill material to the total depth excavated of 17 feet. The fill material consisted of construction debris, primarily concrete rubble, with a brown silt/sand matrix. The fill material emitted a slight petroleum-like odor and displayed slight petroleum-product staining. Groundwater was not encountered in the excavation.

Soil sample TP-2-17 was collected from the base of the excavation at a depth of 17 feet. The sample was analyzed for petroleum products by DEQ Methods NWTPH-Dx and NWTPH-Gx, SVOCs by EPA Method 8270B, and VOCs by EPA Method 8240.

6.1.3 Test Pit TP-3

Test Pit TP-3 is located in the Former Pond Area north of the adjacent Matlack facility. Test Pit TP-3 encountered fill material to the total depth excavated of 13 feet. The fill material consisted of construction debris, primarily concrete rubble, with a dark brown silt/sand matrix. The fill material emitted a petroleum-like odor and displayed a petroleum-product staining. Groundwater was not encountered in the excavation.

Soil sample TP-3-13 was collected from the base of the excavation at a depth of 13 feet. The sample was analyzed for petroleum products by DEQ Methods NWTPH-Dx and NWTPH-Gx, SVOCs by EPA Method 8270B, and VOCs by EPA Method 8240.

6.1.4 Test Pit TP-4

Test Pit TP-4 is located in the Former Pond Area in the southwest portion of the site. Test Pit TP-4 encountered fill material to the total depth excavated of 12 feet. The fill material consisted of construction debris, primarily concrete rubble, with a brown

silt/sand matrix. The fill material did not emit a petroleum-like odor and displayed no petroleum-product staining. Groundwater was not encountered in the excavation.

No soil sample from Test Pit TP-4 was submitted for analyses.

6.1.5 Test Pit TP-5

Test Pit TP-5 is located north of the UST remediation area in the northeast portion of the site. Test Pit TP-5 encountered sand fill material to the total depth excavated of eight feet. The fill material consisted of well-graded coarse to medium-grained sand with minor silt. The fill material did not emit a petroleum-like odor and did not display petroleum-product staining. Groundwater was not encountered in the excavation.

Soil sample TP-5-8 was collected from the base of the excavation at a depth of eight feet. The sample was analyzed for petroleum products by DEQ Methods NWTPH-Dx and NWTPH-Gx, SVOCs by EPA Method 8270B, and VOCs by EPA Method 8240.

6.2 GROUNDWATER FLOW CONDITIONS

PNG surveyed the elevation of the monitoring wells casings on May 25, 1999. The survey was referenced to an arbitrary datum of 100 feet. Groundwater levels were measured in the six monitoring wells on May 26, 1999, and July 28, 1999 (Table 2).

6.2.1 May 26, 1999

Groundwater levels at the site as measured on May 26, 1999 ranged from 9.26 to 17.78 feet below ground surface (bgs). The flow is to the north, toward the Columbia River, at a gradient of 0.018 foot per foot (ft/ft) (Figure 4).

The shallow water level in Well MW-3 appears to indicate that a perched water zone is present in the area of the well. Data from Well MW-3 were not used in the calculation of a groundwater flow gradient. A comparison of the groundwater levels in Test Pit TP-1 and the adjacent Well MW-2 indicates that the water observed in the test pit excavation was also a perched water zone.

6.2.2 July 28, 1999

Groundwater levels at the site as measured on July 28, 1999, ranged from 10.25 to 22.92 feet bgs. Groundwater flow is to the north at a gradient of 0.017 ft/ft (Figure 5).

The water levels in Well MW-3 appeared to indicate a perched water zone.

7 ANALYTICAL RESULTS

A summary of the soil and groundwater analytical results is provided in Tables 3 through 8. Laboratory analytical reports are presented as Appendix A.

7.1 DATA REVIEW

A review of the analytical reports resulted in the following modifications to the reports.

1. Sample ID LAP990109 – The Sample Point Code is TP-1-12, not TP-1-17.
2. Sample ID LAB990111 – The Sample Point Code is TP-3-13, not TP-2-13 as reported.
3. Sample ID LAB 990113 – The result for Method NWTPH-Gx is 244 ug/L, not 244 mg/L as reported. This correction has been confirmed by the laboratory.
4. Sample ID LAB 990114 – The result for Method NWTPH-Gx is 109 ug/L, not 109 mg/L as reported. This correction has been confirmed by the laboratory.
5. Sample ID LAB 990115 – The result for Method NWTPH-Gx is 90.9 ug/L, not 90.9 mg/L as reported. This correction has been confirmed by the laboratory
6. Sample ID LAB 990116 – The result for Method NWTPH-Gx is <80 ug/L, not <80 mg/L as reported. This correction has been confirmed by the laboratory.
7. Sample ID LAB 990117 – The result for Method NWTPH-Gx is 310 ug/L, not 310 mg/L as reported. This correction has been confirmed by the laboratory.
8. Sample ID LAB 990118 – The result for Method NWTPH-Gx is <80 ug/L, not <80 mg/L as reported. This correction has been confirmed by the laboratory.

Sample W7 from the July 28, 1999 sampling event is a duplicate sample collected from Well MW-5.

7.2 SOIL ANALYTICAL RESULTS

Petroleum hydrocarbons were detected in all four test pit soil samples submitted (Table 3). Total petroleum hydrocarbons as gasoline (TPH-G) were detected in three soil samples (TP-1-12, TP-2-17, and TP-3-13). Concentrations of TPH-G ranged from 3.63 mg/Kg to 1,470 mg/Kg. The highest concentration of TPH-G was from the soil sample from Test Pit TP-1 located in the material storage area.

Total petroleum hydrocarbons in the heavy oil range were detected in all four test pit soil samples submitted at concentrations ranging from 116 mg/Kg to 1,440 mg/Kg. The highest concentrations of TPH in the heavy oil range were from Test Pit TP-3 (1,000 mg/Kg) and Test Pit TP-5 (1,440 mg/Kg).

Concentrations of TPH as diesel were not detected at laboratory detection limits in any of the four soil samples submitted.

Semi-volatile organic hydrocarbons were not detected at the laboratory detection limits in any of the four soil samples submitted (Table 4).

Benzene in sample TP-3-13 was the only VOC detected at concentrations exceeding the laboratory detection limits in the four soil samples submitted (Table 5).

7.3 GROUNDWATER ANALYTICAL RESULTS

The results of the May 26, 1999 and July 28, 1999 groundwater sampling events are described in the following sections.

7.3.1 May 26, 1999 Sampling Event

Petroleum hydrocarbons were detected in water samples from Wells MW-1, MW-2, MW-3, and MW-5 during the May 26, 1999 sampling event (Table 6). Total petroleum hydrocarbon as gasoline was detected in samples collected from Wells MW-1, MW-2, MW-3, and MW-5 at concentrations ranging from 0.091 mg/L to 0.310 mg/L.

Total petroleum hydrocarbon as diesel was not detected at laboratory detection limits in any of the six water soil samples submitted.

Total petroleum hydrocarbon in the heavy oil range was detected in the water sample from MW-2 at a concentration of 2.13 mg/L. SATURATED

Semi-volatile organic compounds were detected in water samples from Wells MW-1, MW-2, and MW-3. Only 2,4 dimethylphenol (50 ug/L in MW-1 and 110 ug/L in MW-3) and Bis(2-ethylhexyl) Phthalate (50 ug/L in MW-3) were detected at concentrations that exceeded five times the laboratory detection limits (Table 7).

Volatile organic compounds were detected in water samples from Wells MW-1, and MW-3 (Table 8). Benzene (1 ug/L), chlorobenzene (19 ug/L), chloroethane (9 ug/L) and ethylbenzene (5 ug/L) were detected in the sample from Well MW-1. Chlorobenzene,(3 ug/L) and 1,2 dichlorobenzene (12 ug/L) were detected in the sample from Well MW-3.

7.3.2 July 28, 1999 Sampling Event

Petroleum hydrocarbons were detected in water samples from Wells MW-1, MW-2, MW-3, MW-4, and MW-5 during the July 28, 1999 sampling event (Table 6). Total petroleum hydrocarbons as gasoline were detected in samples from Wells MW-1, MW-2, and MW-3 at concentrations ranging from 0.123 mg/L to 0.234 mg/L.

Total petroleum hydrocarbons as diesel were detected in samples from Wells MW-1, MW-2, MW-3, MW-4, and MW-5 at concentrations ranging from 0.580 mg/L to 1.84 mg/L.

Total petroleum hydrocarbons in the heavy oil range were detected in the water sample from Wells MW-1, MW-3, MW-4, and MW-5 at a concentration ranging from 0.528 mg/L to 1.02 ug/L.

Semi-volatile organic compounds were detected in water samples from Wells MW-1, MW-2, and MW-3. None of the compounds were detected at concentrations that exceeded five times the laboratory detection limits (Table 7).

Volatile organic compounds were detected in water samples from Wells MW-1 and MW-3 (Table 8). Chlorobenzene (9 ug/L) and chloroethane (12 ug/L) were detected in the sample from Well MW-1. Only 1,2 dichlorobenzene (3 ug/L) was detected in the sample from Well MW-3.

8 SUMMARY OF FINDINGS

PNG conducted a Phase II Investigation at the subject site. The investigation included the excavation of five test pits, the installation of six monitoring wells, collection and analysis of selected soil samples, and collection and analysis of groundwater samples from two sampling events.

8.1 UST AT FORMER PENINSULA DIESEL FACILITY

The areas of concern with the UST were the effect of the release from the UST and the former activities of the facility on the soil and groundwater. Assessment of the UST at the former Peninsula Diesel facility included the review of the following:

- Available documents concerning the UST decommissioning in 1997.
- The results of soil and groundwater sampling during the installation of Boring B-1 during the PNG Phase II ESA in December 1998.
- The results of the soil sampling during the installation of Test Pit TP-5.

A gasoline UST was identified at the former Peninsula Diesel facility in July 1997 during a Phase I ESA by a prospective purchaser of the site. A wash pad with a dry well and various containers of hazardous materials were also identified. The location of the UST and the wash pad are shown on Figure 2.

A Phase I ESA Report by Northwest Consultants of Oregon dated September 11, 1997, provides some information concerning the UST decommissioning and other remedial activities at the former Peninsula Diesel facility. In August and September 1997, Enviro-Comp Services, Inc. (Enviro-Comp) decommissioned the UST by excavation and removal. Enviro-Comp also excavated the dry well and a large volume of petroleum contaminated soil (PCS).

Soil samples collected by Enviro-Comp indicate that residual PCS were left in place. An undefined groundwater remediation system was also installed prior to filling the former UST cavity.

The UST release was reported to DEQ and the site was assigned file 26-97-0558.

A document in the DEQ file indicated that a groundwater sample detected benzene at a concentration of 9 ug/L. During the PNG Limited Phase II ESA, Boring B-1 was installed in the area of the decommissioned UST. A water sample from the boring (B1-W) detected gasoline constituents with the concentration of benzene at 28 mg/L. ug/l

During the present Phase II Investigation, Test Pit TP-5 was excavated approximately 40 feet downgradient of the UST excavation. The soil consisted of sand, with no field evidence (visual or olfactory) of impact by petroleum products. Petroleum hydrocarbons in the heavy oil range were detected in the soil sample (TP-5-8) at a concentration of 1,440 mg/Kg.

The following assessment of the UST and activities at the former Peninsula Diesel facility are based on the review of the above information.

- The information concerning the UST presented in the Northwest Consultants of Oregon Phase I ESA report is not sufficient to completely characterize the effects of the release from the UST or the operation of the dry well on soil or groundwater quality.

- The UST, dry well, and a large volume of PCS have been removed. The analytical data presented in the Phase I ESA, the PNG Limited Phase II ESA and the PNG Phase II Investigation indicate that the residual impacted soil and groundwater could potentially extend from the UST excavation to the area of Test Pit TP-5.
- The Phase I ESA indicated that containers of hazardous material had been removed from the site. No disposal documentation was presented in the report. A reconnaissance of the area noted that most of the hazardous materials had been removed from the site. Several barrels of waste are stored north of the former Peninsula Diesel building. Based on a conversation with a worker at the current facility operating in the building, these barrels were from a previous tenant. These barrels should be disposed by the present property owner.

  In addition, soil cuttings and purge water from the PNG Limited Phase II ESA and Phase II Environmental Investigation remain at the site pending disposal.

8.2 MATERIAL STORAGE AREA

The area of concern in the Material Storage Area was the elevated concentration of chlorinated solvents in water samples from Boring B-3 collected during the PNG Limited Phase II ESA. The assessment of the Material Storage Area included the review of the following:

- The Northwest Consultants of Oregon Phase I ESA.
- The results of soil and groundwater samples collected during the installation of Borings B-2 and B-3 during the PNG Limited Phase II ESA in December 1998.
- The results of the soil samples collected during the installation of Test Pit TP-1 and groundwater samples collected from Wells MW-1, MW-2, MW-3, and MW-4.

During the PNG Limited Phase II ESA, a water sample from Boring B-2 detected petroleum constituents. A water sample from Boring B-3 detected chlorinated solvents, including vinyl chloride at a concentration of 35 ug/L. Elevated concentrations of chlorinated solvents were also detected in water samples from borings installed by others on the adjacent former Arrow Trucking property.

During this investigation, Test Pit TP-1 encountered waste materials including metal, tires, wood, and glass. Water entered the test pit to a depth of approximately eight feet, apparently as perched groundwater. The water displayed a petroleum product sheen. Soil sample TP-1-12, from the test pit, only detected the presence of petroleum hydrocarbons in the gasoline and heavy oil ranges; VOCs were not detected.

Groundwater samples from Wells MW-1, MW-2, MW-3, and MW-4 detected very low levels of petroleum hydrocarbons and petroleum constituents. No chlorinated solvents were detected. The negative results from the groundwater samples, indicate that the previous positive chlorinated solvent detection might have been due to turbid water samples collected from the borings or from contamination introduced during sampling.

VINYL CHLORIDE NOT A COMMON CROSS CONTAMINANT

8.3 FORMER POND AREA

The concerns in the Former Pond Area were the potential effect of the residual sludge layer at the base of the Former Pond and the effect of the operations of the adjacent Columbia Steel facility. The assessment of the Former Pond Area included the review of the following:

- Results of soil and groundwater sampling during the installation of Borings B-4, B-5, and B-6 during the PNG Limited Phase II ESA in December 1998.
- Results of the soil sampling during the installation of Test Pits TP-2, TP-3 and TP-4 and groundwater samples collected from Wells MW-1, MW-5, and MW-6.

The Former Pond Area was used for the discharge of waste water from washing tanker trucks at the adjacent Matlack facility. Both EPA and DEQ approved the closure of the pond area in 1980, with the dried, residual sludge layer left in place. The pond area has been filled with construction debris.

In addition, treated PCS from UST decommissioning at the adjacent Matlack facility was disposed with DEQ approval in the Former Pond Area. The exact area of the soil disposal has not been identified.

Test Pits TP-2, TP-3, and TP-4 were excavated to assess the fill material and the residual sludge layer.

The fill material encountered in Test Pit TP-2 was primarily concrete construction debris in a silt/sand matrix. The sludge layer was not encountered. Minor staining was noted. The results of the soil sample (TP-2-17) indicated low levels of petroleum products but no petroleum constituents.

The fill material encountered in Test Pit TP-4 included large pieces of concrete construction debris in a silt/sand matrix. The sludge layer was not encountered. No evidence of staining was noted.

The fill material encountered in Test Pit TP-3 included concrete construction debris and wood in a silt/sand matrix. The sludge layer was not encountered. Petroleum product staining and odor was noted. Soil sample TP-3-13 detected the presence of petroleum hydrocarbons and low concentrations of benzene (0.956 mg/Kg).

Evidence of the residual sludge layer was not identified in the excavation of the test pits or in the cuttings from the installations of monitoring wells. The thickness and lateral extent of the residual sludge layer is not known. The residual sludge layer may be located at a depth below the extent of the test pit excavations or may have been removed or re-graded prior to placement of fill material. The impact of the residual sludge layer on subsurface soils and groundwater quality has not been quantified.

A groundwater sample from Well MW-1 detected a low concentration of petroleum constituent and phenolic compounds during both sampling events. Groundwater samples from Wells MW-5 and MW-6 did not detect VOCs or SVOCs at concentrations above the laboratory detection limits.

9 RECOMMENDATIONS

This section presents recommendations to bring the subject site into compliance with DEQ regulations. The proposed actions are based on the following assumptions:

1. The site will be developed as an extension of the Columbia Boulevard Waste Water Treatment Plant.
2. The depth of excavations will be approximately 25 feet.

9.1 FORMER PENINSULA DIESEL FACILITY

9.1.1 Former UST and Dry Well

The subject site is currently listed as an active site on the DEQ UST Cleanup list. The investigations and remedial activity to date do not appear to be sufficient to acquire DEQ "No Further Action" status.

The gasoline UST, the dry well, and a large volume of soil have been removed. Residual PCS remains in the vicinity of the excavation and petroleum constituents have been detected in groundwater. The characterization of the UST release by Enviro-Comp did not include the following information:

- A map of the excavation area.
- Volume of soil removed.
- Documentation of soil disposal.
- Location of confirmation samples.
- No petroleum constituent analyses were conducted.
- No groundwater data was presented.

Data from the dry well area is also very limited. If petroleum products and constituents are the only contaminants, the dry well area might be included by DEQ with the UST site closure procedure. During the PNG Limited Phase II ESA, Boring B-1 was located in the wash pad area. The results of the water sample (B1-W) did not detect chlorinated solvents.

Based on the limited data available and the proposed use for the area of the site, the UST file could be closed by developing Risk-Based Concentrations as a remedial alternative or the file could be closed as a low impact site. The risk-based or the low impact method would require the collection of additional soil and groundwater data and the analysis of potential receptors.

The work tasks to close the site would include:

- A Geoprobe investigation to properly characterize the area.
- The installation of three monitoring wells and one year of monitoring.
- Preparation of a Corrective Action Plan or Low Impact Site Report.

9.1.2 Hazardous Material

The Phase I ESA and PNG's site reconnaissance identified waste materials that require special disposal. The Phase I ESA indicated that a drum of hazardous material located by the site building. The PNG Phase II Environmental Investigation also identified several waste drums. If the contents of these drums can not be determined, a characterization of the contents would have to be conducted.

9.2 MATERIALS STORAGE AREA

The Materials Storage Area is not specifically included in the DEQ UST File 26-97-0558 or the DEQ Cleanup Site 186.

The primary concern in the Materials Storage Area is the potential hazardous material and special waste that is stored in this area and the solid waste and contaminated debris that potentially could be excavated during construction activities as described below.

9.2.1 Stored Materials

The materials stored in this area include paint, roofing shingles, an old boiler, an air-conditioning unit, and treated lumber. These materials should be removed by the present owner prior to purchase.

9.2.2 Fill Materials

Test Pit TP-1 contained fill material with numerous tires and PCS. If excavated this material would have to be treated as a special waste. The extent of this impacted fill does not appear to be continuous across the entire Materials Storage Area, but hot spots would probably be encountered during excavation activities.

9.2.3 Groundwater

The results of the groundwater sampling from the monitoring wells in the Materials Storage Area did not confirm the elevated vinyl chloride concentrations detected in groundwater samples from the PNG Limited Phase II ESA. Vinyl chloride was not detected above laboratory detection limits in any of the in any of the six monitoring wells in either sampling event during the Phase II Investigation. The previous elevated vinyl chloride concentrations may have been due to the analysis of sediment in the turbid samples collected from the borings or from contamination introduced during the sampling procedure.

Low level concentrations of petroleum product constituents and phenolic substances were present in Wells MW-1 and MW-3. These concentrations do not exceed the EPA Drinking Water Maximum Concentration Limits (MCL). The results of the groundwater sampling during the Phase II Investigation did not identify evidence of a extensive groundwater contaminant plume on the subject site.

9.3 FORMER POND AREA

The Former Pond Area is part of the DEQ Cleanup Site 186. The Former Ponds had been used for the disposal of rinse water generated at the adjacent tanker washing

facility. The ponds were drained in 1984 and the residual sludge left in place. Both EPA and DEQ approved the pond closure. The ponds have been filled with construction debris. In 1993, DEQ conducted a Preliminary Assessment of the site and recommended further assessment of the pond area. DEQ placed the Arrow Trucking site on the Confirmed Release List in 1997.

9.3.1 Soil and Fill

The soil and fill material in the Former Pond Area was assessed with the installation of Test Pits TP-2, TP-3, and TP-4 and inspection of drill cuttings from Wells MW-1, MW-5, and MW-6. The residual sludge layer was not encountered at the depths excavated in the test pits and was not identified in the drill cuttings.

Soil samples from Test Pits TP-2 and TP-3 detected petroleum products. The concentrations detected are consistent with low level PCS. Compounds related to residual sludge layer, i.e. phenols and pentachlorophenol, were not detected in soil samples.

Based on the limited explorations, the fill material appears to be consistent with construction debris and would not require environmental remediation. The sludge layer was not identified in the explorations. If the sludge layer is encountered during construction activities, the material would have to be sampled to determine the status as a hazardous waste and disposed of properly.

9.3.2 Groundwater

The groundwater in the Former Pond Area was assessed with the water samples from Wells MW-1, MW-5, and MW-6. Well MW-1 is located adjacent to the water treatment process area on the adjacent Matlack facility. Wells MW-5 and MW-6 are located in the are of the former ponds.

The low level petroleum product constituents and phenolic compounds (2,4 dimethylphenol and phenol) might indicate low level impact from the adjacent water treatment process area or might be affected by the fill material in the vicinity of the well. The data from the groundwater sampling events do not indicate extensive groundwater impact.

The results from the groundwater sampling events for Wells MW-5 and MW-6 did not detect groundwater impact, other than very low concentrations of petroleum products.

9.4 SUMMARY

The following tasks are required to bring the subject site into compliance with US EPA and DEQ regulations.

Further characterization of the extent of impact from the UST release to complete the closure process.

The disposal of excavated materials as special waste would be based on the volume of special waste generated.

The existing materials stored at the site should be removed by the owner, prior to purchase.

Additional assessment of the Former Pond Area should be completed by the owner or other responsible party.

10 LIMITATIONS

PNG Environmental, Inc. has prepared this report for use by the City of Portland Bureau of Environmental Services. This report may be made available to future property owners and to regulatory agencies, but this report is not intended for use by others and the information contained herein is not applicable to other sites. Our interpretation of subsurface soil conditions is based on limited, widely-spaced field observations and chemical analytical data. Areas with contamination may exist in portions of the site that were not explored or analyzed.

Within the limitations of scope, schedule, and budget, our services have been executed in accordance with generally accepted practices and laws, rules, and regulations at the time that the report was prepared. No other conditions, express or implied, should be understood.

PNG ENVRIONMENTAL, INC.

Paul Eckler/FOR
Craig Hultgren
Project Geologist

Gerard Koschal, R.G.
Senior Geologist

Table 1
Well Construction Details
Larsen Property
Portland, Oregon

					Well Information					
Well Number	Installation Date	Installer	Borehole Depth (ft)	Drill Type	Well Dia. (in)	Well Materials	Screen Slot (in)	Well Casing Elevation[1]	Well Casing Length (ft)	Screen Length (ft)
MW-1	05/18/99	Geotech	25	10 in HSA	2	PVC	0.020	96.62	16.1	10
MW-2	05/18/99	Geotech	22	10 in HSA	2	PVC	0.020	88.08	18.4	10
MW-3	05/18/99	Geotech	18	10 in HSA	2	PVC	0.020	94.47	8.7	10
MW-4	05/24/99	Geotech	22	6-in Air Rotary	2	PVC	0.020	94.01	8.5	10
MW-5	05/24/99	Geotech	30	6-in Air Rotary	2	PVC	0.020	94.18	17.2	15
MW-6	05/24/99	Geotech	25	6-in Air Rotary	2	PVC	0.020	98.38	17.5	10

Notes:
ft = Feet
in = Inches

Table 2
Groundwater Elevation Data
Larson Property
Portland, Oregon

Well Identification (toc)	Date Gauged	Depth to Water (ft)	Groundwater Elevation (ft)
MW-1	05/26/99	18.03	78.59
(96.62)	07/28/99	17.98	78.64
MW-2	05/26/99	20.15	67.93
(88.08)	07/28/99	20.81	67.27
MW-3	05/26/99	10.43	84.04
(94.47)	07/28/99	11.42	83.05
MW-4	05/26/99	19.65	74.36
(94.01)	07/28/99	20.83	73.18
MW-5	05/26/99	20.23	73.95
(94.18)	07/28/99	22.92	71.26
MW-6	05/26/99	17.54	80.84
(98.38)	07/28/99	17.05	81.33

Notes:
toc = Top of casing
ft = Feet
Elevations referenced to an arbitrary datum assumed to be 100 ft.

Table 3
Soil Analytical Results
Total Petroleum Hydrocarbons
Larsen Property
Portland, Oregon

Sample Identification	Depth (Feet)	Date Sampled	NWTPH-Gx (mg/Kg)	NWTPH-DX	
				Diesel (mg/Kg)	Heavy Oil (mg/Kg)
TP-1-12	12	05/18/99	**1,470**	0.25 U	**116**
TP-3-13	13	05/18/99	**4.77**	250 U	**1,000**
TP-2-17	17	05/18/99	**3.63**	125 U	**423**
TP-5-8	8	05/18/99	2.50 U	125 U	**1,440**

Notes:
- = Not analyzed for this parameter
mg/Kg = Milligrams per kilograms
U = Not detected at method reporting limit
NWTPH-Gx by Sub NWTPH-Gx
Heavy Oil by Sub NWTPH-Gx
NWTPH-Dx by Sub NWTPH-Dx

Table 4
Soil Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA	Phase II Investigation			
	B2-12 (12 ft) 12/17/99 (mg/Kg) EPA 3550A/8270C	TP-1-12 (12 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-2-17 (17 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-5-8 (8 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-3-13 (13 ft) 05/18/99 (mg/Kg) EPA 8270B
1,2-Dichlorobenzene	0.3 U	2 U	10 U	10 U	20 U
1,2,4-Trichlorobenzene	0.3 U	1 U	5 U	5 U	10 U
1,3-Dichlorobenzene	0.3 U	2 U	10 U	10 U	20 U
1,4-Dichlorobenzene	0.3 U	2 U	10 U	10 U	20 U
2,4,5-Trichlorophenol	0.3 U	2 U	10 U	10 U	20 U
2,4,6-Trichlorophenol	0.3 U	1 U	5 U	5 U	10 U
2,4-Dichlorophenol	0.3 U	1 U	5 U	5 U	10 U
2,4-Dimethylphenol	0.3 U	1 U	5 U	5 U	10 U
2,4-Dinitrophenol	2 U	2 U	10 U	10 U	20 U
2,4-Dinitrotoluene	0.3 U	4 U	20 U	20 U	40 U
2,6-Dinitrotoluene	0.3 U	1 U	5 U	5 U	10 U
2-Chloronaphthalene	0.3 U	1 U	5 U	5 U	10 U
2-Chlorophenol	0.3 U	1 U	5 U	5 U	10 U
2-Methyl-4,6-dinitrophenol	2 U	1 U	5 U	5 U	10 U
2-Methylnaphthalene	0.3 U	1 U	5 U	5 U	10 U
2-Methylphenol	0.3 U	1 U	5 U	5 U	10 U
2-Nitroaniline	2 U	-	-	-	-
2-Nitrophenol	0.3 U	1 U	5 U	5 U	10 U
3- and 4-Methylphenol Coelution	0.3 U	2 U	-	-	-
3,3'-Dichlorobenzidine	2 U	2 U	10 U	10 U	20 U
3-Nitroaniline	2 U	-	-	-	-
4,6-Dinitro-2-2methylphenol	-	2 U	10 U	10 U	20 U
4-Bromophenyl Phenyl Ether	0.3 U	1 U	5 U	5 U	10 U
4-Chloro-3-methylphenol	0.3 U	1 U	5 U	5 U	10 U
4-Chloroaniline	0.3 U	4 U	20 U	20 U	40 U
4-Chlorophenyl Phenyl Ether	0.3 U	1 U	5 U	5 U	10 U
4-Nitroaniline	2 U	2 U	10 U	10 U	20 U
4-Nitrophenol	2 U	2 U	10 U	10 U	20 U
Acenaphthene	0.3 U	1 U	5 U	5 U	10 U
Acenaphthylene	0.3 U	1 U	5 U	5 U	10 U
Aniline	1 U	-	-	-	-
Anthracene	0.3 U	10 U	50 U	50 U	100 U
Benzidine	-	2 U	10 U	10 U	20 U
Benz(a)anthracene	0.3 U	1 U	5 U	5 U	10 U
Benzo(a)pyrene	0.3 U	1 U	5 U	5 U	10 U
Benzo(b)fluoranthene	0.3 U	1 U	5 U	5 U	10 U
Benzo(g,h,i)perylene	0.3 U	1 U	5 U	5 U	10 U
Benzo(k)fluoranthene	0.3 U	1 U	5 U	5 U	10 U
Butyl Benzyl Phthalate	0.3 U	1 U	5 U	5 U	10 U
Benzoic Acid	2 U	1 U	5 U	5 U	10 U
Benzyl Alcohol	0.3 U	1 U	5 U	5 U	10 U
Bis(2-chloroethoxy)methane	0.3 U	1 U	5 U	5 U	10 U

Table 4
Soil Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA	Phase II Investigation			
	B2-12 (12 ft) 12/17/99 (mg/Kg) EPA 3550A/8270C	TP-1-12 (12 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-2-17 (17 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-5-8 (8 ft) 05/18/99 (mg/Kg) EPA 8270B	TP-3-13 (13 ft) 05/18/99 (mg/Kg) EPA 8270B
Bis(2-chloroethyl) Ether	0.3 U	1 U	5 U	5 U	10 U
Bis(2-chloroisopropyl) Ether	0.3 U	1 U	5 U	5 U	10 U
Bis(2-ethylhexyl) Phthalate	0.3 U	1 U	5 U	5 U	10 U
Chrysene	0.3 U	1 U	5 U	5 U	10 U
Di-n-butyl Phthalate	0.3 U	2 U	10 U	10 U	20 U
Di-n-octyl Phthalate	0.3 U	1 U	5 U	5 U	10 U
Dibenz(a,h)anthracene	0.3 U	1 U	5 U	5 U	10 U
Dibenzofuran	0.3 U	1 U	5 U	5 U	10 U
Diethyl Phthalate	0.3 U	1 U	5 U	5 U	10 U
Dimethyl Phthalate	0.3 U	1 U	5 U	5 U	10 U
Fluoranthene	0.6	1 U	5 U	5 U	10 U
Fluorene	0.3 U	1 U	5 U	5 U	10 U
Hexachlorobenzene	0.3 U	1 U	5 U	5 U	10 U
Hexachlorobutadiene	0.3 U	2 U	10 U	10 U	20 U
Hexachlorocyclopentadiene	0.3 U	2 U	10 U	10 U	20 U
Hexachloroethane	0.3 U	2 U	10 U	10 U	20 U
Indeno(1,2,3-cd)pyrene	0.3 U	1 U	5 U	5 U	10 U
Isophorone	0.3 U	1 U	5 U	5 U	10 U
N-Nitrosodimethylamine	2 U	1 U	5 U	5 U	10 U
N-Nitrosodi-n-propylamine	0.3 U	1 U	5 U	5 U	10 U
N-Nitrosodiphenylamine	0.3 U	1 U	5 U	5 U	10 U
Naphthalene	0.3 U	1 U	5 U	5 U	10 U
Nitrobenzene	0.3 U	1 U	5 U	5 U	10 U
Pentachlorophenol (PCP)	2 U	2 U	10 U	10 U	20 U
Phenanthrene	0.3 U	1 U	5 U	5 U	10 U
Phenol	0.3 U	1 U	5 U	5 U	10 U
Pyrene	0.4	1 U	5 U	5 U	10 U

Notes:
- = Not analyzed for this parameter
U = not detected at method reporting limit shown
mg/Kg = Micrograms per liter

Table 5
Soil Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA		Phase II Investigation			
	B1-17 (17 ft) 12/17/98 (ug/Kg) EPA 8260	B-2-12 (12 ft) 12/17/98 (ug/Kg) EPA 8260	TP-1-12 (12 ft) 05/18/99 (ug/Kg) EPA 8240	TP-2-17 (17 ft) 05/18/99 (ug/Kg) EPA 8240	TP-5-8 (8 ft) 05/18/99 (ug/Kg) EPA 8240	TP-2-13 (13 ft) 05/18/99 (ug/Kg) EPA 8240
1,1,1-Trichloroethane (TCA)	5 U	5 U	200 U	200 U	200 U	200 U
1,1,2,2-Tetrachloroethane	5 U	5 U	200 U	200 U	200 U	200 U
1,1,2-Trichloroethane	5 U	5 U	200 U	200 U	200 U	200 U
1,1-Dichloroethane	5 U	5 U	200 U	200 U	200 U	200 U
1,1-Dichloroethene	5 U	5 U	200 U	200 U	200 U	200 U
1,1-Dichloropropene	5 U	5 U	200 U	200 U	200 U	200 U
1,2,3-Trichlorobenzene	20 U	20 U	200 U	200 U	200 U	200 U
1,2,3-Trichloropropane	5 U	5 U	200 U	200 U	200 U	200 U
1,2,4-Trichlorobenzene	20 U	20 U	200 U	200 U	200 U	200 U
1,2,4-Trimethylbenzene	20 U	20 U	200 U	200 U	200 U	200 U
1,2-Dibromo-3-chloropropane (DBCP)	20 U	20 U	200 U	200 U	200 U	200 U
1,2-Dibromoethane (EDB)	20 U	20 U	200 U	200 U	200 U	200 U
1,2-Dichlorobenzene	5 U	5 U	200 U	200 U	200 U	200 U
1,2-Dichloroethane	5 U	5 U	200 U	200 U	200 U	200 U
1,2-Dichloropropane	5 U	5 U	200 U	200 U	200 U	200 U
1,3,5-Trimethylbenzene	20 U	20 U	200 U	200 U	200 U	200 U
1,3-Dichlorobenzene	5 U	5 U	200 U	200 U	200 U	200 U
1,3-Dichloropropene total	-	-	200 U	200 U	200 U	200 U
1,3-Dichloropropane	5 U	5 U	200 U	200 U	200 U	200 U
1,4-Dichlorobenzene	5 U	5 U	200 U	200 U	200 U	200 U
2,2-Dichloropropane	5 U	5 U	200 U	200 U	200 U	200 U
2-Butanone (MEK)	20 U	20 U	200 U	200 U	200 U	200 U
2-Chlorotoluene	20 U	20 U	200 U	200 U	200 U	200 U
2-Hexanone	20 U	20 U	200 U	200 U	200 U	200 U
4-Chlorotoluene	20 U	20 U	200 U	200 U	200 U	200 U
4-Isopropyltoluene	20 U	20 U	200 U	200 U	200 U	200 U
4-Methyl-2-pentanone (MIBK)	20 U	20 U	200 U	200 U	200 U	200 U
Acetone	**160**	50U	200 U	200 U	200 U	200 U
Acrolein	-	-	200 U	200 U	200 U	200 U
Acrylonitrile	-	-	200 U	200 U	200 U	200 U
Benzene	5 U	5 U	5000 U	5000 U	5000 U	**956**
Bromobenzene	5 U	5 U	200 U	200 U	200 U	200 U
Bromochloromethane	5 U	5 U	200 U	200 U	200 U	200 U
Bromodichloromethane	5 U	5 U	200 U	200 U	200 U	200 U
Bromoform	5 U	5 U	5000 U	5000 U	5000 U	5000 U
Bromomethane	5 U	5 U	500 U	500 U	500 U	500 U
Carbon Disulfide	5 U	5 U	-	-	-	-
Carbon Tetrachloride	5 U	5 U	200 U	200 U	200 U	200 U
Chlorobenzene	5 U	5 U	200 U	200 U	200 U	200 U
Chloroethane	5 U	5 U	1000 U	1000 U	1000 U	1000 U

Table 5
Soil Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA		Phase II Investigation			
	B1-17 (17 ft) 12/17/98 (ug/Kg) EPA 8260	B-2-12 (12 ft) 12/17/98 (ug/Kg) EPA 8260	TP-1-12 (12 ft) 05/18/99 (ug/Kg) EPA 8240	TP-2-17 (17 ft) 05/18/99 (ug/Kg) EPA 8240	TP-5-8 (8 ft) 05/18/99 (ug/Kg) EPA 8240	TP-2-13 (13 ft) 05/18/99 (ug/Kg) EPA 8240
Chloroform	5 U	5 U	200 U	200 U	200 U	200 U
Chloromethane	5 U	5 U	200 U	200 U	200 U	200 U
cis-1,2-Dichloroethene	5 U	5 U	-	-	-	-
cis-1,3-Dichloropropene	5 U	5 U	-	-	-	-
Dibromochloromethane	5 U	5 U	400 U	400 U	400 U	400 U
Dichlorobromomethane	-	-	200 U	200 U	200 U	200 U
Dibromomethane	5 U	5 U	500 U	500 U	500 U	500 U
Dichlorodifluoromethane	5 U	5 U	200 U	200 U	200 U	200 U
Ethylbenzene	5 U	5 U	200 U	200 U	200 U	200 U
Hexachlorobutadiene	20 U	20 U	-	-	-	-
Isopropylbenzene	20 U	20 U	-	-	-	-
$_{m,p}$-Xylenes	5 U	5 U	-	-	-	-
Methylene Chloride	10 U	10 U	-	-	-	-
Naphthalene	20 U	68	-	-	-	-
n-Butylbenzene	20 U	20 U	-	-	-	-
n-Propylbenzene	20 U	20 U	-	-	-	-
$_{o}$-Xylene	5 U	5 U	-	-	-	-
sec-Butylbenzene	20 U	20 U	-	-	-	-
Styrene	5 U	5 U	-	-	-	-
tert-Butylbenzene	20 U	20 U	-	-	-	-
Tetrachloroethene (PCE)	5 U	5 U	500 U	500 U	500 U	500 U
Toluene	5 U	5 U	200 U	200 U	200 U	200 U
trans-1,2-Dichloroethene	5 U	5 U	200 U	200 U	200 U	200 U
trans-1,3-Dichloropropene	5 U	5 U	-	-	-	-
Trichloroethene (TCE)	5 U	5 U	200 U	200 U	200 U	200 U
Trichlorofluoromethane	5 U	5 U	200 U	200 U	200 U	200 U
Vinyl Chloride	5 U	5 U	200 U	200 U	200 U	200 U

Notes:
- = Not analyzed for this parameter
U = not detected at method reporting limit shown

Table 6
Groundwater Analytical Results
Total Petroleum Hydrocarbons
Larsen Property
Portland, Oregon

Sample Identification	Date Sampled	NWTPH-Gx (mg/L)	NWTPH-DX	
			Diesel (mg/L)	Heavy Oil (mg/L)
MW-1	05/26/99	**0.244**	0.600 U	1.20 U
	07/28/99	**0.125**	**1.84**	**1.02**
MW-2	05/26/99	**0.109**	0.600 U	**2.13**
	07/28/99	**0.123**	**0.599**	0.500 U
MW-3	05/26/99	**0.091**	0.600 U	1.20 U
	07/28/99	**0.234**	**0.656**	**0.538**
MW-4	05/26/99	0.080 U	0.600 U	1.20 U
	07/28/99	0.080 U	**0.693**	**0.651**
MW-5	05/26/99	**0.310**	0.650 U	1.30 U
	07/28/99	0.080 U	**0.764**	**0.656**
W-7 (MW-5 Dup)	07/28/99	0.080 U	**0.580**	**0.528**
MW-6	05/26/99	0.080 U	0.700 U	1.40 U

Notes:
- = Not analyzed for this parameter
mg/L = Milligrams per liter
U = Not detected at method reporting limit
NWTPH-Gx by Sub NWTPH-Gx
Heavy Oil by Sub NWTPH-Gx
NWTPH-Dx by Sub NWTPH-Dx

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA		
	B1-W 12/17/1998 EPA 8520B/8270C (ug/L)	B2-W 12/17/1998 EPA 8520B/8270C (ug/L)	B3-W 12/17/1998 EPA 8520B/8270C (ug/L)
1,2,4-Trichlorobenzene	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U
2,4,5-Trichlorophenol	10 U	10 U	10 U
2,4,6-Trichlorophenol	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U
2,4-Dinitrophenol	25 U	25 U	25 U
2,4-Dinitrotoluene	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U
2-Chloronaphthalene	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U
2-Methyl-4,6-dinitrophenol	25 U	25 U	25 U
2-Methylnaphthalene	10 U	**24**	10 U
2-Methylphenol	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U
2-Nitrophenol	10 U	10 U	10 U
3- and 4-Methylphenol Coelution	10 U	10 U	10 U
3,3'-Dichlorobenzidine	25 U	25 U	25 U
3-Nitroaniline	25 U	25 U	25 U
4-Bromophenyl Phenyl Ether	10 U	10 U	10 U
4-Chloro-3-methylphenol	10 U	10 U	10 U
4-Chloroaniline	10 U	10 U	10 U
4-Chlorophenyl Phenyl Ether	10 U	10 U	10 U
4-Nitroaniline	25 U	25 U	25 U
4-Nitrophenol	25 U	25 U	25 U
Acenaphthene	10 U	**37**	10 U
Acenaphthylene	10 U	10 U	10 U
Aniline	25 U	25 U	25 U
Anthracene	10 U	**21**	10 U
Azobenzene	-	-	-
Benzidine	-	-	-
Benz(a)anthracene	10 U	**23**	10 U
Benzo(a)pyrene	10 U	**26**	10 U
Benzo(b)fluoranthene	10 U	**21**	10 U
Benzo(g,h,i)perylene	10 U	**15**	10 U
Benzo(k)fluoranthene	10 U	**19**	10 U
Butyl Benzyl Phthalate	10 U	10 U	10 U
Benzoic Acid	25 U	25 U	25 U
Benzyl Alcohol	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	10 U	10 U	10 U
Bis(2-chloroethyl) Ether	10 U	10 U	10 U
Bis(2-chloroisopropyl) Ether	10 U	10 U	10 U

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA		
	B1-W 12/17/1998 EPA 8520B/8270C (ug/L)	B2-W 12/17/1998 EPA 8520B/8270C (ug/L)	B3-W 12/17/1998 EPA 8520B/8270C (ug/L)
Bis(2-ethylhexyl) Phthalate	10 U	10 U	10 U
Chrysene	10 U	26	10 U
Di-n-butyl Phthalate	10 U	10 U	10 U
Di-n-octyl Phthalate	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U
Dibenzofuran	10 U	18	25 U
Diethyl Phthalate	10 U	10 U	10 U
Dimethyl Phthalate	10 U	10 U	10 U
Fluoranthene	10 U	59	10 U
Fluorene	10 U	30	10 U
Hexachlorobenzene	10 U	10 U	10 U
Hexachlorobutadiene	10 U	10 U	10 U
Hexachlorocyclopentadiene	10 U	10 U	10 U
Hexachloroethane	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	16	10 U
Isophorone	10 U	10 U	10 U
N-Nitrosodimethylamine	25 U	25 U	25 U
N-Nitrosodi-n-propylamine	10 U	10 U	10 U
N-Nitrosodiphenylamine	10 U	10 U	10 U
Naphthalene	10 U	85	10 U
Nitrobenzene	10 U	10 U	10 U
Pentachlorophenol (PCP)	25 U	25 U	25 U
Phenanthrene	10 U	64	10 U
Phenol	10 U	10 U	10 U
Pyrene	10 U	41	10 U

Notes:
U = Not detected at method reporting limit shown
- = Not analyzed for this parameter
ug/L = Micrograms per liter

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-1 05/26/99 EPA 625 (ug/L)	MW-1 07/28/99 EPA 625 (ug/L)	MW-2 05/26/99 EPA 625 (ug/L)	MW-2 07/28/99 EPA 625 (ug/L)	MW-3 05/26/99 EPA 625 (ug/L)	MW-3 07/28/99 EPA 625 (ug/L)
1,2,4-Trichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	5 U	5 U	5 U	5 U	20	5 U
1,3-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U
2,4,5-Trichlorophenol	-	-	-	-	-	-
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	50	20	10 U	10 U	110	10 U
2,4-Dinitrophenol	20 U	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
2-Chloronaphthalene	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2-Methyl-4,6-dinitrophenol	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	-	-	-	-	-	-
2-Methylphenol	-	-	-	-	-	-
2-Nitroaniline	-	-	-	-	-	-
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U
3- and 4-Methylphenol Coelution	-	-	-	-	-	-
3,3'-Dichlorobenzidine	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether	5 U	5 U	5 U	5 U	5 U	5 U
4-Nitroaniline	-	-	-	-	-	-
4-Nitrophenol	20 U	20 U	20 U	20 U	20 U	20 U
Acenaphthene	5 U	5 U	10	10	5 U	5 U
Acenaphthylene	5 U	5 U	5 U	5 U	5 U	5 U
Aniline	-	-	-	-	-	-
Anthracene	5 U	5 U	5 U	5 U	10	5 U
Azobenzene	5 U	5 U	5 U	5 U	5 U	5 U
Benzidine	10 U	10 U	10 U	10 U	10 U	10 U
Benz(a)anthracene	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(a)pyrene	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(b)fluoranthene	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(g,h,i)perylene	5 U	5 U	5 U	5 U	5 U	5 U
Benzo(k)fluoranthene	5 U	5 U	5 U	5 U	5 U	5 U
Butyl Benzyl Phthalate	20 U	20 U	20 U	20 U	20 U	20 U
Benzoic Acid	-	-	-	-	-	-
Benzyl Alcohol	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	5 U	5 U	5 U	5 U	5 U	5 U
Bis(2-chloroethyl) Ether	5 U	5 U	5 U	5 U	5 U	5 U
Bis(2-chloroisopropyl) Ether	5 U	5 U	5 U	5 U	5 U	5 U

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-1 05/26/99 EPA 625 (ug/L)	MW-1 07/28/99 EPA 625 (ug/L)	MW-2 05/26/99 EPA 625 (ug/L)	MW-2 07/28/99 EPA 625 (ug/L)	MW-3 05/26/99 EPA 625 (ug/L)	MW-3 07/28/99 EPA 625 (ug/L)
Bis(2-ethylhexyl) Phthalate	10 U	10 U	10 U	10 U	50	10 U
Chrysene	5 U	5 U	5 U	5 U	5 U	5 U
Di-n-butyl Phthalate	20 U	20 U	20 U	20 U	10	20 U
Di-n-octyl Phthalate	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	5 U	5 U	5 U	5 U	5 U	5 U
Dibenzofuran	-	-	-	-	-	-
Diethyl Phthalate	5 U	5 U	5 U	5 U	5 U	5 U
Dimethyl Phthalate	-	-	-	-	-	-
Fluoranthene	5 U	5 U	5 U	5 U	5 U	5 U
Fluorene	5 U	5 U	5 U	10	5 U	5 U
Hexachlorobenzene	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorobutadiene	5 U	5 U	5 U	5 U	5 U	5 U
Hexachlorocyclopentadiene	5 U	5 U	5 U	5 U	5 U	5 U
Hexachloroethane	5 U	5 U	5 U	5 U	5 U	5 U
Indeno(1,2,3-cd)pyrene	5 U	5 U	5 U	5 U	5 U	5 U
Isophorone	5 U	5 U	5 U	5 U	5 U	5 U
N-Nitrosodimethylamine	5 U	5 U	5 U	5 U	5 U	5 U
N-Nitrosodi-n-propylamine	5 U	5 U	5 U	5 U	5 U	5 U
N-Nitrosodiphenylamine	5 U	5 U	5 U	5 U	5 U	5 U
Naphthalene	5 U	5 U	5 U	5 U	5 U	5 U
Nitrobenzene	5 U	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol (PCP)	10 U	10 U	10 U	10 U	10 U	10 U
Phenanthrene	5 U	5 U	5 U	5 U	10	5 U
Phenol	30	10 U	10 U	10 U	10 U	10 U
Pyrene	5 U	5 U	5 U	5 U	5 U	5 U

Notes:
U = Not detected at method report
- = Not analyzed for this paramete
ug/L = Micrograms per liter

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-4 05/26/99 EPA 625 (ug/L)	MW-4 07/28/99 EPA 625 (ug/L)	MW-5 05/26/99 EPA 625 (ug/L)	MW-5 07/28/99 EPA 625 (ug/L)	MW-6 05/26/99 EPA 625 (ug/L)	MW-6 07/28/99 EPA 625 (ug/L)
1,2,4-Trichlorobenzene	10 U	5 U	18 U	5 U	10 U	10 U
1,2-Dichlorobenzene	10 U	5 U	18 U	5 U	10 U	10 U
1,3-Dichlorobenzene	10 U	5 U	18 U	5 U	10 U	10 U
1,4-Dichlorobenzene	10 U	5 U	18 U	5 U	10 U	10 U
2,4,5-Trichlorophenol	-	-	-	-	-	-
2,4,6-Trichlorophenol	20 U	10 U	36 U	10 U	20 U	20 U
2,4-Dichlorophenol	20 U	10 U	36 U	10 U	20 U	20 U
2,4-Dimethylphenol	20 U	10 U	36 U	10 U	20 U	20 U
2,4-Dinitrophenol	40 U	20 U	73 U	20 U	40 U	40 U
2,4-Dinitrotoluene	10 U	5 U	18 U	5 U	10 U	10 U
2,6-Dinitrotoluene	10 U	5 U	18 U	5 U	10 U	10 U
2-Chloronaphthalene	10 U	5 U	18 U	5 U	10 U	10 U
2-Chlorophenol	20 U	10 U	36 U	10 U	20 U	20 U
2-Methyl-4,6-dinitrophenol	20 U	10 U	36 U	10 U	20 U	20 U
2-Methylnaphthalene	-	-	-	-	-	-
2-Methylphenol	-	-	-	-	-	-
2-Nitroaniline	-	-	-	-	-	-
2-Nitrophenol	20 U	10 U	36 U	10 U	20 U	20 U
3- and 4-Methylphenol Coelution	-	-	-	-	-	-
3,3'-Dichlorobenzidine	10 U	5 U	18 U	5 U	10 U	10 U
3-Nitroaniline	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether	10 U	5 U	18 U	5 U	10 U	10 U
4-Chloro-3-methylphenol	20 U	10 U	36 U	10 U	20 U	20 U
4-Chloroaniline	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether	10 U	5 U	18 U	5 U	10 U	10 U
4-Nitroaniline	-	-	-	-	-	-
4-Nitrophenol	40 U	20 U	73 U	20 U	40 U	40 U
Acenaphthene	10 U	5 U	18 U	5 U	10 U	10 U
Acenaphthylene	10 U	5 U	18 U	5 U	10 U	10 U
Aniline	10 U	-	-	-	10 U	10 U
Anthracene	10 U	5 U	18 U	5 U	10 U	10 U
Azobenzene	10 U	5 U	18 U	5 U	10 U	10 U
Benzidine	20 U	10 U	36 U	10 U	20 U	20 U
Benz(a)anthracene	10 U	5 U	18 U	5 U	10 U	10 U
Benzo(a)pyrene	10 U	5 U	18 U	5 U	10 U	10 U
Benzo(b)fluoranthene	10 U	5 U	18 U	5 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	5 U	18 U	5 U	10 U	10 U
Benzo(k)fluoranthene	10 U	5 U	18 U	5 U	10 U	10 U
Butyl Benzyl Phthalate	40 U	20 U	73 U	20 U	40 U	40 U
Benzoic Acid	-	-	-	-	-	-
Benzyl Alcohol	-	-	-	-	-	-
Bis(2-chloroethoxy)methane	10 U	5 U	18 U	5 U	10 U	10 U
Bis(2-chloroethyl) Ether	10 U	5 U	18 U	5 U	10 U	10 U
Bis(2-chloroisopropyl) Ether	10 U	5 U	18 U	5 U	10 U	10 U

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-4 05/26/99 EPA 625 (ug/L)	MW-4 07/28/99 EPA 625 (ug/L)	MW-5 05/26/99 EPA 625 (ug/L)	MW-5 07/28/99 EPA 625 (ug/L)	MW-6 05/26/99 EPA 625 (ug/L)	MW-6 07/28/99 EPA 625 (ug/L)
Bis(2-ethylhexyl) Phthalate	20 U	10 U	36 U	10 U	20 U	20 U
Chrysene	10 U	5 U	18 U	5 U	10 U	10 U
Di-n-butyl Phthalate	40 U	20 U	73 U	20 U	40 U	40 U
Di-n-octyl Phthalate	20 U	10 U	36 U	10 U	20 U	20 U
Dibenz(a,h)anthracene	10 U	5 U	18 U	5 U	10 U	10 U
Dibenzofuran	-	-	-	-	-	-
Diethyl Phthalate	10 U	5 U	18 U	5 U	10 U	10 U
Dimethyl Phthalate	-	-	-	-	-	-
Fluoranthene	10 U	5 U	18 U	5 U	10 U	10 U
Fluorene	10 U	5 U	18 U	5 U	10 U	10 U
Hexachlorobenzene	10 U	5 U	18 U	5 U	10 U	10 U
Hexachlorobutadiene	10 U	5 U	18 U	5 U	10 U	10 U
Hexachlorocyclopentadiene	10 U	5 U	18 U	5 U	10 U	10 U
Hexachloroethane	10 U	5 U	18 U	5 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	5 U	18 U	5 U	10 U	10 U
Isophorone	10 U	5 U	18 U	5 U	10 U	10 U
N-Nitrosodimethylamine	10 U	5 U	18 U	5 U	10 U	10 U
N-Nitrosodi-n-propylamine	10 U	5 U	18 U	5 U	10 U	10 U
N-Nitrosodiphenylamine	10 U	5 U	18 U	5 U	10 U	10 U
Naphthalene	10 U	5 U	18 U SLV 50	5 U	10 U	10 U
Nitrobenzene	10 U	5 U	18 U 15 SW	5 U	10 U	10 U
Pentachlorophenol (PCP)	20 U	10 U	36 U	10 U	20 U	20 U
Phenanthrene	10 U	5 U	18 U	5 U	10 U	10 U
Phenol	20 U	10 U	36 U	10 U	20 U	20 U
Pyrene	10 U	5 U	18 U	5 U	10 U	10 U

Notes:
U = Not detected at method report
- = Not analyzed for this paramete
ug/L = Micrograms per liter

MRLs too high

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation	
	W-7 (MW-5 Dup) 07/28/99 EPA 625 (ug/L)	Trip Blank 07/28/99 EPA 625 (ug/L)
1,2,4-Trichlorobenzene	10 U	5 U
1,2-Dichlorobenzene	10 U	5 U
1,3-Dichlorobenzene	10 U	5 U
1,4-Dichlorobenzene	10 U	5 U
2,4,5-Trichlorophenol	-	-
2,4,6-Trichlorophenol	20 U	10 U
2,4-Dichlorophenol	20 U	10 U
2,4-Dimethylphenol	20 U	10 U
2,4-Dinitrophenol	40 U	20 U
2,4-Dinitrotoluene	10 U	5 U
2,6-Dinitrotoluene	10 U	5 U
2-Chloronaphthalene	10 U	5 U
2-Chlorophenol	20 U	10 U
2-Methyl-4,6-dinitrophenol	20 U	10 U
2-Methylnaphthalene	-	-
2-Methylphenol	-	-
2-Nitroaniline	-	-
2-Nitrophenol	20 U	10 U
3- and 4-Methylphenol Coelution	-	-
3,3'-Dichlorobenzidine	10 U	5 U
3-Nitroaniline	-	-
4-Bromophenyl Phenyl Ether	10 U	5 U
4-Chloro-3-methylphenol	20 U	10 U
4-Chloroaniline	-	-
4-Chlorophenyl Phenyl Ether	10 U	5 U
4-Nitroaniline	-	-
4-Nitrophenol	40 U	20 U
Acenaphthene	10 U	5 U
Acenaphthylene	10 U	5 U
Aniline	10 U	-
Anthracene	10 U	5 U
Azobenzene	10 U	5 U
Benzidine	20 U	10 U
Benz(a)anthracene	10 U	5 U
Benzo(a)pyrene	10 U	5 U
Benzo(b)fluoranthene	10 U	5 U
Benzo(g,h,i)perylene	10 U	5 U
Benzo(k)fluoranthene	10 U	5 U
Butyl Benzyl Phthalate	40 U	20 U
Benzoic Acid	-	-
Benzyl Alcohol	-	-
Bis(2-chloroethoxy)methane	10 U	5 U
Bis(2-chloroethyl) Ether	10 U	5 U
Bis(2-chloroisopropyl) Ether	10 U	5 U

Table 7
Groundwater Analytical Results
Semi-Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation	
	W-7 (MW-5 Dup) 07/28/99 EPA 625 (ug/L)	Trip Blank 07/28/99 EPA 625 (ug/L)
Bis(2-ethylhexyl) Phthalate	20 U	10 U
Chrysene	10 U	5 U
Di-n-butyl Phthalate	40 U	20 U
Di-n-octyl Phthalate	20 U	10 U
Dibenz(a,h)anthracene	10 U	5 U
Dibenzofuran	-	-
Diethyl Phthalate	10 U	5 U
Dimethyl Phthalate	-	-
Fluoranthene	10 U	5 U
Fluorene	10 U	5 U
Hexachlorobenzene	10 U	5 U
Hexachlorobutadiene	10 U	5 U
Hexachlorocyclopentadiene	10 U	5 U
Hexachloroethane	10 U	5 U
Indeno(1,2,3-cd)pyrene	10 U	5 U
Isophorone	10 U	5 U
N-Nitrosodimethylamine	10 U	5 U
N-Nitrosodi-n-propylamine	10 U	5 U
N-Nitrosodiphenylamine	10 U	5 U
Naphthalene	10 U	5 U
Nitrobenzene	10 U	5 U
Pentachlorophenol (PCP)	20 U	10 U
Phenanthrene	10 U	5 U
Phenol	20 U	10 U
Pyrene	10 U	5 U

Notes:
U = Not detected at method report
- = Not analyzed for this paramete
ug/L = Micrograms per liter

Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA			Phase II Investigation	
	B1-W 12/17/1998 (ug/L) EPA 8230B	B2-W 12/17/1998 (ug/L) EPA 8230B	B3-W 12/17/1998 (ug/L) EPA 8230B	MW-1 05/26/99 (ug/L) EPA 624	MW-1 07/28/99 (ug/L) EPA 624
1,1,1,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	5 U	5 U
1,1,1-Trichloroethane (TCA)	0.5 U	0.5 U	0.5 U	3 U	3 U
1,1,2,2-Tetrachloroethane	0.5 U	0.5 U	0.5 U	3 U	3 U
1,1,2-Trichloroethane	0.5 U	0.5 U	0.5 U	3 U	3 U
1,1-Dichloroethane	0.5 U	0.9	0.5 U	2 U	2 U
1,1-Dichloroethene	0.5 U	0.5 U	0.9	3 U	3 U
1,1-Dichloropropene	0.5 U	0.5 U	0.5 U	3 U	3 U
1,2-Dibromo-3-chloropropane (DBCP)	2 U	2 U	2 U	-	-
1,2-Dibromoethane (EDB)	2 U	2 U	2 U	-	-
1,2-Dichlorobenzene	0.5 U	0.5 U	0.5 U	5 U	5 U
1,2-Dichloroethane	0.5 U	0.5 U	0.5 U	3 U	3 U
1,2-Dichloropropane	0.5 U	0.5 U	0.5 U	3 U	3 U
1,3-Dichlorobenzene	0.5 U	0.5 U	0.5 U	2 U	2 U
1,3-Dichloropropane	0.5 U	0.5 U	0.5 U	2 U	2 U
1,2,3-Trichlorobenzene	2 U	2 U	2 U	-	-
1,2,3-Trichloropropane	0.5 U	0.5 U	0.5 U	-	-
1,2,4-Trichlorobenzene	2 U	2 U	2 U	-	-
1,2,4-Trimethylbenzene	2 U	2 U	2 U	-	-
1,3,5-Trimethylbenzene	2 U	2 U	2 U	-	-
1,4-Dichlorobenzene	0.5 U	0.5 U	0.5 U	2 U	2 U
2,2-Dichloropropane	0.5 U	0.5 U	0.5 U	-	-
2-Butanone (MEK)	20 U	20 U	20 U	-	-
2-Chlorotoluene	2 U	2 U	2 U	-	-
2-Hexanone	20 U	20 U	20 U	-	-
4-Chlorotoluene	2 U	2 U	2 U	-	-
4-Isopropyltoluene	2 U	2 U	2 U	-	-
4-Methyl-2-pentanone (MIBK)	20 U	20 U	20 U	-	-
Acetone	20 U	20 U	20 U	-	-
2-Chloroethylvinyl ether	-	-	-	50 U	50 U
Acrolein	-	-	-	100 U	100 U
Acrylonitrile	-	-	-	50 U	50 U
Benzene	28	0.5 U	0.9	1	1 U
Bromobenzene	0.5 U	0.5 U	0.5 U	-	-
Bromochloromethane	0.5 U	0.5 U	0.5 U	-	-
Bromodichloromethane	0.5 U	0.5 U	0.5 U	3 U	3 U
Bromoform	0.5 U	0.5 U	0.5 U	3 U	3 U
Bromomethane	0.5 U	0.5 U	0.5 U	10 U	10 U
Carbon Disulfide	1.7	0.8	0.5 U	-	-
Carbon Tetrachloride	0.5 U	0.5 U	0.5 U	3 U	3 U
Chlorobenzene	0.5 U	0.5 U	0.5 U	19	9
Chloroethane	0.5 U	0.5 U	0.5 U	9	12
Chloroform	0.5 U	0.5 U	0.5 U	1 U	1 U
Chloromethane	0.5 U	0.5 U	0.5 U	10 U	10 U

Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II ESA			Phase II Investigation	
	B1-W 12/17/1998 (ug/L) EPA 8230B	B2-W 12/17/1998 (ug/L) EPA 8230B	B3-W 12/17/1998 (ug/L) EPA 8230B	MW-1 05/26/99 (ug/L) EPA 624	MW-1 07/28/99 (ug/L) EPA 624
cis-1,2-Dichloroethene	0.5 U	**1.0**	**58**	-	-
cis-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	4 U	4 U
Dibromochloromethane	0.5 U	0.5 U	0.5 U	5 U	5 U
Dibromomethane	0.5 U	0.5 U	0.5 U	-	-
Dichlorodifluoromethane	0.5 U	0.5 U	0.5 U	-	-
Ethylbenzene	**6.7**	0.5 U	0.5 U	**5**	3 U
Methylene Chloride	1 U	1 U	1 U	4 U	4 U
Tetrachloroethene (PCE)	0.5 U	0.5 U	0.5 U	2 U	2 U
Toluene	**2.4**	0.5 U	0.5 U	1 U	1 U
trans-1,2-Dichloroethene	0.5 U	0.5 U	**1.8**	2 U	2 U
trans-1,3-Dichloropropene	0.5 U	0.5 U	0.5 U	3 U	3 U
Trichloroethene (TCE)	0.5 U	0.5 U	5.5	4 U	4 U
Trichlorofluoromethane	0.5 U	0.5 U	0.5 U	4 U	4 U
Vinyl Chloride	0.5 U	0.5 U	**35**	50 U	50 U
Hexachlorobutadiene	2 U	2 U	2 U	-	-
Isopropylbenzene	2 U	2 U	2 U	-	-
m,p-Xylenes	1.0	0.5	0.5 U	-	-
Naphthalene	2 U	**100**	2 U	-	-
n-Butylbenzene	2 U	2 U	2 U	-	-
n-Propylbenzene	2 U	2 U	2 U	-	-
o-Xylene	**0.9**	0.5 U	0.5 U	-	-
sec-Butylbenzene	2 U	2 U	2 U	-	-
Styrene	0.5 U	0.5 U	0.5 U	-	-
tert-Butylbenzene	2 U	2 U	2 U	-	-

Notes:
- = Not analyzed for this parameter
U = Not detected at method reporting limit shown
ug/L = Micrograms per liter

Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-2 05/26/99 (ug/L) EPA 624	MW-2 07/28/99 (ug/L) EPA 624	MW-3 05/26/99 (ug/L) EPA 624	MW-3 07/28/99 (ug/L) EPA 624	MW-4 05/26/99 (ug/L) EPA 624	MW-4 07/28/99 (ug/L) EPA 624
1,1,1,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane (TCA)	3 U	3 U	3 U	3 U	3 U	3 U
1,1,2,2-Tetrachloroethane	3 U	3 U	3 U	3 U	3 U	3 U
1,1,2-Trichloroethane	3 U	3 U	3 U	3 U	3 U	3 U
1,1-Dichloroethane	2 U	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U	3 U	3 U
1,1-Dichloropropene	3 U	3 U	3 U	3 U	3 U	3 U
1,2-Dibromo-3-chloropropane (DBCP)	-	-	-	-	-	-
1,2-Dibromoethane (EDB)	-	-	-	-	-	-
1,2-Dichlorobenzene	5 U	5 U	12	3	5 U	5 U
1,2-Dichloroethane	3 U	3 U	3 U	3 U	3 U	3 U
1,2-Dichloropropane	3 U	3 U	3 U	3 U	3 U	3 U
1,3-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	2 U	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	-	-	-	-	-	-
1,2,3-Trichloropropane	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-
1,4-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	-	-	-	-	-	-
2-Butanone (MEK)	-	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-
2-Hexanone	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-	-
Acetone	-	-	-	-	-	-
2-Chloroethylvinyl ether	50 U	50 U	50 U	50 U	50 U	50 U
Acrolein	100 U	100 U	100 U	100 U	100 U	100 U
Acrylonitrile	50 U	50 U	50 U	50 U	50 U	50 U
Benzene	1 U	1 U	1 U	1 U	1 U	1 U
Bromobenzene	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	-	-
Bromodichloromethane	3 U	3 U	3 U	3 U	3 U	3 U
Bromoform	3 U	3 U	3 U	3 U	3 U	3 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	-	-	-	-	-	-
Carbon Tetrachloride	3 U	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	1 U	1 U	3	1 U	1 U	1 U
Chloroethane	50 U	50 U	50 U	50 U	50 U	50 U
Chloroform	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U

Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation					
	MW-2 05/26/99 (ug/L) EPA 624	MW-2 07/28/99 (ug/L) EPA 624	MW-3 05/26/99 (ug/L) EPA 624	MW-3 07/28/99 (ug/L) EPA 624	MW-4 05/26/99 (ug/L) EPA 624	MW-4 07/28/99 (ug/L) EPA 624
cis-1,2-Dichloroethene	-	-	-	-	-	-
cis-1,3-Dichloropropene	4 U	4 U	4 U	4 U	4 U	4 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U
Dibromomethane	-	-	-	-	-	-
Dichlorodifluoromethane	-	-	-	-	-	-
Ethylbenzene	3 U	3 U	3 U	3 U	3 U	3 U
Methylene Chloride	4 U	4 U	4 U	4 U	4 U	4 U
Tetrachloroethene (PCE)	2 U	2 U	2 U	2 U	2 U	2 U
Toluene	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	3 U	3 U	3 U	3 U	3 U	3 U
Trichloroethene (TCE)	4 U	4 U	4 U	4 U	4 U	4 U
Trichlorofluoromethane	4 U	4 U	4 U	4 U	4 U	4 U
Vinyl Chloride	50 U	50 U	50 U	50 U	50 U	50 U
Hexachlorobutadiene	-	-	-	-	-	-
Isopropylbenzene	-	-	-	-	-	-
m,p-Xylenes	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-	-
n-Propylbenzene	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	-	-
Styrene	-	-	-	-	-	-
tert-Butylbenzene	-	-	-	-	-	-

Notes:
- = Not analyzed for this parameter
U = Not detected at method reporting li
ug/L = Micrograms per liter

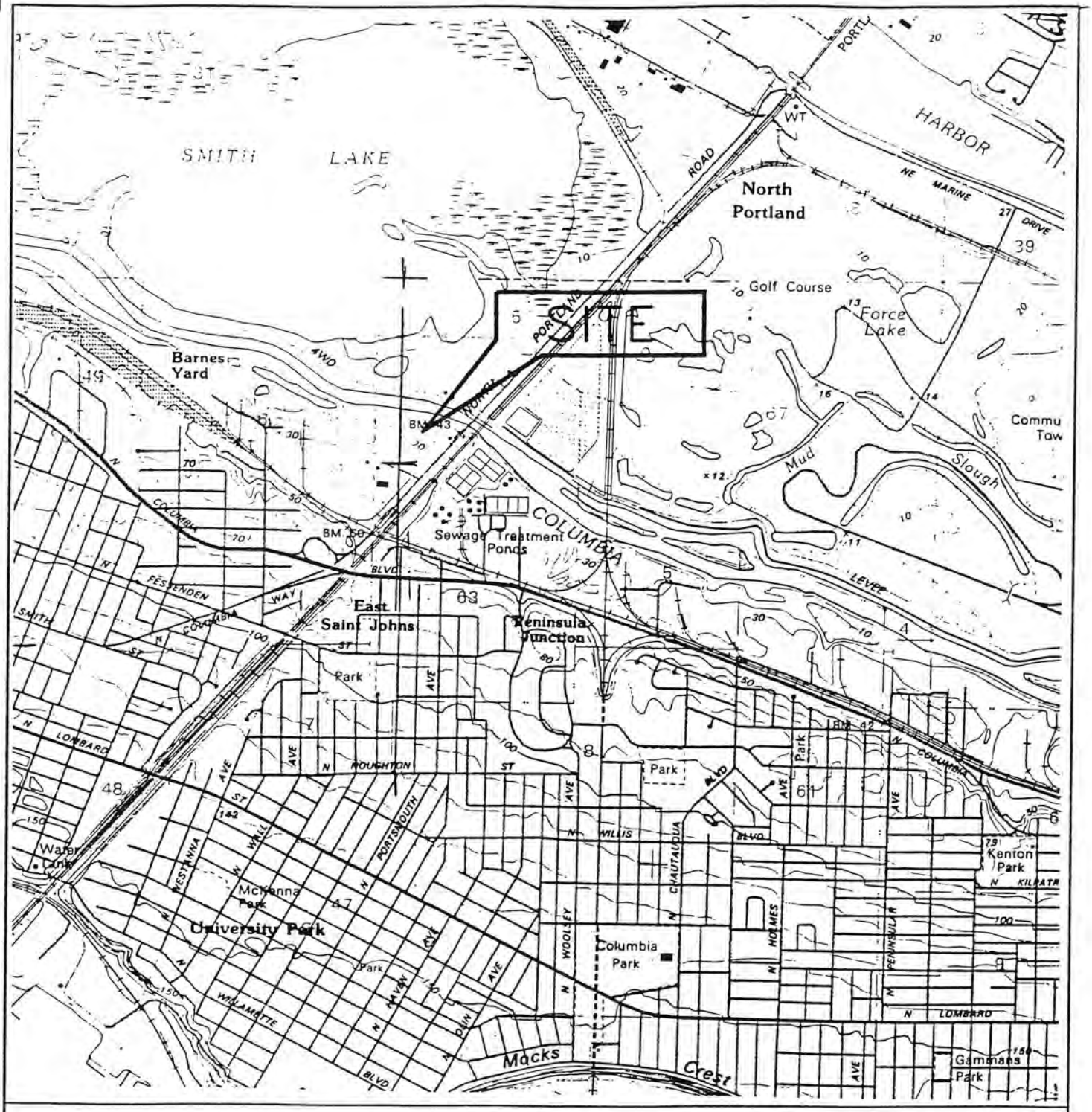
Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

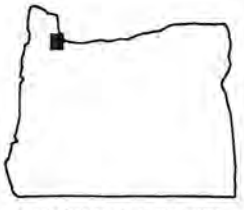
Parameters	Phase II Investigation				
	MW-5 05/26/99 (ug/L) EPA 624	MW-5 07/28/99 (ug/L) EPA 624	MW-6 05/26/99 (ug/L) EPA 624	MW-6 07/28/99 (ug/L) EPA 624	W-7 (MW5 Dup) 07/28/99 (ug/L) EPA 624
1,1,1,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane (TCA)	3 U	3 U	3 U	3 U	3 U
1,1,2,2-Tetrachloroethane	3 U	3 U	3 U	3 U	3 U
1,1,2-Trichloroethane	3 U	3 U	3 U	3 U	3 U
1,1-Dichloroethane	2 U	2 U	2 U	2 U	2 U
1,1-Dichloroethene	3 U	3 U	3 U	3 U	3 U
1,1-Dichloropropene	3 U	3 U	3 U	3 U	3 U
1,2-Dibromo-3-chloropropane (DBCP)	-	-	-	-	-
1,2-Dibromoethane (EDB)	-	-	-	-	-
1,2-Dichlorobenzene	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	3 U	3 U	3 U	3 U	3 U
1,2-Dichloropropane	3 U	3 U	3 U	3 U	3 U
1,3-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U
1,3-Dichloropropane	2 U	2 U	2 U	2 U	2 U
1,2,3-Trichlorobenzene	-	-	-	-	-
1,2,3-Trichloropropane	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-
1,4-Dichlorobenzene	2 U	2 U	2 U	2 U	2 U
2,2-Dichloropropane	-	-	-	-	-
2-Butanone (MEK)	-	-	-	-	-
2-Chlorotoluene	-	-	-	-	-
2-Hexanone	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-
4-Isopropyltoluene	-	-	-	-	-
4-Methyl-2-pentanone (MIBK)	-	-	-	-	-
Acetone	-	-	-	-	-
2-Chloroethylvinyl ether	50 U	50 U	50 U	50 U	50 U
Acrolein	100 U	100 U	100 U	100 U	100 U
Acrylonitrile	50 U	50 U	50 U	50 U	50 U
Benzene	1 U	1 U	1 U	1 U	1 U
Bromobenzene	-	-	-	-	-
Bromochloromethane	-	-	-	-	-
Bromodichloromethane	3 U	3 U	3 U	3 U	3 U
Bromoform	3 U	3 U	3 U	3 U	3 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon Disulfide	-	-	-	-	-
Carbon Tetrachloride	3 U	3 U	3 U	3 U	3 U
Chlorobenzene	1 U	1 U	1 U	1 U	1 U
Chloroethane	50 U	50 U	50 U	50 U	50 U
Chloroform	1 U	1 U	1 U	1 U	1 U
Chloromethane	10 U	10 U	10 U	10 U	10 U

Table 8
Groundwater Analytical Results
Volatile Organic Compounds
Larsen Property
Portland, Oregon

Parameters	Phase II Investigation				
	MW-5 05/26/99 (ug/L) EPA 624	MW-5 07/28/99 (ug/L) EPA 624	MW-6 05/26/99 (ug/L) EPA 624	MW-6 07/28/99 (ug/L) EPA 624	W-7 (MW5 Dup) 07/28/99 (ug/L) EPA 624
cis-1,2-Dichloroethene	-	-	-	-	-
cis-1,3-Dichloropropene	4 U	4 U	4 U	4 U	4 U
Dibromochloromethane	5 U	5 U	5 U	5 U	5 U
Dibromomethane	-	-	-	-	-
Dichlorodifluoromethane	-	-	-	-	-
Ethylbenzene	3 U	3 U	3 U	3 U	3 U
Methylene Chloride	4 U	4 U	4 U	4 U	4 U
Tetrachloroethene (PCE)	2 U	2 U	2 U	2 U	2 U
Toluene	1 U	1 U	1 U	1 U	1 U
trans-1,2-Dichloroethene	2 U	2 U	2 U	2 U	2 U
trans-1,3-Dichloropropene	3 U	3 U	3 U	3 U	3 U
Trichloroethene (TCE)	4 U	4 U	4 U	4 U	4 U
Trichlorofluoromethane	4 U	4 U	4 U	4 U	4 U
Vinyl Chloride	50 U	50 U	50 U	50 U	50 U
Hexachlorobutadiene	-	-	-	-	-
Isopropylbenzene	-	-	-	-	-
m,p-Xylenes	-	-	-	-	-
Naphthalene	-	-	-	-	-
n-Butylbenzene	-	-	-	-	-
n-Propylbenzene	-	-	-	-	-
o-Xylene	-	-	-	-	-
sec-Butylbenzene	-	-	-	-	-
Styrene	-	-	-	-	-
tert-Butylbenzene	-	-	-	-	-

Notes:
- = Not analyzed for this parameter
U = Not detected at method reporting li
ug/L = Micrograms per liter





QUADRANGLE LOCATION

REFERENCE: USGS 7.5 MINUTE QUADRANGLE;
QUADRANGLE LOCATION; PORTLAND OREGON

0 500 1000 2000
SCALE IN FEET

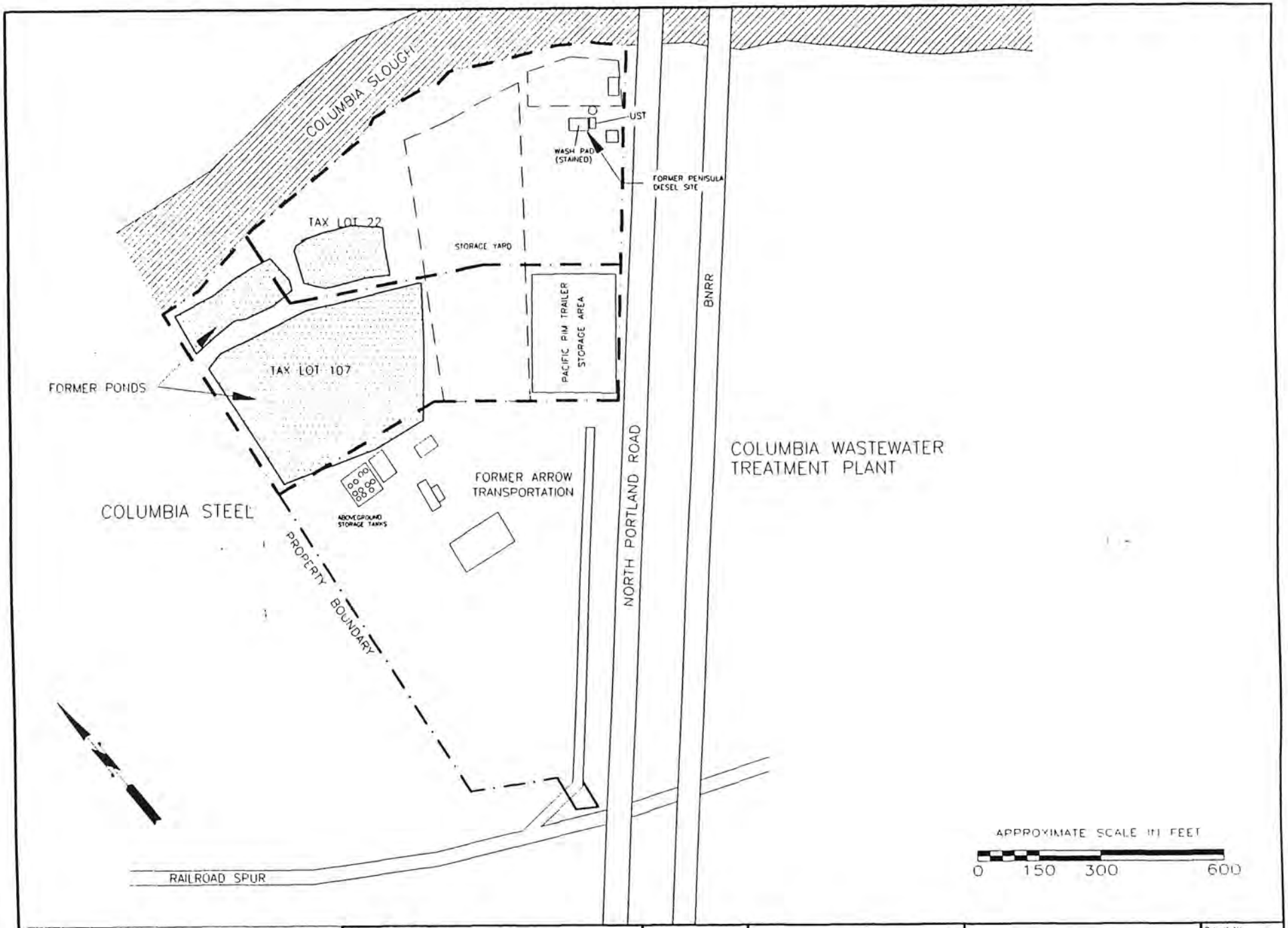
PNG Environmental, Inc
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2587
FAX (503) 620-2977

CURRENT DATE: 2/5/99
CAD FILE NAME: SITELOC
DRAWN BY: WEB
APPROVED BY:

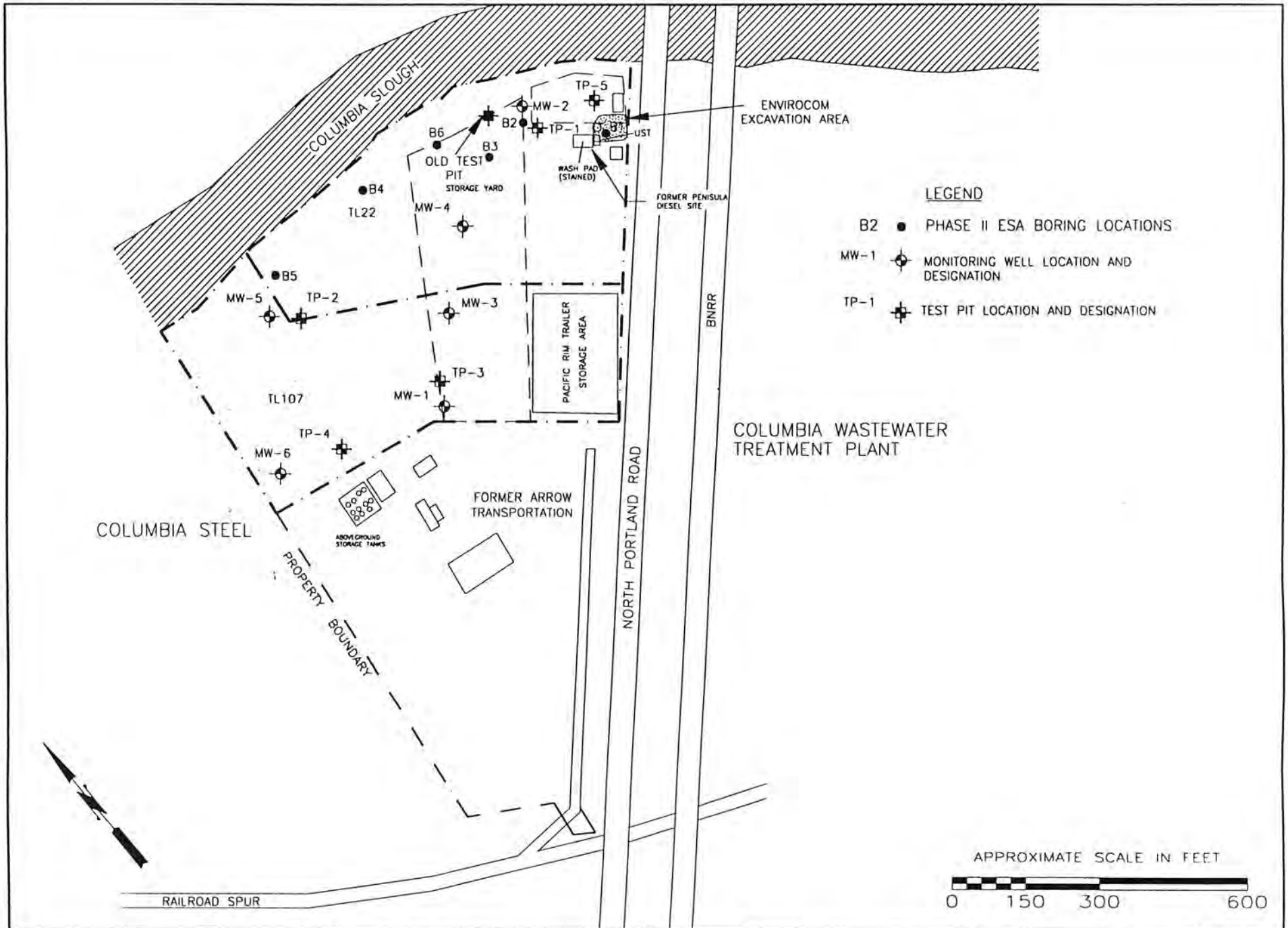
LARSEN PROPERTY
10505 N. PORTLAND ROAD
PORTLAND, OR

SITE LOCATION MAP

Project No. 850-02
Figure No.



	PNG Environmental, Inc. 7130 SW Elmhurst Street (503) 620-2387 Tigard, Oregon 97223 FAX (503) 620-2977	CURRENT DATE: 9-13-99 CAD FILE NAME: 850-02 DRAWN BY: SAB APPROVED BY: CK	Phase II Investigation Portland, Oregon for Portland BES	SITE MAP	Project No. 850-02 Figure No. 2



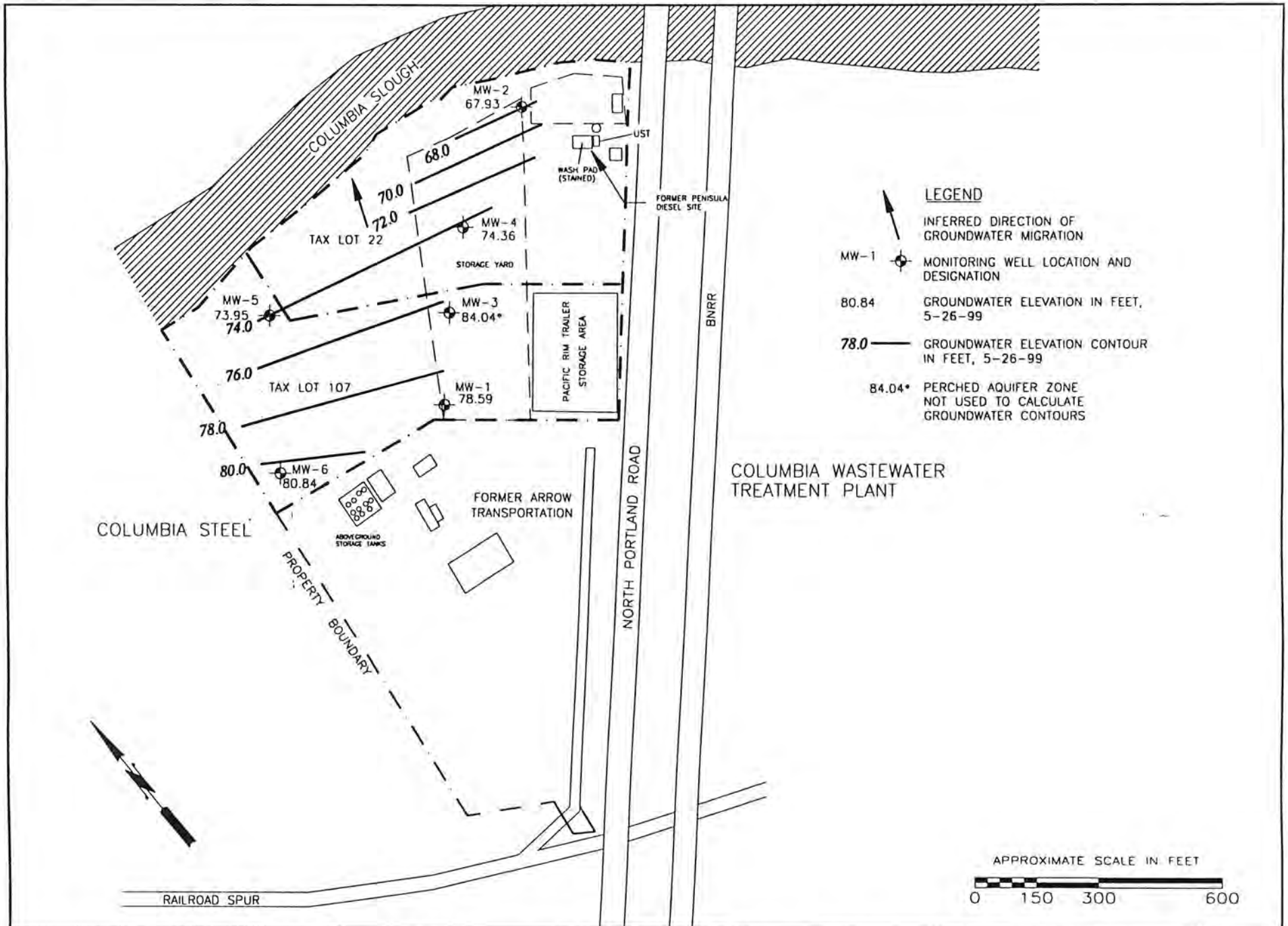
PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

CURRENT DATE: 9-13-99
CAD FILE NAME: 850-02
DRAWN BY: SKB
APPROVED BY: CK

Phase II Investigation
Portland, Oregon
for Portland BES

Monitoring Well and Test Pit Location Map

Project No. 850-02
Figure No. 3



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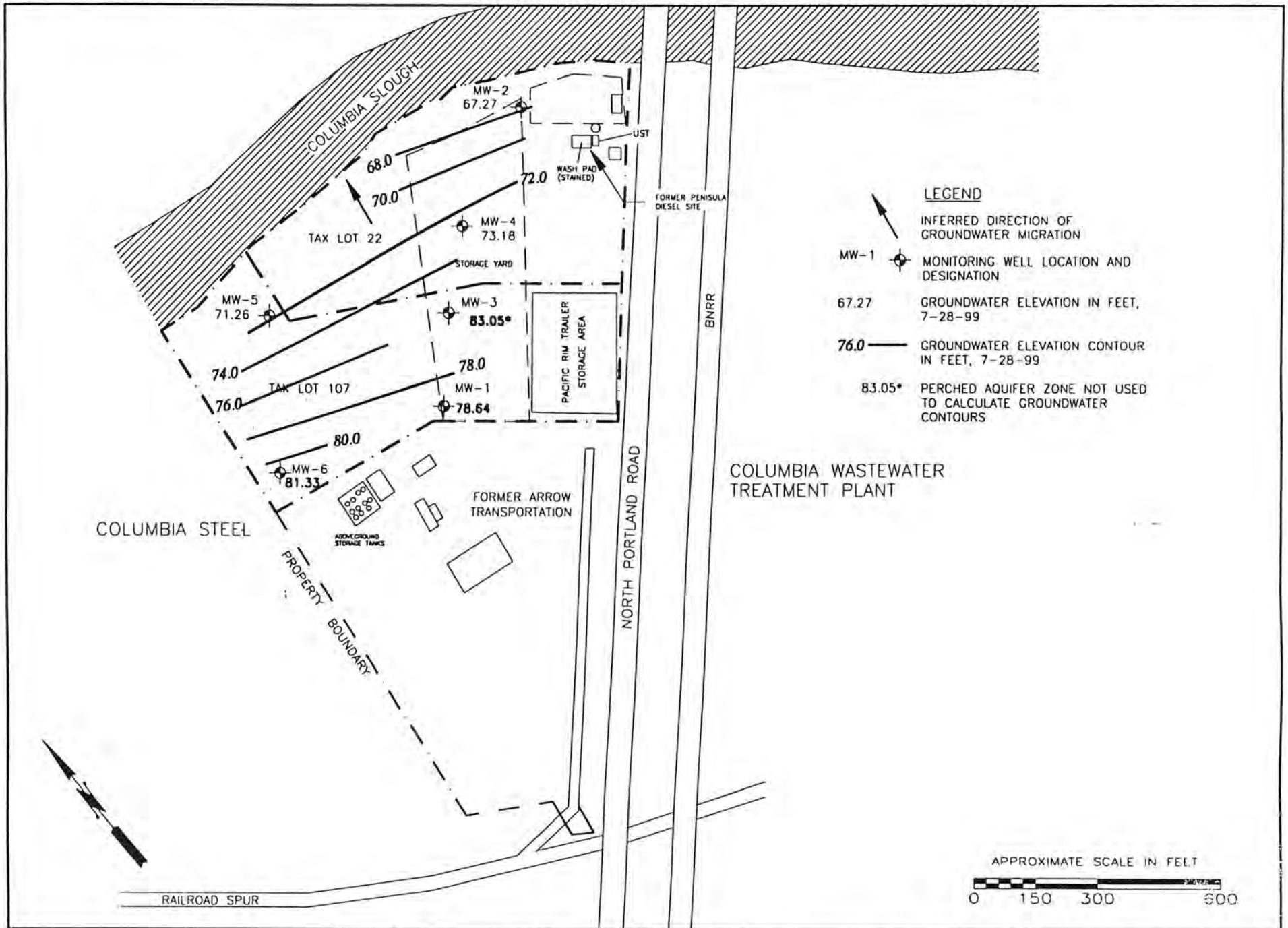

	PNG Environmental, Inc. 7130 SW Elmhurst Street Tigard, Oregon 97223 (503) 620-2387 FAX (503) 620-2977	CURRENT DATE: 9-13-99 CAD FILE NAME: 850-02 DRAWN BY: SKB APPROVED BY: CK	Phase II Investigation Portland, Oregon for Portland BES	GROUNDWATER ELEVATION CONTOUR MAP JULY 28, 1999	Project No. 850-02 Figure No. 5

APPENDIX A
LABORATORY ANALYTICAL REPORTS

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 9:10 **System ID** AD04025 **Sample ID** LAB990109

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 1

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-1-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<25.0	mg/Kg	25.0	NWTPH-Dx
HEAVY OIL RANGE HYDROCARBONS	116	mg/Kg	50.0	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	1470	mg/Kg	125	NWTPH-Gx
SEMI-VOLATILE ORGANICS				
1,2-Diphenylhydrazine	<2.00	mg/Kg	2.00	EPA 8270B
1,2,4-Trichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4,6-Trichlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dichlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
2-Methylnaphthalene	<1.00	mg/Kg	1.00	EPA 8270B
2-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
3,3-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<1.00	mg/Kg	1.00	EPA 8270B
4-Chloro-3-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<1.00	mg/Kg	1.00	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthylene	<1.00	mg/Kg	1.00	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 9:10 **System ID** AD04025 **Sample ID** LAB990109

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 1

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-1-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Anthracene	<10.0	mg/Kg	10.0	EPA 8270B
Benzidine	<2.00	mg/Kg	2.00	EPA 8270B
Benzo(a)anthracene	<1.00	mg/Kg	1.00	EPA 8270B
Benzo(a)pyrene	<1.00	mg/Kg	1.00	EPA 8270B
Benzo(b)fluoranthene	<1.00	mg/Kg	1.00	EPA 8270B
Benzo(g,h,i)perylene	<1.00	mg/Kg	1.00	EPA 8270B
Benzo(k)fluoranthene	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Bis(2-chloroethoxy) methane	<1.00	mg/Kg	1.00	EPA 8270B
Bis(2-chloroethyl) ether	<1.00	mg/Kg	1.00	EPA 8270B
Bis(2-chloroisopropyl) ether	<1.00	mg/Kg	1.00	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Dibenzo(a,h)anthracene	<1.00	mg/Kg	1.00	EPA 8270B
Dibenzofuran	<1.00	mg/Kg	1.00	EPA 8270B
Diethyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Dimethyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Fluoranthene	<1.00	mg/Kg	1.00	EPA 8270B
Fluorene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<1.00	mg/Kg	1.00	EPA 8270B
Isophorone	<1.00	mg/Kg	1.00	EPA 8270B
N-Nitrosodi-n-propylamine	<1.00	mg/Kg	1.00	EPA 8270B
N-Nitrosodimethylamine	<1.00	mg/Kg	1.00	EPA 8270B
N-Nitrosodiphenylamine	<1.00	mg/Kg	1.00	EPA 8270B
Naphthalene	<1.00	mg/Kg	1.00	EPA 8270B
Nitrobenzene	<1.00	mg/Kg	1.00	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 9:10 **System ID** AD04025 **Sample ID** LAB990109

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 1

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-1-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<1.00	mg/Kg	1.00	EPA 8270B
Phenol	<1.00	mg/Kg	1.00	EPA 8270B
Pyrene	<1.00	mg/Kg	1.00	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1,2,2-Tetrachloroethane	<200	µg/Kg	200	EPA 8240
1,1,2-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethene	<200	µg/Kg	200	EPA 8240
1,2-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,2-Dichloropropane	<200	µg/Kg	200	EPA 8240
1,3-Dichloropropene, total	<200	µg/Kg	200	EPA 8240
2-Chloroethylvinyl ether	<5000	µg/Kg	5000	EPA 8240
Acrolein	<5000	µg/Kg	5000	EPA 8240
Acrylonitrile	<500	µg/Kg	500	EPA 8240
Benzene	<200	µg/Kg	200	EPA 8240
Bromoform	<200	µg/Kg	200	EPA 8240
Bromomethane	<1000	µg/Kg	1000	EPA 8240
Carbon tetrachloride	<200	µg/Kg	200	EPA 8240
Chlorobenzene	<200	µg/Kg	200	EPA 8240
Chloroethane	<400	µg/Kg	400	EPA 8240
Chloroform	<200	µg/Kg	200	EPA 8240
Chloromethane	<500	µg/Kg	500	EPA 8240
Dibromochloromethane	<200	µg/Kg	200	EPA 8240
Dichlorobromomethane	<200	µg/Kg	200	EPA 8240
Ethylbenzene	<200	µg/Kg	200	EPA 8240
Methylene chloride	<500	µg/Kg	500	EPA 8240
Tetrachloroethene	<200	µg/Kg	200	EPA 8240
Toluene	<200	µg/Kg	200	EPA 8240
trans-1,2-Dichloroethene	<200	µg/Kg	200	EPA 8240
Trichloroethene	<200	µg/Kg	200	EPA 8240

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 9:10 **System ID** AD04025 **Sample ID** LAB990109

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 1

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-1-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Vinyl chloride	<200	µg/Kg	200	EPA 8240

End of Report for Sample ID: LAB990109

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Laboratory Analysis Report

Sample Date/Time 5/18/99 10:30 **System ID** AD04026 **Sample ID** LAB990110

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 2

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<125	mg/Kg	125	NWTPH-Dx
HEAVY OIL RANGE HYDROCARBONS	423	mg/Kg	250	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	3.63	mg/Kg	2.50	NWTPH-Gx
SEMI-VOLATILE ORGANICS				
1,2-Diphenylhydrazine	<10.0	mg/Kg	10.0	EPA 8270B
1,2,4-Trichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4,6-Trichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2-Methylnaphthalene	<5.00	mg/Kg	5.00	EPA 8270B
2-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<5.00	mg/Kg	5.00	EPA 8270B
4-Chloro-3-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<5.00	mg/Kg	5.00	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthylene	<5.00	mg/Kg	5.00	EPA 8270B

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Laboratory Analysis Report

Sample Date/Time 5/18/99 10:30 **System ID** AD04026 **Sample ID** **LAB990110**

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 2

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Anthracene	<50.0	mg/Kg	50.0	EPA 8270B
Benzidine	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(a)anthracene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(a)pyrene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(b)fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(g,h,i)perylene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(k)fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroethoxy) methane	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroethyl) ether	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroisopropyl) ether	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Dibenzo(a,h)anthracene	<5.00	mg/Kg	5.00	EPA 8270B
Dibenzofuran	<5.00	mg/Kg	5.00	EPA 8270B
Diethyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Dimethyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Fluorene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<5.00	mg/Kg	5.00	EPA 8270B
Isophorone	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodi-n-propylamine	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodimethylamine	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodiphenylamine	<5.00	mg/Kg	5.00	EPA 8270B
Naphthalene	<5.00	mg/Kg	5.00	EPA 8270B
Nitrobenzene	<5.00	mg/Kg	5.00	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 10:30 **System ID** AD04026 **Sample ID** LAB990110

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 2

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<5.00	mg/Kg	5.00	EPA 8270B
Phenol	<5.00	mg/Kg	5.00	EPA 8270B
Pyrene	<5.00	mg/Kg	5.00	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1,2,2-Tetrachloroethane	<200	µg/Kg	200	EPA 8240
1,1,2-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethene	<200	µg/Kg	200	EPA 8240
1,2-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,2-Dichloropropane	<200	µg/Kg	200	EPA 8240
1,3-Dichloropropene, total	<200	µg/Kg	200	EPA 8240
2-Chloroethylvinyl ether	<5000	µg/Kg	5000	EPA 8240
Acrolein	<5000	µg/Kg	5000	EPA 8240
Acrylonitrile	<500	µg/Kg	500	EPA 8240
Benzene	<200	µg/Kg	200	EPA 8240
Bromoform	<200	µg/Kg	200	EPA 8240
Bromomethane	<1000	µg/Kg	1000	EPA 8240
Carbon tetrachloride	<200	µg/Kg	200	EPA 8240
Chlorobenzene	<200	µg/Kg	200	EPA 8240
Chloroethane	<400	µg/Kg	400	EPA 8240
Chloroform	<200	µg/Kg	200	EPA 8240
Chloromethane	<500	µg/Kg	500	EPA 8240
Dibromochloromethane	<200	µg/Kg	200	EPA 8240
Dichlorobromomethane	<200	µg/Kg	200	EPA 8240
Ethylbenzene	<200	µg/Kg	200	EPA 8240
Methylene chloride	<500	µg/Kg	500	EPA 8240
Tetrachloroethene	<200	µg/Kg	200	EPA 8240
Toluene	<200	µg/Kg	200	EPA 8240
trans-1,2-Dichloroethene	<200	µg/Kg	200	EPA 8240
Trichloroethene	<200	µg/Kg	200	EPA 8240

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Laboratory Analysis Report

Sample Date/Time 5/18/99 10:30 **System ID** AD04026 **Sample ID** LAB990110

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 2

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-17
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Vinyl chloride	<200	µg/Kg	200	EPA 8240

End of Report for Sample ID: LAB990110

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 12:00 **System ID** AD04028 **Sample ID** LAB990112

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 5

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-5-8
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<125	mg/Kg	125	NWTPH-Dx
HEAVY OIL RANGE HYDROCARBONS	1440	mg/Kg	250	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<2.50	mg/Kg	2.50	NWTPH-Gx
SEMI-VOLATILE ORGANICS				
1,2-Diphenylhydrazine	<10.0	mg/Kg	10.0	EPA 8270B
1,2,4-Trichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4,6-Trichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dichlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
2-Methylnaphthalene	<5.00	mg/Kg	5.00	EPA 8270B
2-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
3,3-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<5.00	mg/Kg	5.00	EPA 8270B
4-Chloro-3-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<5.00	mg/Kg	5.00	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthylene	<5.00	mg/Kg	5.00	EPA 8270B

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Sample Date/Time 5/18/99 12:00 **System ID** AD04028 **Sample ID** LAB990112

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 5

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-5-8
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Anthracene	<50.0	mg/Kg	50.0	EPA 8270B
Benzidine	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(a)anthracene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(a)pyrene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(b)fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(g,h,i)perylene	<5.00	mg/Kg	5.00	EPA 8270B
Benzo(k)fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroethoxy) methane	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroethyl) ether	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-chloroisopropyl) ether	<5.00	mg/Kg	5.00	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Dibenzo(a,h)anthracene	<5.00	mg/Kg	5.00	EPA 8270B
Dibenzofuran	<5.00	mg/Kg	5.00	EPA 8270B
Diethyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Dimethyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Fluoranthene	<5.00	mg/Kg	5.00	EPA 8270B
Fluorene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<5.00	mg/Kg	5.00	EPA 8270B
Isophorone	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodi-n-propylamine	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodimethylamine	<5.00	mg/Kg	5.00	EPA 8270B
N-Nitrosodiphenylamine	<5.00	mg/Kg	5.00	EPA 8270B
Naphthalene	<5.00	mg/Kg	5.00	EPA 8270B
Nitrobenzene	<5.00	mg/Kg	5.00	EPA 8270B

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Sample Date/Time 5/18/99 12:00 **System ID** AD04028 **Sample ID** LAB990112

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 5

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-5-8
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<5.00	mg/Kg	5.00	EPA 8270B
Phenol	<5.00	mg/Kg	5.00	EPA 8270B
Pyrene	<5.00	mg/Kg	5.00	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1,2,2-Tetrachloroethane	<200	µg/Kg	200	EPA 8240
1,1,2-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethene	<200	µg/Kg	200	EPA 8240
1,2-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,2-Dichloropropane	<200	µg/Kg	200	EPA 8240
1,3-Dichloropropene, total	<200	µg/Kg	200	EPA 8240
2-Chloroethylvinyl ether	<5000	µg/Kg	5000	EPA 8240
Acrolein	<5000	µg/Kg	5000	EPA 8240
Acrylonitrile	<500	µg/Kg	500	EPA 8240
Benzene	<200	µg/Kg	200	EPA 8240
Bromoform	<200	µg/Kg	200	EPA 8240
Bromomethane	<1000	µg/Kg	1000	EPA 8240
Carbon tetrachloride	<200	µg/Kg	200	EPA 8240
Chlorobenzene	<200	µg/Kg	200	EPA 8240
Chloroethane	<400	µg/Kg	400	EPA 8240
Chloroform	<200	µg/Kg	200	EPA 8240
Chloromethane	<500	µg/Kg	500	EPA 8240
Dibromochloromethane	<200	µg/Kg	200	EPA 8240
Dichlorobromomethane	<200	µg/Kg	200	EPA 8240
Ethylbenzene	<200	µg/Kg	200	EPA 8240
Methylene chloride	<500	µg/Kg	500	EPA 8240
Tetrachloroethene	<200	µg/Kg	200	EPA 8240
Toluene	<200	µg/Kg	200	EPA 8240
trans-1,2-Dichloroethene	<200	µg/Kg	200	EPA 8240
Trichloroethene	<200	µg/Kg	200	EPA 8240

6/28/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 12:00 **System ID** AD04028 **Sample ID** **LAB990112**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN/TEST PIT 5

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-5-8
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Vinyl chloride	<200	µg/Kg	200	EPA 8240

End of Report for Sample ID: LAB990112

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 10:50 **System ID** AD04027 **Sample ID** LAB990111

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 3

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-13
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<250	mg/Kg	250	NWTPH-Dx
HEAVY OIL RANGE HYDROCARBONS	1000	mg/Kg	500	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	4.77	mg/Kg	2.50	NWTPH-Gx
SEMI-VOLATILE ORGANICS				
1,2-Diphenylhydrazine	<20.0	mg/Kg	20.0	EPA 8270B
1,2,4-Trichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,2-Dichlorobenzene	<20.0	mg/Kg	20.0	EPA 8270B
1,3-Dichlorobenzene	<20.0	mg/Kg	20.0	EPA 8270B
1,4-Dichlorobenzene	<20.0	mg/Kg	20.0	EPA 8270B
2,4,5-Trichlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4,6-Trichlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dichlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dimethylphenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrophenol	<40.0	mg/Kg	40.0	EPA 8270B
2,4-Dinitrotoluene	<10.0	mg/Kg	10.0	EPA 8270B
2,6-Dinitrotoluene	<10.0	mg/Kg	10.0	EPA 8270B
2-Chloronaphthalene	<10.0	mg/Kg	10.0	EPA 8270B
2-Chlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
2-Methylnaphthalene	<10.0	mg/Kg	10.0	EPA 8270B
2-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
3,3'-Dichlorobenzidine	<20.0	mg/Kg	20.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<20.0	mg/Kg	20.0	EPA 8270B
4-Bromophenylphenyl ether	<10.0	mg/Kg	10.0	EPA 8270B
4-Chloro-3-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Chloroaniline	<40.0	mg/Kg	40.0	EPA 8270B
4-Chlorophenylphenyl ether	<10.0	mg/Kg	10.0	EPA 8270B
4-Nitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
Acenaphthene	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthylene	<10.0	mg/Kg	10.0	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report.

Sample Date/Time 5/18/99 10:50 **System ID** AD04027 **Sample ID** **LAB990111**

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 3

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-13
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Anthracene	<100	mg/Kg	100	EPA 8270B
Benzidine	<20.0	mg/Kg	20.0	EPA 8270B
Benzo(a)anthracene	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(a)pyrene	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(b)fluoranthene	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(g,h,i)perylene	<10.0	mg/Kg	10.0	EPA 8270B
Benzo(k)fluoranthene	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Bis(2-chloroethoxy) methane	<10.0	mg/Kg	10.0	EPA 8270B
Bis(2-chloroethyl) ether	<10.0	mg/Kg	10.0	EPA 8270B
Bis(2-chloroisopropyl) ether	<10.0	mg/Kg	10.0	EPA 8270B
Bis(2-ethylhexyl) phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Chrysene	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-butyl phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Di-n-octyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Dibenzo(a,h)anthracene	<10.0	mg/Kg	10.0	EPA 8270B
Dibenzofuran	<10.0	mg/Kg	10.0	EPA 8270B
Diethyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Dimethyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Fluoranthene	<10.0	mg/Kg	10.0	EPA 8270B
Fluorene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachlorobutadiene	<20.0	mg/Kg	20.0	EPA 8270B
Hexachlorocyclopentadiene	<20.0	mg/Kg	20.0	EPA 8270B
Hexachloroethane	<20.0	mg/Kg	20.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<10.0	mg/Kg	10.0	EPA 8270B
Isophorone	<10.0	mg/Kg	10.0	EPA 8270B
N-Nitrosodi-n-propylamine	<10.0	mg/Kg	10.0	EPA 8270B
N-Nitrosodimethylamine	<10.0	mg/Kg	10.0	EPA 8270B
N-Nitrosodiphenylamine	<10.0	mg/Kg	10.0	EPA 8270B
Naphthalene	<10.0	mg/Kg	10.0	EPA 8270B
Nitrobenzene	<10.0	mg/Kg	10.0	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 10:50 **System ID** AD04027 **Sample ID** LAB990111

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 3

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-13
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Pentachlorophenol	<20.0	mg/Kg	20.0	EPA 8270B
Phenanthrene	<10.0	mg/Kg	10.0	EPA 8270B
Phenol	<10.0	mg/Kg	10.0	EPA 8270B
Pyrene	<10.0	mg/Kg	10.0	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1,2,2-Tetrachloroethane	<200	µg/Kg	200	EPA 8240
1,1,2-Trichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,1-Dichloroethene	<200	µg/Kg	200	EPA 8240
1,2-Dichloroethane	<200	µg/Kg	200	EPA 8240
1,2-Dichloropropane	<200	µg/Kg	200	EPA 8240
1,3-Dichloropropene, total	<200	µg/Kg	200	EPA 8240
2-Chloroethylvinyl ether	<5000	µg/Kg	5000	EPA 8240
Acrolein	<5000	µg/Kg	5000	EPA 8240
Acrylonitrile	<500	µg/Kg	500	EPA 8240
Benzene	956	µg/Kg	200	EPA 8240
Bromoform	<200	µg/Kg	200	EPA 8240
Bromomethane	<1000	µg/Kg	1000	EPA 8240
Carbon tetrachloride	<200	µg/Kg	200	EPA 8240
Chlorobenzene	<200	µg/Kg	200	EPA 8240
Chloroethane	<400	µg/Kg	400	EPA 8240
Chloroform	<200	µg/Kg	200	EPA 8240
Chloromethane	<500	µg/Kg	500	EPA 8240
Dibromochloromethane	<200	µg/Kg	200	EPA 8240
Dichlorobromomethane	<200	µg/Kg	200	EPA 8240
Ethylbenzene	<200	µg/Kg	200	EPA 8240
Methylene chloride	<500	µg/Kg	500	EPA 8240
Tetrachloroethene	<200	µg/Kg	200	EPA 8240
Toluene	<200	µg/Kg	200	EPA 8240
trans-1,2-Dichloroethene	<200	µg/Kg	200	EPA 8240
Trichloroethene	<200	µg/Kg	200	EPA 8240

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/99 10:50 **System ID** AD04027 **Sample ID** **LAB990111**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN TEST PIT 3

Date Received: 5/21/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: TP-2-13
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: CH/GK/PNG

Comments:

Test Parameter	Result	Units	MRL	Method
Vinyl chloride	<200	µg/Kg	200	EPA 8240

End of Report for Sample ID: LAB990111

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/28/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 8:30 **System ID** AD04150 **Sample ID** LAB990113

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-1

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-1
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE RESULT FOR 2,4-DIMETHYLPHENOL (SEMI-VOLATILE ORGANICS) MAY BE A LOW ESTIMATE DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	0.05	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	<0.005	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

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City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 8:30 **System ID** AD04150 **Sample ID** LAB990113

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-1

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-1
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE RESULT FOR 2,4-DIMETHYLPHENOL (SEMI-VOLATILE ORGANICS) MAY BE A LOW ESTIMATE DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	0.03	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

(cc) 6/29/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 8:30 **System ID** AD04150 **Sample ID** LAB990113

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-1

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-1
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE RESULT FOR 2,4-DIMETHYLPHENOL (SEMI-VOLATILE ORGANICS) MAY BE A LOW ESTIMATE DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	0.019	mg/L	0.001	EPA 624
Chloroethane	0.009	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	0.005	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.600	mg/L	0.600	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 8:30 **System ID** AD04150 **Sample ID** LAB990113

Page: 4

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-1

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-1
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE RESULT FOR 2,4-DIMETHYLPHENOL (SEMI-VOLATILE ORGANICS) MAY BE A LOW ESTIMATE DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<1.20	mg/L	1.20	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	244	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990113

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 10:15 **System ID** AD04151 **Sample ID** LAB990114

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-2

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-2
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: IN ADDITION TO THE REPORTED SEMI-VOLATILE ORGANICS, THIS SAMPLE CONTAINED FLUORENE, ANTHRACENE, FLUORANTHENE AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.01	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

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City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 10:15 **System ID** AD04151 **Sample ID** **LAB990114**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-2

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-2
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: IN ADDITION TO THE REPORTED SEMI-VOLATILE ORGANICS, THIS SAMPLE CONTAINED FLUORENE, ANTHRACENE, FLUORANTHENE AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	0.02	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

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City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 10:15 **System ID** AD04151 **Sample ID** **LAB990114**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-2

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-2
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: IN ADDITION TO THE REPORTED SEMI-VOLATILE ORGANICS, THIS SAMPLE CONTAINED FLUORENE, ANTHRACENE, FLUORANTHENE AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.600	mg/L	0.600	NWTPH-Dx

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City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 10:15 **System ID** AD04151 **Sample ID** LAB990114

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-2

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-2
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: IN ADDITION TO THE REPORTED SEMI-VOLATILE ORGANICS, THIS SAMPLE CONTAINED FLUORENE, ANTHRACENE, FLUORANTHENE AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	2.13	mg/L	1.20	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	109	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990114

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:15 **System ID** AD04152 **Sample ID** **LAB990115**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY W-3
Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-3
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE
Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS. THE RESULTS FOR THE REPORTED SEMI-VOLATILE ORGANICS SHOULD BE CONSIDERED ESTIMATES DUE TO MATRIX INTERFERENCE. ACENAPHTHENE, FLUORENE, HEXACHLOROBENZENE, AND FLUORANTHENE WERE ALSO DETECTED, BUT AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dimethylphenol	0.11	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.04	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.01	mg/L	0.005	EPA 625
2-Chlorophenol	<0.02	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.02	mg/L	0.010	EPA 625
2-Nitrophenol	<0.02	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.01	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.02	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Nitrophenol	<0.04	mg/L	0.020	EPA 625
Acenaphthene	<0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.01	mg/L	0.005	EPA 625
Anthracene	0.01	mg/L	0.005	EPA 625
Azobenzene	<0.01	mg/L	0.005	EPA 625
Benzidine	<0.02	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.01	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.01	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.01	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.04	mg/L	0.020	EPA 625

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:15 **System ID** AD04152 **Sample ID** LAB990115

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-3

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-3
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS. THE RESULTS FOR THE REPORTED SEMI-VOLATILE ORGANICS SHOULD BE CONSIDERED ESTIMATES DUE TO MATRIX INTERFERENCE. ACENAPHTHENE, FLUORENE, HEXACHLOROBENZENE, AND FLUORANTHENE WERE ALSO DETECTED, BUT AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	0.05	mg/L	0.010	EPA 625
Chrysene	<0.01	mg/L	0.005	EPA 625
Di-n-butyl phthalate	0.10	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.02	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.01	mg/L	0.005	EPA 625
Diethyl phthalate	<0.01	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.01	mg/L	0.005	EPA 625
Fluoranthene	<0.01	mg/L	0.005	EPA 625
Fluorene	<0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.01	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.01	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.01	mg/L	0.005	EPA 625
Hexachloroethane	<0.01	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.01	mg/L	0.005	EPA 625
Isophorone	<0.01	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.01	mg/L	0.005	EPA 625
Naphthalene	<0.01	mg/L	0.005	EPA 625
Nitrobenzene	<0.01	mg/L	0.005	EPA 625
Pentachlorophenol	<0.02	mg/L	0.010	EPA 625
Phenanthrene	0.01	mg/L	0.005	EPA 625
Phenol	<0.02	mg/L	0.010	EPA 625
Pyrene	<0.01	mg/L	0.005	EPA 625
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:15 **System ID** AD04152 **Sample ID** LAB990115

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-3

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-3
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS. THE RESULTS FOR THE REPORTED SEMI-VOLATILE ORGANICS SHOULD BE CONSIDERED ESTIMATES DUE TO MATRIX INTERFERENCE. ACENAPHTHENE, FLUORENE, HEXACHLOROBENZENE, AND FLUORANTHENE WERE ALSO DETECTED, BUT AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	0.012	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	0.003	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.600	mg/L	0.600	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:15 **System ID** AD04152 **Sample ID** LAB990115

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-3

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-3
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS. THE RESULTS FOR THE REPORTED SEMI-VOLATILE ORGANICS SHOULD BE CONSIDERED ESTIMATES DUE TO MATRIX INTERFERENCE. ACENAPHTHENE, FLUORENE, HEXACHLOROBENZENE, AND FLUORANTHENE WERE ALSO DETECTED, BUT AT LEVELS BELOW THE MRL.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<1.20	mg/L	1.20	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	90.9	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990115

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:45 **System ID** AD04153 **Sample ID** LAB990116

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-4

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-4
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.02	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.04	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.01	mg/L	0.005	EPA 625
2-Chlorophenol	<0.02	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.02	mg/L	0.010	EPA 625
2-Nitrophenol	<0.02	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.01	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.02	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Nitrophenol	<0.04	mg/L	0.020	EPA 625
Acenaphthene	<0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.01	mg/L	0.005	EPA 625
Anthracene	<0.01	mg/L	0.005	EPA 625
Azobenzene	<0.01	mg/L	0.005	EPA 625
Benzidine	<0.02	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.01	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.01	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.01	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.04	mg/L	0.020	EPA 625

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Sample Date/Time 5/26/99 9:45 **System ID** AD04153 **Sample ID** **LAB990116**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY W-4
Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-4
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE
Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.02	mg/L	0.010	EPA 625
Chrysene	<0.01	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.04	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.02	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.01	mg/L	0.005	EPA 625
Diethyl phthalate	<0.01	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.01	mg/L	0.005	EPA 625
Fluoranthene	<0.01	mg/L	0.005	EPA 625
Fluorene	<0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.01	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.01	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.01	mg/L	0.005	EPA 625
Hexachloroethane	<0.01	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.01	mg/L	0.005	EPA 625
Isophorone	<0.01	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.01	mg/L	0.005	EPA 625
Naphthalene	<0.01	mg/L	0.005	EPA 625
Nitrobenzene	<0.01	mg/L	0.005	EPA 625
Pentachlorophenol	<0.02	mg/L	0.010	EPA 625
Phenanthrene	<0.01	mg/L	0.005	EPA 625
Phenol	<0.02	mg/L	0.010	EPA 625
Pyrene	<0.01	mg/L	0.005	EPA 625
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:45 **System ID** AD04153 **Sample ID** LAB990116

Page: 3

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-4

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-4
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.600	mg/L	0.600	NWTPH-Dx

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/29/99

Rec'd 6/26/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 9:45 **System ID** AD04153 **Sample ID** **LAB990116**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-4

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-4
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/P'NG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<1.20	mg/L	1.20	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990116

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 12:30 **System ID** AD04154 **Sample ID** LAB990117

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-5

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-5
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/FNG

Comments: LAB: THE SAMPLE SUBMITTED FOR VOLATILE ORGANICS ANALYSIS WAS NOT PRESERVED. THIS SAMPLE WAS DILUTED BY A FACTOR OF 3.64 FOR SEMI-VOLATILE ORGANICS ANALYSIS. TO REDUCE MATRIX INTERFERENCE, THE SEDIMENT IN THE SAMPLE WAS EXCLUDED FROM THE ALIQUOT EXTRACTED FOR SEMI-VOLATILE ORGANICS.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.018	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.018	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.018	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.018	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.036	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.036	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.036	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.073	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.018	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.018	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.018	mg/L	0.005	EPA 625
2-Chlorophenol	<0.036	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.036	mg/L	0.010	EPA 625
2-Nitrophenol	<0.036	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.018	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.018	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.036	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.018	mg/L	0.005	EPA 625
4-Nitrophenol	<0.073	mg/L	0.020	EPA 625
Acenaphthene	<0.018	mg/L	0.005	EPA 625
Acenaphthylene	<0.018	mg/L	0.005	EPA 625
Anthracene	<0.018	mg/L	0.005	EPA 625
Azobenzene	<0.018	mg/L	0.005	EPA 625
Benzidine	<0.036	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.018	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.018	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.018	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.018	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.018	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.073	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 12:30 **System ID** AD04154 **Sample ID** LAB990117

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-5

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-5
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE SAMPLE SUBMITTED FOR VOLATILE ORGANICS ANALYSIS WAS NOT PRESERVED. THIS SAMPLE WAS DILUTED BY A FACTOR OF 3.64 FOR SEMI-VOLATILE ORGANICS ANALYSIS. TO REDUCE MATRIX INTERFERENCE, THE SEDIMENT IN THE SAMPLE WAS EXCLUDED FROM THE ALIQUOT EXTRACTED FOR SEMI-VOLATILE ORGANICS.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.018	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.018	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.018	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.036	mg/L	0.010	EPA 625
Chrysene	<0.018	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.073	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.036	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.018	mg/L	0.005	EPA 625
Diethyl phthalate	<0.018	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.018	mg/L	0.005	EPA 625
Fluoranthene	<0.018	mg/L	0.005	EPA 625
Fluorene	<0.018	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.018	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.018	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.018	mg/L	0.005	EPA 625
Hexachloroethane	<0.018	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.018	mg/L	0.005	EPA 625
Isophorone	<0.018	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.018	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.018	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.018	mg/L	0.005	EPA 625
Naphthalene	<0.018	mg/L	0.005	EPA 625
Nitrobenzene	<0.018	mg/L	0.005	EPA 625
Pentachlorophenol	<0.036	mg/L	0.010	EPA 625
Phenanthrene	<0.018	mg/L	0.005	EPA 625
Phenol	<0.036	mg/L	0.010	EPA 625
Pyrene	<0.018	mg/L	0.005	EPA 625
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 12:30 **System ID** AD04154 **Sample ID** LAB990117

Page: 3

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-5

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-5
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE SAMPLE SUBMITTED FOR VOLATILE ORGANICS ANALYSIS WAS NOT PRESERVED. THIS SAMPLE WAS DILUTED BY A FACTOR OF 3.64 FOR SEMI-VOLATILE ORGANICS ANALYSIS. TO REDUCE MATRIX INTERFERENCE, THE SEDIMENT IN THE SAMPLE WAS EXCLUDED FROM THE ALIQUOT EXTRACTED FOR SEMI-VOLATILE ORGANICS.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.650	mg/L	0.650	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 12:30 **System ID** AD04154 **Sample ID** **LAB990117**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-5

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-5
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THE SAMPLE SUBMITTED FOR VOLATILE ORGANICS ANALYSIS WAS NOT PRESERVED. THIS SAMPLE WAS DILUTED BY A FACTOR OF 3.64 FOR SEMI-VOLATILE ORGANICS ANALYSIS. TO REDUCE MATRIX INTERFERENCE, THE SEDIMENT IN THE SAMPLE WAS EXCLUDED FROM THE ALIQUOT EXTRACTED FOR SEMI-VOLATILE ORGANICS.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<1.30	mg/L	1.30	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	310	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990117

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 11:05 System ID AD04155 Sample ID **LAB990118**

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-6

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-6
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/P'NG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.02	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.04	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.01	mg/L	0.005	EPA 625
2-Chlorophenol	<0.02	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.02	mg/L	0.010	EPA 625
2-Nitrophenol	<0.02	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.01	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.02	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Nitrophenol	<0.04	mg/L	0.020	EPA 625
Acenaphthene	<0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.01	mg/L	0.005	EPA 625
Anthracene	<0.01	mg/L	0.005	EPA 625
Azobenzene	<0.01	mg/L	0.005	EPA 625
Benzidine	<0.02	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.01	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.01	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.01	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.04	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 11:05 **System ID** AD04155 **Sample ID** LAB990118

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-6

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-6
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/P'NG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.02	mg/L	0.010	EPA 625
Chrysene	<0.01	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.04	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.02	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.01	mg/L	0.005	EPA 625
Diethyl phthalate	<0.01	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.01	mg/L	0.005	EPA 625
Fluoranthene	<0.01	mg/L	0.005	EPA 625
Fluorene	<0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.01	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.01	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.01	mg/L	0.005	EPA 625
Hexachloroethane	<0.01	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.01	mg/L	0.005	EPA 625
Isophorone	<0.01	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.01	mg/L	0.005	EPA 625
Naphthalene	<0.01	mg/L	0.005	EPA 625
Nitrobenzene	<0.02	mg/L	0.010	EPA 625
Pentachlorophenol	<0.01	mg/L	0.005	EPA 625
Phenanthrene	<0.02	mg/L	0.010	EPA 625
Phenol	<0.01	mg/L	0.005	EPA 625
Pyrene				
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 11:05 **System ID** AD04155 **Sample ID** LAB990118

Page: 3

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-6

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-6
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	<0.700	mg/L	0.700	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/26/99 11:05 **System ID** AD04155 **Sample ID** LAB990118

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: LARSEN PROPERTY
W-6

Proj Subcategory: SPECIAL WASTE
Sample Point Code: W-6
IMS File/Invoice #: 3030.000

Date Received: 5/26/99
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH/PNG

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<1.40	mg/L	1.40	NWTPH-Dx
NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	mg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990118

CENTER CODE: 14522110 PROJECT 6064

City of Portland
Bureau of Environmental Services
Chain of Custody

Project Name: SPECIAL WASTE MISC SAMP
Project Subcat. SPECIAL WASTE
File Number: 3030.000
Matrix: GRNDWTR

Date: 5/18/99
Page: 1 of 1
Collected by: CH / GK
PN 6

05/17/99 10:25 ☎503 823 5228 SEWERAGE SYSTEM ☑002

Sample ID No.	Location (Rep Address 1)	Sample Type	Point Code	Date	Time	Tests Requested				8260
LAB 990109	LARSEN / TEST PIT 1	S	TP-1-17	5/18/99	9:10	PCBs by 8082	X VOCs by ~~624~~ 8260	X NWHCID[2]	Other: QUANTIFY	
						RCRA Metals[1]	X SVOCs by ~~625~~	X Other:	Pesticides/PCBs by 8081	
LAB 990110	LARSEN / TEST PIT 2	S	TP-2-17	5/18/99	10:30	PCBs by 8082	X VOCs by ~~624~~ 8260	X NWHCID[2]	Other: QUANTIFY	
						RCRA Metals[1]	X SVOCs by ~~625~~	X Other:	Pesticides/PCBs by 8081	
LAB 990111	LARSEN / TEST PIT 3	S	TP-2-13	5/18/99	10:50	PCBs by 8082	X VOCs by ~~624~~ 8260	X NWHCID[2]	Other: QUANTIFY	
						RCRA Metals[1]	X SVOCs by ~~625~~	X Other:	Pesticides/PCBs by 8081	
LAB 990112	LARSEN / TEST PIT 5	S	TP-5-8	5/18/99	12:00	PCBs by 8082	X VOCs by ~~624~~ 8260	X NWHCID[2]	Other: QUANTIFY	
						RCRA Metals[1]	X SVOCs by 625	X Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:	
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081	

[1] As, Ba, Cd, Cr, Pb, Hg, Se, Ag

[2] run NWTPHDX and NWTPHGX if detects on NWHCID

Relinquished By 1:	Received By 1:	Relinquished By 2:	Received By 2:
Signature: [signature] Time: 11:45	Signature: John W. Matson Time: 11:45	Signature: Time:	Signature: Time:
Printed Name: GERARD KOSCITAL Date: 5/21/99	Printed Name: JOHN W. MATSON Date: 5/21/99	Printed Name: Date:	Printed Name: Date:

CENTER CODE: 14522110 PROJECT 6064

City of Portland
Bureau of Environmental Services
Chain of Custody

LARSEN PROPERTY

Project Name: SPECIAL WASTE MISC SAMP		Date: 5/26/99	
Project Subcat. SPECIAL WASTE		Page: 1 of 1	
File Number: 3030.000		Collected by: CRAIG HULTGREN	
Matrix: GRNDWTR		PNG	

Sample ID No.	Location (Rep Address 1)	Sample Type	Point Code	Date	Time	Tests Requested			
LAB 990113	~~MW~~-W-1 - LARSEN	W	W-1	5/26/99	8:30	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	Other:	Pesticides/PCBs by 8081
LAB 990114	W-2 - LARSEN	W	W-2	5/26/99	10:15	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	Other:	Pesticides/PCBs by 8081
LAB 990115	W-3 - LARSEN	W	W-3	5/26/99	9:15	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	X Other:	Pesticides/PCBs by 8081
LAB 990116	W-4 - LARSEN	W	W-4	5/26/99	9:45	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	Other:	Pesticides/PCBs by 8081
LAB 990117	W-5 - LARSEN	W	W-5	5/26/99	12:00	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	Other:	Pesticides/PCBs by 8081
LAB 990118	W-6 - LARSEN	W	W-6	5/26/99	11:05	PCBs by 8082	X VOCs by 624	X NWHCID[2]	X Other: QUANTIFY
						RCRA Metals[1]	X SVOCs by 625	Other:	Pesticides/PCBs by 8081
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081
						PCBs by 8082	VOCs by 624	NWHCID[2]	Other:
						RCRA Metals[1]	SVOCs by 625	Other:	Pesticides/PCBs by 8081

[1] As, Ba, Cd, Cr, Pb, Hg, Se, Ag
[2] run NWTPHDX and NWTPHGX if detects on NWHCID

Relinquished By 1:	Received By 1:	Relinquished By 2:	Received By 2:
Signature: [signature] Time: 12:30	Signature: John W. Matson Time: 12:30	Signature: Time:	Signature: Time:
Printed Name: GERARD KOSCITAL Date: 5/26/99	Printed Name: JOHN W. MATSON Date: 5/26/99	Printed Name: Date:	Printed Name: Date:

PNG.

S:\EID\3030.000\SAMPDOC\MISCCOC.XLS, 2/5/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 9:25 **System ID:** AD06104 **Sample ID:** LAB990184

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W1

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	0.02	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	<0.005	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 9:25 **System ID:** AD06104 **Sample ID:** LAB990184

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W1

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 9:25 **System ID:** AD06104 **Sample ID:** **LAB990184**

Page: 3
Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W1
Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000
Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	0.009	mg/L	0.001	EPA 624
Chloroethane	0.012	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	1.84	mg/L	0.250	NWTPH-Dx

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 9:25 **System ID:** AD06104 **Sample ID:** **LAB990184**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W1

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	1.02	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	125	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990184

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 11:25 **System ID:** AD06105 **Sample ID:** LAB990185

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W2

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.01	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 11:25 **System ID:** AD06105 **Sample ID:** LAB990185

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W2

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 11:25 **System ID:** AD06105 **Sample ID:** LAB990185

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W2

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	0.599	mg/L	0.250	NWTPH-Dx

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Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 11:25 **System ID:** AD06105 **Sample ID:** LAB990185

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W2

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	<0.500	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	123	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990185

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:00 **System ID:** AD06106 **Sample ID:** LAB990186

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W3

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.01	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	<0.005	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

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Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:00 **System ID:** AD06106 **Sample ID:** LAB990186

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W3

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:00 **System ID:** AD06106 **Sample ID:** LAB990186

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W3

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	0.656	mg/L	0.250	NWTPH-Dx

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Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:00 **System ID:** AD06106 **Sample ID:** LAB990186

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W3

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	0.538	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	234	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990186

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:50 **System ID:** AD06107 **Sample ID:** LAB990187

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W4

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.01	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	<0.005	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:50 **System ID:** AD06107 **Sample ID:** **LAB990187**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W4

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:50 **System ID:** AD06107 **Sample ID:** LAB990187

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W4

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	0.693	mg/L	0.250	NWTPH-Dx

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 10:50 **System ID:** AD06107 **Sample ID:** LAB990187

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W4

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	0.651	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990187

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 12:30 **System ID:** AD06108 **Sample ID:** LAB990188

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W5

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE ORGANIC TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.005	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.01	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.01	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.02	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.005	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.005	mg/L	0.005	EPA 625
2-Chlorophenol	<0.01	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.01	mg/L	0.010	EPA 625
2-Nitrophenol	<0.01	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.005	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.01	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.005	mg/L	0.005	EPA 625
4-Nitrophenol	<0.02	mg/L	0.020	EPA 625
Acenaphthene	<0.005	mg/L	0.005	EPA 625
Acenaphthylene	<0.005	mg/L	0.005	EPA 625
Anthracene	<0.005	mg/L	0.005	EPA 625
Azobenzene	<0.005	mg/L	0.005	EPA 625
Benzidine	<0.01	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.005	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.005	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.005	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.005	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.02	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 12:30 **System ID:** AD06108 **Sample ID:** **LAB990188**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W5

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE ORGANIC TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.005	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.01	mg/L	0.010	EPA 625
Chrysene	<0.005	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.02	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.01	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.005	mg/L	0.005	EPA 625
Diethyl phthalate	<0.005	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.005	mg/L	0.005	EPA 625
Fluoranthene	<0.005	mg/L	0.005	EPA 625
Fluorene	<0.005	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.005	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.005	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.005	mg/L	0.005	EPA 625
Hexachloroethane	<0.005	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.005	mg/L	0.005	EPA 625
Isophorone	<0.005	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.005	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.005	mg/L	0.005	EPA 625
Naphthalene	<0.005	mg/L	0.005	EPA 625
Nitrobenzene	<0.005	mg/L	0.005	EPA 625
Pentachlorophenol	<0.01	mg/L	0.010	EPA 625
Phenanthrene	<0.005	mg/L	0.005	EPA 625
Phenol	<0.01	mg/L	0.010	EPA 625
Pyrene	<0.005	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 12:30 **System ID:** AD06108 **Sample ID:** LAB990188

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W5

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE ORGANIC TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	0.764	mg/L	0.250	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 12:30 **System ID:** AD06108 **Sample ID:** LAB990188

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W5

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE ORGANIC TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	0.656	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990188

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 13:40 **System ID:** AD06109 **Sample ID:** **LAB990189**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W6

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.02	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.04	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.01	mg/L	0.005	EPA 625
2-Chlorophenol	<0.02	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.02	mg/L	0.010	EPA 625
2-Nitrophenol	<0.02	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.01	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.02	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Nitrophenol	<0.04	mg/L	0.020	EPA 625
Acenaphthene	<0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.01	mg/L	0.005	EPA 625
Anthracene	<0.01	mg/L	0.005	EPA 625
Azobenzene	<0.01	mg/L	0.005	EPA 625
Benzidine	<0.02	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.01	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.01	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.01	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.04	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 13:40 **System ID:** AD06109 **Sample ID:** LAB990189

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W6

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.02	mg/L	0.010	EPA 625
Chrysene	<0.01	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.04	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.02	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.01	mg/L	0.005	EPA 625
Diethyl phthalate	<0.01	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.01	mg/L	0.005	EPA 625
Fluoranthene	<0.01	mg/L	0.005	EPA 625
Fluorene	<0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.01	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.01	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.01	mg/L	0.005	EPA 625
Hexachloroethane	<0.01	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.01	mg/L	0.005	EPA 625
Isophorone	<0.01	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.01	mg/L	0.005	EPA 625
Naphthalene	<0.01	mg/L	0.005	EPA 625
Nitrobenzene	<0.01	mg/L	0.005	EPA 625
Pentachlorophenol	<0.02	mg/L	0.010	EPA 625
Phenanthrene	<0.01	mg/L	0.005	EPA 625
Phenol	<0.02	mg/L	0.010	EPA 625
Pyrene	<0.01	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 13:40 **System ID:** AD06109 **Sample ID:** **LAB990189**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W6

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Dx				
DIESEL RANGE HYDROCARBONS	0.580	mg/L	0.250	NWTPH-Dx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 13:40 **System ID:** AD06109 **Sample ID:** **LAB990189**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W6

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: LAB: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE. NCA: DETECTED DIESEL AND HEAVY OIL RANGE HYDROCARBONS DO NOT HAVE PATTERN AND RANGE CONSISTENT WITH TYPICAL PETROLEUM PRODUCTS AND MAY BE DUE TO BIOGENIC INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
HEAVY OIL RANGE HYDROCARBONS	0.528	mg/L	0.500	NWTPH-Dx
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	µg/L	80.0	NWTPH-Gx

End of Report for Sample ID: LAB990189

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 14:05 **System ID:** AD06110 **Sample ID:** **LAB990190**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W7

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
ORG SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,2-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,3-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
1,4-Dichlorobenzene	<0.01	mg/L	0.005	EPA 625
2,4,6-Trichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dichlorophenol	<0.02	mg/L	0.010	EPA 625
2,4-Dimethylphenol	<0.02	mg/L	0.010	EPA 625
2,4-Dinitrophenol	<0.04	mg/L	0.020	EPA 625
2,4-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2,6-Dinitrotoluene	<0.01	mg/L	0.005	EPA 625
2-Chloronaphthalene	<0.01	mg/L	0.005	EPA 625
2-Chlorophenol	<0.02	mg/L	0.010	EPA 625
2-Methyl-4,6-dinitrophenol	<0.02	mg/L	0.010	EPA 625
2-Nitrophenol	<0.02	mg/L	0.010	EPA 625
3,3'-Dichlorobenzidine	<0.01	mg/L	0.005	EPA 625
4-Bromophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Chloro-3-methylphenol	<0.02	mg/L	0.010	EPA 625
4-Chlorophenylphenyl ether	<0.01	mg/L	0.005	EPA 625
4-Nitrophenol	<0.04	mg/L	0.020	EPA 625
Acenaphthene	<0.01	mg/L	0.005	EPA 625
Acenaphthylene	<0.01	mg/L	0.005	EPA 625
Anthracene	<0.01	mg/L	0.005	EPA 625
Azobenzene	<0.01	mg/L	0.005	EPA 625
Benzidine	<0.02	mg/L	0.010	EPA 625
Benzo(a)anthracene	<0.01	mg/L	0.005	EPA 625
Benzo(a)pyrene	<0.01	mg/L	0.005	EPA 625
Benzo(b)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzo(g,h,i)perylene	<0.01	mg/L	0.005	EPA 625
Benzo(k)fluoranthene	<0.01	mg/L	0.005	EPA 625
Benzyl butyl phthalate	<0.04	mg/L	0.020	EPA 625

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 14:05 **System ID:** AD06110 **Sample ID:** LAB990190

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W7

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
Bis(2-chloroethoxy) methane	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroethyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-chloroisopropyl) ether	<0.01	mg/L	0.005	EPA 625
Bis(2-ethylhexyl) phthalate	<0.02	mg/L	0.010	EPA 625
Chrysene	<0.01	mg/L	0.005	EPA 625
Di-n-butyl phthalate	<0.04	mg/L	0.020	EPA 625
Di-n-octyl phthalate	<0.02	mg/L	0.010	EPA 625
Dibenzo(a,h)anthracene	<0.01	mg/L	0.005	EPA 625
Diethyl phthalate	<0.01	mg/L	0.005	EPA 625
Dimethyl phthalate	<0.01	mg/L	0.005	EPA 625
Fluoranthene	<0.01	mg/L	0.005	EPA 625
Fluorene	<0.01	mg/L	0.005	EPA 625
Hexachlorobenzene	<0.01	mg/L	0.005	EPA 625
Hexachlorobutadiene	<0.01	mg/L	0.005	EPA 625
Hexachlorocyclopentadiene	<0.01	mg/L	0.005	EPA 625
Hexachloroethane	<0.01	mg/L	0.005	EPA 625
Indeno(1,2,3-cd)pyrene	<0.01	mg/L	0.005	EPA 625
Isophorone	<0.01	mg/L	0.005	EPA 625
N-Nitrosodi-n-propylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodimethylamine	<0.01	mg/L	0.005	EPA 625
N-Nitrosodiphenylamine	<0.01	mg/L	0.005	EPA 625
Naphthalene	<0.01	mg/L	0.005	EPA 625
Nitrobenzene	<0.01	mg/L	0.005	EPA 625
Pentachlorophenol	<0.02	mg/L	0.010	EPA 625
Phenanthrene	<0.01	mg/L	0.005	EPA 625
Phenol	<0.02	mg/L	0.010	EPA 625
Pyrene	<0.01	mg/L	0.005	EPA 625
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 14:05 **System ID:** AD06110 **Sample ID:** **LAB990190**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W7

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624
SUB NWTPH-Gx				
GASOLINE RANGE HYDROCARBONS	<80.0	µg/L	80.0	NWTPH-Gx

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 14:05 **System ID:** AD06110 **Sample ID:** **LAB990190**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: W7

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: CH

Comments: THIS SAMPLE WAS DILUTED BY A FACTOR OF TWO FOR SEMI-VOLATILE ORGANIC COMPOUNDS ANALYSIS. BASED ON LOW SURROGATE RECOVERIES, LOW LEVELS OF SEMI-VOLATILE TARGET ANALYTES MAY NOT HAVE BEEN DETECTED DUE TO MATRIX INTERFERENCE.

Test Parameter	Result	Units	MRL	Method

End of Report for Sample ID: LAB990190

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 Fax (503) 823-5656

Report Date: 8/17/99

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 0:00 **System ID:** AD06111 **Sample ID:** LAB990191

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: TRIP BLANK

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: OTHER
Collected By: CH

Comments:

Test Parameter	Result	Units	MRL	Method
ORG VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<0.005	mg/L	0.005	EPA 624
1,1,1-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2,2-Tetrachloroethane	<0.003	mg/L	0.003	EPA 624
1,1,2-Trichloroethane	<0.003	mg/L	0.003	EPA 624
1,1-Dichloroethane	<0.002	mg/L	0.002	EPA 624
1,1-Dichloroethene	<0.003	mg/L	0.003	EPA 624
1,2-Dichlorobenzene	<0.003	mg/L	0.003	EPA 624
1,2-Dichloroethane	<0.005	mg/L	0.005	EPA 624
1,2-Dichloropropane	<0.003	mg/L	0.003	EPA 624
1,3-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
1,4-Dichlorobenzene	<0.002	mg/L	0.002	EPA 624
2-Chloroethylvinyl ether	<0.05	mg/L	0.050	EPA 624
Acrolein	<0.1	mg/L	0.100	EPA 624
Acrylonitrile	<0.05	mg/L	0.050	EPA 624
Benzene	<0.001	mg/L	0.001	EPA 624
Bromodichloromethane	<0.003	mg/L	0.003	EPA 624
Bromoform	<0.003	mg/L	0.003	EPA 624
Bromomethane	<0.01	mg/L	0.010	EPA 624
Carbon tetrachloride	<0.003	mg/L	0.003	EPA 624
Chlorobenzene	<0.001	mg/L	0.001	EPA 624
Chloroethane	<0.01	mg/L	0.010	EPA 624
Chloroform	<0.001	mg/L	0.001	EPA 624
Chloromethane	<0.01	mg/L	0.010	EPA 624
cis-1,3-Dichloropropene	<0.004	mg/L	0.004	EPA 624
Dibromochloromethane	<0.005	mg/L	0.005	EPA 624
Ethylbenzene	<0.003	mg/L	0.003	EPA 624
Methylene chloride	<0.004	mg/L	0.004	EPA 624
Tetrachloroethene	<0.002	mg/L	0.002	EPA 624
Toluene	<0.001	mg/L	0.001	EPA 624
trans-1,2-Dichloroethene	<0.002	mg/L	0.002	EPA 624

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time: 7/28/99 0:00 **System ID:** AD06111 **Sample ID:** **LAB990191**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: TRIP BLANK

Date Received: 7/28/99
Sample Status: INACTIVE

Proj. Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: OTHER
Collected By: CH

Comments:

Test Parameter	Result	Units	MRL	Method
trans-1,3-Dichloropropene	<0.003	mg/L	0.003	EPA 624
Trichloroethene	<0.004	mg/L	0.004	EPA 624
Trichlorofluoromethane	<0.004	mg/L	0.004	EPA 624
Vinyl chloride	<0.05	mg/L	0.050	EPA 624

End of Report for Sample ID: LAB990191

City of Portland
Bureau of Environmental Services

Chain of Custody

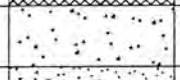
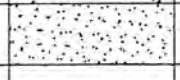
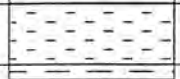
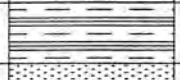
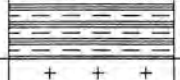
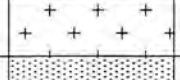
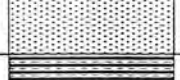
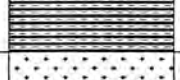
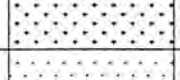
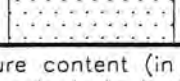
Project Name: SPECIAL WASTE MISC SAMP Date: 7/28/99
Project Subcat. SPECIAL WASTE Page: 1 of 1
File Number: 3030.000 Collected by: [illegible] HULTS
Matrix: WATER

Sample ID No.	Location (Rep Address 1)	Sample Type	Point Code	Date	Time	Tests Requested
LAB 990184	W1	W		7/28/99	9:25	SEMI VOLATILES BY 8270 VOC BY 8260
LAB 990185	W2	W			11:25	& NWTPHG & NWTPHDX
LAB 990186	W3	W			1000	
LAB 990187	W4	W			1050	
LAB 990188	W5	W			1230	
LAB 990189	W6	W			1340	
LAB 990190	W7	W			1405	VOC'S & 8325
LAB 990191	TRIP BLANK	W				

Relinquished By 1:	Received By 1:	Relinquished By 2:	Received By 2:
Signature: [signature] Time: 7/28/99	Signature: [signature] Time: 1645	Signature: Time:	Signature: Time:
Printed Name: GERARD KOSCHAL Date: 1645	Printed Name: JUL 28 1999	Printed Name: Date:	Printed Name: Date:

PNG ENVIRONMENTAL.

APPENDIX B
BORING LOGS

MAJOR DIVISIONS		SYMBOLS		TYPICAL NAMES
COARSE GRAINED SOILS (more than 1/2 of soil >No. 200 sieve size)	GRAVELS more than 50% coarse fraction > no.4 sieve	GW		Well-grade gravels or gravel-sand mixtures, little to no fines.
		GP		Poorly-graded gravels or gravel-sand mixtures, little to no fines.
		GM		Silty gravels, gravel-sand-silt mixtures.
		GC		Clayey gravels or gravel-sand-clay mixtures
	SANDS less than 50% coarse fraction > no.4 sieve	SW		Well-graded sands or gravelly sands, little to no fines.
		SP		Poorly-graded sands or gravelly sands, little to no fines.
		SM		Silty sands, sand-silt mixtures.
		SC		Clayey sands, sand-clay mixtures.
FINED GRAINED SOILS (more than 1/2 of soil < No. 200 sieve size)	SILTS & CLAYS Liquid Limit* less than 50%	ML		Inorganic silts and very fine sands, silty or clayey fine sands or clayey silts with slight plasticity.
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy or silty clays, lean clays.
		OL		Organic silts and organic silty clays of low plasticity.
	SILTS & CLAYS Liquid Limit* greater than 50%	MH		Inorganic silts, micaceous or diatomaceous fine sand or silty soils, elastic silts.
		CH		Inorganic clays of high plasticity, fat clays.
		OH		Organic clays of medium to high plasticity, organic silty clay, organic silts.
HIGHLY ORGANIC SOILS		Pt		Peat or other highly organic soils.

*Liquid Limit represents the moisture content (in percent) of a soil at which point the soil no longer behaves like a plastic and starts to behave like a liquid.

BORING LOG SYMBOLS

SAMPLE INTERVAL
GROUNDWATER, FIRST OBSERVED
GROUNDWATER, STATIC

SAMPLE TYPES:
- SS – Split Spoon
- G – Grab
- ST – Shelby Tube
- GS – Geoprobe Sampler

SHEEN TYPES:
- NS – No Sheen observed
- SS – Slight Sheen observed (Spotty coverage of sheen pan, no irridescence)
- MS – Moderate Sheen (full coverage of sheen pan, no irredescence)
- HS – Heavy Sheen (full coverage of sheen pan, irridescent)

SAMPLE MOISTURE:
- DRY – No moisture, dry to touch
- MOIST – Damp but no visible moisture
- WET – Visible free water

SAMPLE PLASTICITY (FINE-GRAINED SOILS):
- NONPLASTIC – Cannot be rolled at any moisture content
- LOW – Barely rolled, lump cannot be formed when drier than plastic limit
- MEDIUM – Easily rolled, lump crumbles when drier than plastic limit
- HIGH – Easily rolled yet takes considerable time to reach the plastic limit, lump can be formed without crumbling when drier than the plastic limit

PARTICLE SIZE RANGE (COARSE-GRAINED SOILS):
- GRAVEL – FINE, COARSE
- SAND – FINE, MEDIUM, COARSE

Based on Unified Soil Classification System and ASTM Standard D2487 and D2488

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

STATE OF OREGON

MONITORING WELL REPORT

B-1

MULT 58187

Received Date 06/17/1999
Well ID Tag# L 22156
Start Card # 117512

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

(1) OWNER/PROJECT

Well No. 22156
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Depth of completed well 25 ft.

Diameter	From	To
10.00	0.00	25

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	13.00	5.00	S

Vault
ft.
TO
ft.
Casing Diameter
Liner ☐

Monument
3 ft.
TO
-2 ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft.
TO
ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	13.00	Bentonite	5.00		S

Filter Pack Screen ☐
13 ft.
TO
25 ft.

Diameter	From	To	Gauge	Material	Type	Slot Size
	15	25		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 52 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG ENVIRONMENTAL
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 6
1. SE 1/4 of SE 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 107

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

18.0 Ft. below land surface. Date 05/18/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 18 ft.

From	To	Est. Flow Rate	SWL
18	25		18

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
FILL, GRAVELS	0	20	
GREY SILT	20	25	18

Date started 05/18/1999 Completed 05/18/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10462
Signed By MARLEN A CROSS Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

Multnomah
58187-
58189

117518 - 117519
SC

COLUMBIA

TL22

L22157
117513
B2

B-3

TL107

B1
117516

L22156

PROPERTY BOUNDARY

COLUMBIA STEEL

FORMER ARROW TRANSPORTATION

NORTH PORTLAND ROAD

BNRR

COLUMBIA WASTEWATER TREATMENT PLANT

APPROXIMATE SCALE IN FEET

0 150 300 600

RAILROAD SPUR

PNG Environmental, Inc.

Phase I Assessment
Portland, Oregon

SITE MAP
Property Boundary
Present Features

2

STATE OF OREGON

MONITORING WELL REPORT

B-2 MULT 58188

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

Received Date 06/17/1999
Well ID Tag# L 22157
Start Card # 117513

(1) OWNER/PROJECT

Well No. 22157
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Depth of completed well 21 ft.

Diameter	From	To
10.00	0.00	21

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	9.00	4.00	S

Vault
0 ft. TO 1 ft. Casing Diameter Liner ☐

Monument
ft. TO ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft. TO ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	9.00	Bentonite	4.00		S

Filter Pack Screen ☐
9 ft. TO 21 ft.

Diameter	From	To	Gauge	Material	Type	Slot Size
	11	21		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 52 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG ENVIRONMENTAL
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 5
1. SW 1/4 of SW 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 22

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

19.0 Ft. below land surface. Date 05/18/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 19 ft.

From	To	Est. Flow Rate	SWL
19	21		19

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
GRAVEL FILL	0	12	
GREY SILT	12	21	19

Date started 05/18/1999 Completed 05/19/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10462
Signed By MARLEN A CROSS Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

Multnomah
58187-
58189

1175 13 - 11751 7
sc

STATE OF OREGON

MONITORING WELL REPORT

MULT 58189

Received Date 06/17/1999
Well ID Tag# L 22158
Start Card # 117514

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

(1) OWNER/PROJECT

Well No. 22158
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☐ Rotary Air ☐ Rotary Mud ☐ Cable
☒ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☒ Depth of completed well 18 ft.

Diameter	From	To
8.00	0.00	18

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	6.00	3.00	S

Vault
ft.
TO
ft.
Casing Diameter Liner ☐

Monument
3 ft.
TO
-2 ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft.
TO
ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	6.00	Bentonite	3.00		S

Filter Pack 6 ft.
TO 18 ft.
Screen ☐

Diameter	From	To	Gauge	Material	Type	Slot Size
	8	18		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 57 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG ENVIRONMENTAL
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 6
1. SE 1/4 of SE 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 107

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

15.0 Ft. below land surface. Date 05/19/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 15 ft.

From	To	Est. Flow Rate	SWL
15	18		15

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
FILL	0	18	15

Date started 05/19/1999 Completed 05/19/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10462
Signed By MARLEN A CROSS Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

COLUMBIA

TL22

L 22 1/57
1175 1/3
B2

B-3

Multnomah
5-8187 -
5-8189

1175 1/3 - 1175 1/9
SC

TL107

B1

1175 1/8
L 8 1/56

PROPERTY BOUNDARY

COLUMBIA STEEL

FORMER ARROW TRANSPORTATION

NORTH PORTLAND ROAD

BNRR

COLUMBIA WASTEWATER TREATMENT PLANT

APPROXIMATE SCALE IN FEET

0 150 300 600

RAILROAD SPUR

PNG Environmental, Inc.

SITE MAP
Property Boundary
Present Features

2

STATE OF OREGON

MONITORING WELL REPORT

MULT 58190

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

Received Date 06/17/1999
Well ID Tag# L 22159
Start Card # 117515

(1) OWNER/PROJECT

Well No. 22159
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Depth of completed well 22 ft.

Diameter	From	To
6.00	0.00	22

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	10.00	4.00	S

Vault
ft.
TO
Casing Diameter Liner ☐
ft.

Monument
3 ft.
TO
-2 ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft.
TO
ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	10.00	Bentonite	4.00		S

Filter Pack Screen ☐
10 ft.
TO
22 ft.

Diameter	From	To	Gauge	Material	Type	Slot Size
	12	22		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 57 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 5
1. SW 1/4 of SW 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 22

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

20.0 Ft. below land surface. Date 05/24/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 20 ft.

From	To	Est. Flow Rate	SWL
20	22		20

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
CONCRET	0	14	
ASPHALT DEBRIS, SILT	14	22	20

Date started 05/24/1999 Completed 05/24/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

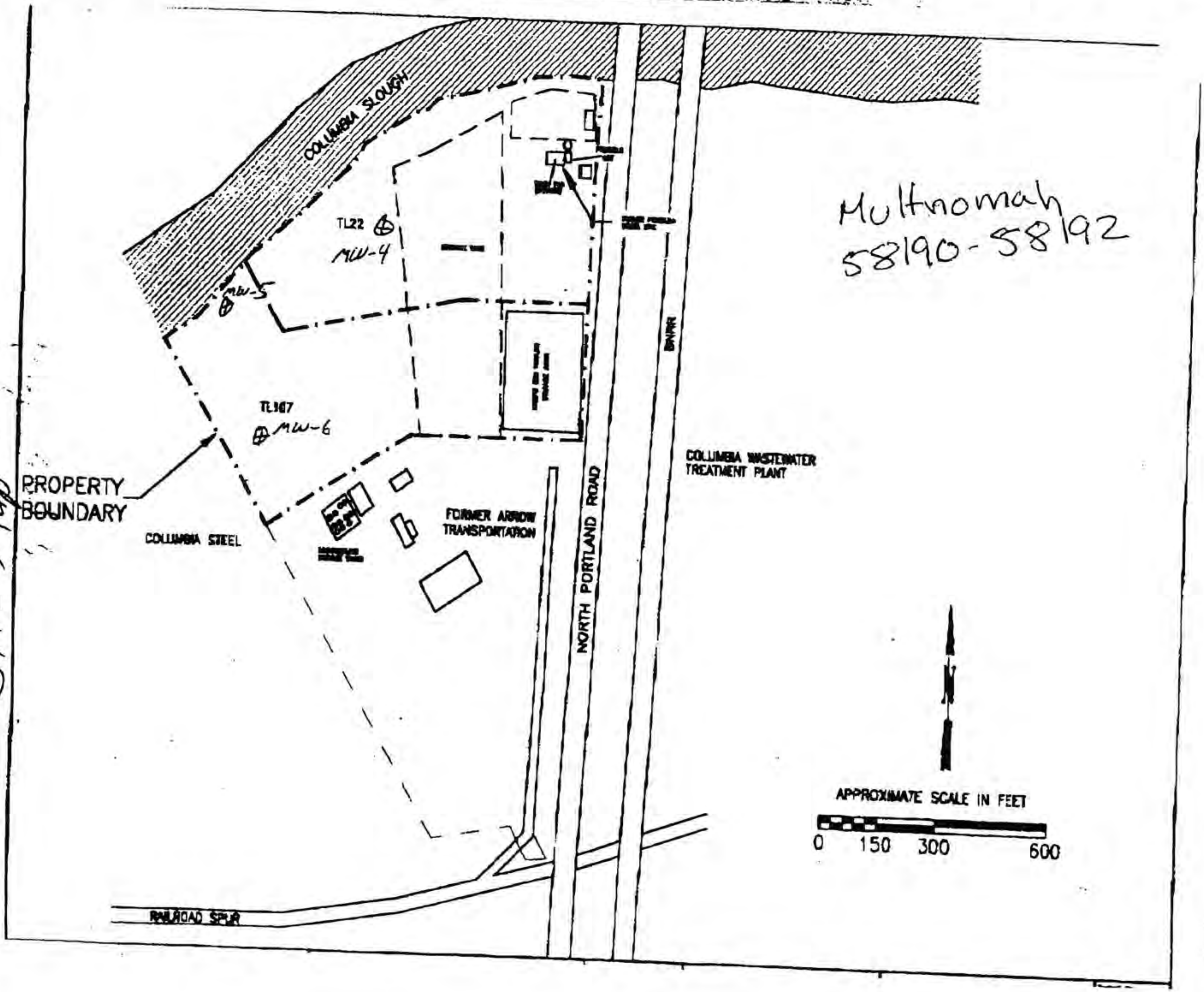
MWC Number 10453
Signed By GORDON E BURTON Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

Site Map


COLUMBIA SLOUGH
TL22
MW-4
MW-5
TL167
MW-6
PROPERTY BOUNDARY
COLUMBIA STEEL
FORMER ARROW TRANSPORTATION
NORTH PORTLAND ROAD
BNRR
COLUMBIA WASTEWATER TREATMENT PLANT
RAILROAD SPUR
APPROXIMATE SCALE IN FEET
0 150 300 600
N
Multnomah
58190-58192

STATE OF OREGON

MONITORING WELL REPORT

MULT 58191

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

Received Date 06/17/1999
Well ID Tag# L 22160
Start Card # 117516

(1) OWNER/PROJECT

Well No. 22160
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Depth of completed well 30 ft.

Diameter	From	To
6.00	0.00	30

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	13.00	5.00	S

Vault
ft.
TO
ft.
Casing Diameter Liner ☐

Monument
3 ft.
TO
-2 ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft.
TO
ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	13.00	Bentonite	5.00		S

Filter Pack Screen ☐
13 ft.
TO
30 ft.

Diameter	From	To	Gauge	Material	Type	Slot Size
	15	30		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 57 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 5
1. SW 1/4 of SW 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 22

3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

29.0 Ft. below land surface. Date 05/24/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 29 ft.

From	To	Est. Flow Rate	SWL
29	30		29

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
GREY SILT AND GRAVELS	0	20	
SILT	20	30	29

Date started 05/24/1999 Completed 05/24/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

MWC Number 10453
Signed By GORDON E BURTON Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

Multnomah
58190-58192

Site Map

STATE OF OREGON

MONITORING WELL REPORT

MULT 58192

(as required by ORS 537.765 & OAR 690-240-095) Instructions for completing this report are on the last page of this form.

Received Date 06/18/1999
Well ID Tag# L 22161
Start Card # 117517

(1) OWNER/PROJECT

Well No. 22161
Co Job No. 3717

Name LOUIS LARSEN
LARSEN, KAREN
Street 15227 NW GILLIHAN RD
City PORTLAND State OR Zip 97231

(2) TYPE OF WORK

☒ New Construction ☐ Alter (Recondition) ☐ Alter (Repair)
☐ Conversion ☐ Deepening ☐ Abandonment

(3) DRILLING METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable
☐ Hollow Stem Auger Other *****

(4) BORE HOLE CONSTRUCTION

Special Standards ☐ Depth of completed well 25 ft.

Diameter	From	To
6.00	0.00	25

Material	Begin Depth	End Depth	Material Amount	Units
Concrete	0.00	1.00	2.00	S
Bentonite	1.00	13.00	5.00	S

Vault
ft.
TO
ft.
Casing Diameter
Liner ☐
Monument
3 ft.
TO
-2 ft.

Casing or Liner	Diameter	Begin Depth	End Depth	Gauge	Material	Construction Weld	Construction Threaded	Location Of Shoe
C	2.00				Plastic	■	■	

Seal
ft.
TO
ft.

From	To	Material	Amount	Seal Grout Weight	Units
0.00	1.00	Concrete	2.00		S
1.00	13.00	Bentonite	5.00		S

Filter Pack
13 ft.
TO
25 ft.
Screen ☐

Diameter	From	To	Gauge	Material	Type	Slot Size
	15	25		PL		.010

Filter Pack
Material SA
Size 20.00 in.

(5) WELL TEST

Permeability Yield
Conductivity PH
Temperature of water 57 °F/C Depth artesian flow found ft.
Was water analysis done? ☒
By Whom? PNG
Depth of strata to be analyzed. From ft. to ft.
Remarks

Name of supervising Geologist/Engineer

(6) LOCATION OF WELL By legal description

County
Township 1.00 N Range 1.00 E Section 6
1. SE 1/4 of SE 1/4 of above section.
Legal Desc:

2. Either Street address of well location
10505 N PORTLAND RD
or Tax lot number of well location 107
3. ATTACH MAP WITH LOCATION IDENTIFIED. Map shall include approximate scale and north arrow.

(7) STATIC WATER LEVEL

24.0 Ft. below land surface. Date 05/24/1999
Artesian Pressure lb/sq. in. Date

(8) WATER BEARING ZONES

Depth at which water was first found 24 ft.

From	To	Est. Flow Rate	SWL
24	25		24

(9) WELL LOG

Ground elevation ft.

Material	From	To	SWL
BROWN SILT	0	15	
SANDY SILT	15	25	

Date started 05/24/1999 Completed 05/24/1999

(unbonded) Monitor Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to the best knowledge and belief.

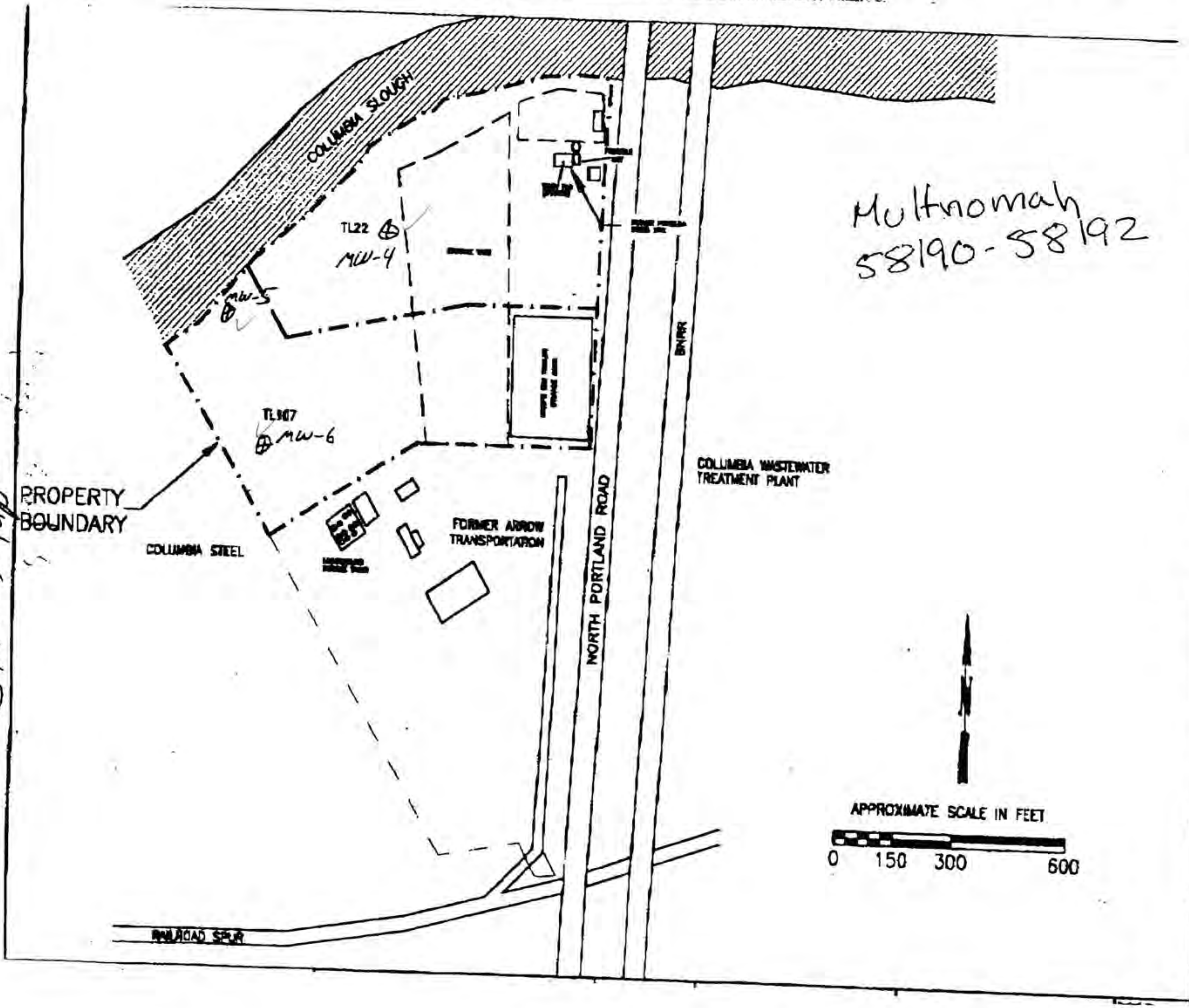
MWC Number 10453
Signed By GORDON E BURTON Date

(bonded) Monitor Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief.

MWC Number 10011
Signed By GREG MCINNIS Date

Site Map


COLUMBIA SLOUGH
TL22
MW-4
MW-5
TL907
MW-6
PROPERTY BOUNDARY
COLUMBIA STEEL
FORMER ARROW TRANSPORTATION
NORTH PORTLAND ROAD
BNRR
COLUMBIA WASTEWATER TREATMENT PLANT
RAILROAD SPUR
APPROXIMATE SCALE IN FEET
0 150 300 600
Multnomah
58190-58192

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-1

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 18, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT,bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, fine to medium sand, fine to coarse gravels, abundant concrete, asphalt, debris fill, moist, no product odor.		Well monument above-ground with concrete apron. 2-inch locking compression well cap. Concrete 0 to 1 foot.
	GRAB			0		5				Bentonite 1 to 4 feet. Two 50 pound bags. 2-inch diameter, sch 40 solid PVC casing from above-ground to 14.5 feet.
	GRAB			0		10				
				0		15		@18": stiff.		10 x 20 sand: 4 to 25 feet, eleven 50 pound bags. 2-inch diameter, sch 40 0.010-slotted PVC well screen from 14.5 feet to 24.5 feet.
	GRAB					20		Silty Gravel Fill (GM) dark brown to black brick and other fill debris, faint creosote-like odor, visible sheen		
	GRAB			0		25		TD 25'		2-inch diameter, 6-inch deep threaded PVC end cap from 24.5 to 25 feet.
						30				

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: HOLLOW-STEM TRACK RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-18-99
DRILLING END TIME: 5-18-99

COORDINATES: NA
SURFACE ELEVATION: 95.04
CASING ELEVATION: 96.62
DATUM: ARBITRARY

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-2

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 18, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT,bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, fine clayey sand, fine to coarse gravels, abundant fill debris, moist, creosote-like odor.		Well monument above-ground with concrete apron, 2-inch locking compression well cap.
										Concrete 0 to 1 foot.
										Bentonite 1 to 4 feet. Two 50 pound bags.
	GRAB			0		5				2-inch diameter, sch 40 solid PVC casing from above-ground to 11.5 feet.
										10 x 20 sand; 4 to 22 feet, eleven 50 pound bags.
	GRAB			0		10				
								Silt Fill (ML) brown; low plasticity; fine to coarse gravel; construction debris; moist to very moist; creosote-like odor.		2-inch diameter, sch 40 0.010-slotted PVC well screen from 11.5 feet to 21.5 feet.
	GRAB			0		15				
	GRAB			0		20				
								TD 22'		2-inch diameter, 6-inch deep threaded PVC end cap from 21.5 to 22 feet.
						25				
						30				

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: HOLLOW-STEM TRACK RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-18-99
DRILLING END TIME: 5-18-99

COORDINATES: NA
SURFACE ELEVATION: 85.71
CASING ELEVATION: 88.08
DATUM: ARBITRARY

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-3

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 18, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT.bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, low plastic fines; fine clayey sand; fine gravel; fill; moist.		Well monument above-ground with concrete apron. 2-inch locking compression well cap.
										Concrete 0 to 1 foot.
										Bentonite 1 to 4 feet. Two 50 pound bags.
	GRAB			0		5				2-inch diameter, sch 40 solid PVC casing from above-ground to 7.5 feet.
	GRAB			0		10				
								Silt Fill (ML) brown; low plasticity; wet; hydrocarbon odor.		
				0		15				10 x 20 sand; 4 to 18 feet, eleven 50 pound bags.
										2-inch diameter, sch 40 0.010-slotted PVC well screen from 7.5 feet to 17.5 feet.
								TD 18'		2-inch diameter, 6-inch deep threaded PVC end cap from 17.5 to 18 feet.
	GRAB					20				
	GRAB			0		25				
						30				

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: HOLLOW-STEM TRACK RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-18-99
DRILLING END TIME: 5-18-99

COORDINATES: NA
SURFACE ELEVATION: 93.03
CASING ELEVATION: 94.47
DATUM: ARBITRARY

PNG Environmental, Inc.

7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-4

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 24, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT.bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, fine to coarse sand, fine to coarse gravel, abundant fill debris, moist, slight creosute-like odor.		Well monument above-ground with concrete apron. 2-inch locking compression well cap.
										Concrete 0 to 1 foot.
										Bentonite 1 to 9.5 feet. Two 50 pound bags.
	GRAB			0		5				2-inch diameter, sch 40 solid PVC casing from 3 feet above-ground to 11.5 feet.
										10 x 20 sand; 9.5 to 22 feet, eleven 50 pound bags.
	GRAB			52		10				
										2-inch diameter, sch 40 0.010-slotted PVC well screen from 11.5 feet to 21.5 feet.
	GRAB			12		15		Silt Fill (ML) with gravel; grayish black; low plasticity; fine to coarse gravel; gravel debris. @16': wet.		
	GRAB			10		20				
								TD 22'		2-inch diameter, 6-inch deep threaded PVC end cap from 21.5 to 22 feet.
						25				
						30				

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: AIR ROTARY RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-24-99
DRILLING END TIME: 5-24-99

COORDINATES: NA
SURFACE ELEVATION: 90.99
CASING ELEVATION: 94.01
DATUM: ARBITRARY

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-5

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 24, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT.bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, fine to coarse sand, fine to coarse gravel, abundant concrete, asphalt, brick and wood debris, moist.		Well monument above-ground with concrete apron. 2-inch locking compression well cap.
										Concrete 0 to 1 foot.
										Bentonite 1 to 13 feet. Three 50 pound bags.
	GRAB			0		5				2-inch diameter, sch 40 solid PVC casing from 3 feet above-ground to 14.5 feet.
										10 x 20 sand: 13 to 30.5 feet, eleven 50 pound bags.
	GRAB			0		10				
	GRAB			0		15				2-inch diameter, sch 40 0.010-slotted PVC well screen from 14.5 feet to 29.5 feet.
	GRAB			0		20		Silt (ML) with gravel; dark gray to grayish black; low plasticity; clayey; micaceous; very moist to wet.		
	GRAB			0		25				
	GRAB			0		30		TD 30'		2-inch diameter, 6-inch deep threaded PVC end cap from 29.5 to 30 feet.

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: AIR ROTARY RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-24-99
DRILLING END TIME: 5-24-99

COORDINATES: NA
SURFACE ELEVATION: 91.48
CASING ELEVATION: 94.18
DATUM: ARBITRARY

PNG Environmental, Inc.
7130 SW Elmhurst Street
Tigard, Oregon 97223
(503) 620-2387
FAX (503) 620-2977

BORING NUMBER MW-6

PROJECT NAME: Larsen Property
PROJECT NUMBER: 850-02
LOCATION: 10505 North Portland Road
LOGGED BY: C. Hultgren
REVIEWED BY: GJK
DATE: MAY 24, 1999

SAMPLE INFORMATION							STRATA	DESCRIPTION	WELL DETAIL	BOREHOLE/WELL CONSTRUCTION DETAIL
LAB SAMPLE	SAMPLE TYPE	BLOW COUNTS	% REC.	PID	SHEEN	DEPTH FT,bsg				
	GRAB			0				Sandy Gravel Fill (GP), brown, fine to coarse sand, fine to coarse gravel, abundant concrete, asphalt, brick and wood debris, moist.		Well monument above-ground with concrete apron. 2-inch locking compression well cap. Concrete 0 to 1 foot.
	GRAB			0		5				Bentonite 1 to 13 feet. Two 50 pound bags. 2-inch diameter, sch 40 solid PVC casing from 3 feet above-ground to 14.5 feet. 10 x 20 sand: 13 to 25 feet, eleven 50 pound bags.
	GRAB			0		10				
	GRAB			0		15				2-inch diameter, sch 40 0.010-slotted PVC well screen from 14.5 feet to 24.5 feet.
	GRAB			0		20		Silt (ML); dark gray to grayish black; low plasticity; trace gravel and fill; clay. @20': very moist.		
	GRAB			0		25		TD 25'		2-inch diameter, 6-inch deep threaded PVC end cap from 24.5 to 25 feet.
						30				

DRILLING CONTRACTOR: GEOTECH EXPLORATIONS
DRILLING METHOD: AIR ROTARY RIG
SAMPLING METHOD: GRAB
DRILLING START TIME: 5-24-99
DRILLING END TIME: 5-24-99

COORDINATES: NA
SURFACE ELEVATION: 95.34
CASING ELEVATION: 98.38
DATUM: ARBITRARY

APPENDIX C
GROUNDWATER COLLECTION FORMS

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-1 | Project name Larsen Property
Sample no. MW-1 | Project no. 850-02
Date 5-26-99 | Collector C. Hultgren

Well Information

Monument condition ☒ Good ☐ Needs repair _____
Well cap condition ☒ Good ☒ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☒ Not measured _____ ppm
Elevation mark ☒ Yes ☐ Added ☐ Other _____
Well diameter ☒ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other _____
☐ Odor _____ ☐ Comments _____

Purge Data

Total well depth 27.12' ft ☒ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product _____ ft
Depth to water 18.03 ft
Casing volume 9.09 ft (H_2O) X 0.16 gpf = 1.45 X 3 = 4.4
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type ☒ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other _____
Purge tubing ☐ New LDPE ☒ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other _____
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other _____
Purge start time _____ Purge stop time _____ Purge rate _____

Field Parameters

Meter used ☒ HYDAC ☐ pH2Tester ☐ Hach ☐ Other _____

Gallons	pH	Temperature	Conductivity	Comments
CV-1	7.02	60	1170	water is relatively clear,
CV-2	7.33	57	1139	slight odor, no sheen
CV-3	7.45	56	1120	

Dissolved Oxygen _____ **Carbon Dioxide** _____

Sampling Device

Bailer ☒ Disposable ☐ Stainless ☐ Teflon ☐ Other _____
Filter Type _____ Size _____ (micron) ☐ Other _____
Bailer cord used ☒ Monofillament ☐ Other _____

Bottles Filled Time 0830

Number	Type	Preservative	Filtration
3	☒ VOA ☐ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☒ None ☐ Other	☐ Yes ☒ No
	☐ VOA ☐ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No

Samplers Signature Craig Hultgren Date 5-26-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no [redacted] MW-2
Sample no. [redacted] W2
Date 5-26-99

Project name: [redacted] LARSEN
Project no. [redacted] 850-02
Collector C. HULTGREN

Well Information

Monument condition	☒ Good	☐ Needs repair		
Well cap condition	☒ Good	☒ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☒ Not measured	_____ ppm		☐ Odor _____
Elevation mark	☒ Yes	☐ Added	☐ Other _____	
Well diameter	☒ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other _____

Purge Data

Total well depth 27.55 [redacted] ft ☐ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product _____ ft
Depth to water 20.15 ft
Casing volume 3.40 ft (H_2O) X 0.16 gpf = 0.54 X 3 = 1.63
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type	☒ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other _____	
Purge tubing	☐ New LDPE	☒ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other _____
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other _____

Purge start time _____ Purge stop time _____ Purge rate _____

Field Parameters

Meter used ☐ YSI ☒ HYDAC ☐ Other _____

Gallons	pH	Temp	Cond	Comments
CV-1	7.04	60	672	water is clear, hydrocarbon(?)
CV-2	7.92	60	689	odor, NO SHEEN
CV-3	7.88	60	682	

CO2= DO=

Sampling Device

Bailer	☒ Disposable	☐ Stainless	☐ Teflon	☐ Other _____
Filter	Type _____	Size _____ (micron)		☐ Other _____
Bailer cord used	☒ Monofillament			☐ Other _____

Bottles Filled Time 1015

Number	Type	Preservative	Filtration
3	☒ VOA ☐ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☒ None ☐ Other	☐ Yes ☒ No
	☐ VOA ☐ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No

Samplers Signature Craig Hultgren Date 5-26-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-3
Sample no. W3
Date 5-26-99

Project name: [redacted] Larsen Properties
Project no. [redacted] 850-02
Collector C. Hultgren

Well Information

Monument condition	☒ Good	☐ Needs repair		
Well cap condition	☒ Good	☒ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☒ Not measured	____ ppm	☐ Odor	
Elevation mark	☒ Yes	☐ Added	☐ Other	
Well diameter	☒ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other

Purge Data

Total well depth 19.32 [redacted] ft ☒ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 10.43 ft
Casing volume 8.87 ft (H_2O) X 0.16 gpf = 1.42 X 3 = 4.25
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type	☒ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other	
Purge tubing	☐ New LDPE	☒ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other

Purge start time ____ Purge stop time ____ Purge rate ____

Field Parameters

Meter used ☐ YSI ☒ HYDAC ☐ Other

Gallons	pH	Temp	Cond	Comments
CV-1	7.42	56	1046	water is relatively clear, NO
CV-2	7.56	57	1182	odor, NO sheen
CV-3	7.54	56	1177	

CO2= DO=

Sampling Device

Bailer	☒ Disposable	☐ Stainless	☐ Teflon	☐ Other
Filter	Type ____	Size ____ (micron)		☐ Other
Bailer cord used	☒ Monofillament			☐ Other

Bottles Filled Time 0915

Number	Type				Preservative					Filtration	
3	☒ VOA	☐ Amber	☐ Poly	HCL	☒ Nitric	☐ Sulfuric	☐ None	☐ Other		☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL	☒ Nitric	☐ Sulfuric	☐ None	☐ Other		☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL	☐ Nitric	☐ Sulfuric	☒ None	☐ Other		☐ Yes	☒ No
	☐ VOA	☐ Amber	☐ Poly	HCL	☐ Nitric	☐ Sulfuric	☐ None	☐ Other		☐ Yes	☐ No

Samplers Signature C. Hultgren Date 5-26-99

PNG Environmental

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-4 | Project name Larsen Property
Sample no. W4 | Project no. 850-02
Date 5-26-99 | Collector C. Hultgren

Well Information
Monument condition ☒ Good ☐ Needs repair
Well cap condition ☒ Good ☒ Locked ☐ Replaced ☐ Needs replacement
Headspace reading ☒ Not measured _____ ppm
Elevation mark ☒ Yes ☐ Added ☐ Other
Well diameter ☒ 2-inch ☐ 4-inch ☐ 6-inch ☐ Other
☐ Odor ☐ Comments

Purge Data
Total well depth 25.37 ft ☒ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 19.65 ft
Casing volume 5.72 ft (H_2O) X 0.16 gpf = 0.92 X 3 = 2.75
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method
Pump type ☒ Peristaltic ☐ Centrifugal ☐ Submersible ☐ Other
Purge tubing ☐ New LDPE ☒ New HDPE ☐ New Teflon ☐ New Tygon ☐ Other
Bailer type ☐ Disposable ☐ Teflon ☐ Stainless ☐ PVC ☐ Other
Purge start time _____ Purge stop time _____ Purge rate _____

Field Parameters
Meter used ☒ HYDAC ☐ pH2Tester ☐ Hach ☐ Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	8.02	61	2160	water is relatively clear
CV-2	7.80	~~60~~ 58	2080	no odor, no sheen
CV-3	7.68	58	2030	

Dissolved Oxygen _____ **Carbon Dioxide** _____

Sampling Device
Bailer ☒ Disposable ☐ Stainless ☐ Teflon ☐ Other
Filter Type _____ Size _____ (micron) ☐ Other
Bailer cord used ☒ Monofillament ☐ Other

Bottles Filled Time 0945

Number	Type	Preservative	Filtration
3	☒ VOA ☐ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☒ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☒ No
1	☐ VOA ☒ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☒ None ☐ Other	☐ Yes ☒ No
	☐ VOA ☐ Amber ☐ Poly	HCL ☐ Nitric ☐ Sulfuric ☐ None ☐ Other	☐ Yes ☐ No

Samplers Signature Cindy Hultgren Date 5-26-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no [redacted] MW-5
Sample no. [redacted] MW-5
Date 5-26-99

Project name: [redacted] LARSEN
Project no. [redacted] 850.02
Collector C. HULTGREN

Well Information

Monument condition	☒ Good	☐ Needs repair		
Well cap condition	☒ Good	☒ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☒ Not measured	____ ppm		☐ Odor
Elevation mark	☒ Yes	☐ Added	☐ Other	
Well diameter	☒ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other

Purge Data

Total well depth 37.26 [redacted] ft ☒ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product ____ ft
Depth to water 20.23 ft
Casing volume 13.03 ft (H_2O) X 0.16 gpf = 2.08 X 3 = 6.25
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type	☒ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other	
Purge tubing	☐ New LDPE	☒ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other

Purge start time ____ Purge stop time ____ Purge rate ____

Field Parameters

Meter used ☐ YSI ☒ HYDAC ☐ Other

Gallons	pH	Temp	Cond	Comments
CV-1	6.98	62	1,620	water is slightly brown,
CV-2	7.24	62	1,570	NO odor, NO sheen
CV-3	7.40	62	1,590	

CO2= DO=

Sampling Device

Bailer	☒ Disposable	☐ Stainless	☐ Teflon	☐ Other
Filter	Type ____	Size ____ (micron)		☐ Other
Bailer cord used	☒ Monofillament			☐ Other

Bottles Filled Time 12.00

Number	Type			Preservative					Filtration	
3	☒ VOA	☐ Amber	☐ Poly	HCL ☒	Nitric ☐	Sulfuric ☐	None ☐	Other ____	☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL ☒	Nitric ☐	Sulfuric ☐	None ☐	Other ____	☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL ☐	Nitric ☐	Sulfuric ☒	None ☐	Other ____	☐ Yes	☒ No
____	☐ VOA	☐ Amber	☐ Poly	HCL ☐	Nitric ☐	Sulfuric ☐	None ☐	Other ____	☐ Yes	☐ No

Samplers Signature C. Hult Date 5-26-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no. [redacted] MW-6
Sample no. [redacted] W6
Date 5-26 99

Project name: [redacted] LARSEN
Project no. [redacted] 850-02
Collector C. Hultgren

Well Information

Monument condition	☒ Good	☐ Needs repair		
Well cap condition	☒ Good	☒ Locked	☐ Replaced	☐ Needs replacement
Headspace reading	☒ Not measured	_____ ppm		☐ Odor _____
Elevation mark	☒ Yes	☐ Added	☐ Other _____	
Well diameter	☒ 2-inch	☐ 4-inch	☐ 6-inch	☐ Other _____

Purge Data

Total well depth 27.9[redacted] ft ☒ Clean bottom ☐ Muddy bottom ☐ Not measured
Depth to product — ft
Depth to water 17.54 ft
Casing volume 10.36 ft (H_2O) X 0.16 gpf = 1.65 X 3 = 5
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type	☒ Peristaltic	☐ Centrifugal	☐ Submersible	☐ Other _____	
Purge tubing	☐ New LDPE	☒ New HDPE	☐ New Teflon	☐ New Tygon	☐ Other _____
Bailer type	☐ Disposable	☐ Teflon	☐ Stainless	☐ PVC	☐ Other _____

Purge start time _____ Purge stop time _____ Purge rate _____

Field Parameters

Meter used ☐ YSI ☒ HYDAC ☐ Other _____

Gallons	pH	Temp	Cond	Comments
CV-1	7.20	62	890	WATER IS SLIGHTLY OFF-COLORED (BROWN),
CV-2	6.98	62	965	NO ODOR, NO SHEEN
CV-3	6.96	61	934	

CO2= DO=

Sampling Device

Bailer	☒ Disposable	☐ Stainless	☐ Teflon	☐ Other _____
Filter	Type _____	Size _____ (micron)		☐ Other _____
Bailer cord used	☒ Monofillament			☐ Other _____

Bottles Filled Time 1105

Number	Type			Preservative					Filtration	
3	☒ VOA	☐ Amber	☐ Poly	HCL ☒	Nitric ☐	Sulfuric ☐	None ☐	Other ____	☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL ☒	Nitric ☐	Sulfuric ☐	None ☒	Other ____	☐ Yes	☒ No
1	☐ VOA	☒ Amber	☐ Poly	HCL ☐	Nitric ☐	Sulfuric ☐	None ☒	Other ____	☐ Yes	☒ No
____	☐ VOA	☐ Amber	☐ Poly	HCL ☐	Nitric ☐	Sulfuric ☐	None ☐	Other ____	☐ Yes	☐ No

Samplers Signature Craig Hultgren Date 5-26-99

PNG Environmental

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-1 | Project name LARSEN
Sample no. W1 | Project no.
Date 7-28-99 | Collector C. Hultgren

Well Information

Monument condition: (X) Good ( ) Needs repair
Well cap condition: ( ) Good (X) Locked ( ) Replaced ( ) Needs replacement
Headspace reading: (X) Not measured _____ ppm
Elevation mark: (X) Yes ( ) Added ( ) Other
Well diameter: (X) 2-inch ( ) 4-inch ( ) 6-inch ( ) Other
( ) Odor ( ) Comments

Purge Data

Total well depth 27.12 ft ( ) Clean bottom ( ) Muddy bottom (X) Not measured
Depth to product — ft
Depth to water 17.98 ft
Casing volume 9.14 ft (H_2O) X 0.16 gpf = 1.46 X 3 = 4.4
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type: (X) Peristaltic ( ) Centrifugal ( ) Submersible ( ) Other
Purge tubing: ( ) New LDPE (X) New HDPE ( ) New Teflon ( ) New Tygon ( ) Other
Bailer type: ( ) Disposable ( ) Teflon ( ) Stainless ( ) PVC ( ) Other
Purge start time 0900 Purge stop time 0920 Purge rate <.25 GPM

Field Parameters

Meter used: (X) HYDAC ( ) pH2Tester ( ) Hach ( ) Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	7.32	64	1612	WATER IS CLEAR, NO odor,
CV-2	7.59	64	1529	NO SHEEN
CV-3	7.62	64	1576	

Dissolved Oxygen _____ Carbon Dioxide _____

Sampling Device

Bailer: (X) Disposable ( ) Stainless ( ) Teflon ( ) Other
Filter: Type _____ Size _____ (micron) ( ) Other
Bailer cord used: (X) Monofillament ( ) Other

Bottles Filled Time 0925

Number	Type	Preservative	Filtration
4	(X) VOA ( ) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None (X) Other	( ) Yes (X) No
_____	( ) VOA ( ) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes ( ) No

Samplers Signature Craig Hultgren Date 7-28-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-2 | Project name LARSEN
Sample no. W2 | Project no.
Date 7-23-99 | Collector C.H.

Well Information

Monument condition: (X) Good ( ) Needs repair
Well cap condition: ( ) Good (X) Locked ( ) Replaced ( ) Needs replacement
Headspace reading: (X) Not measured ____ ppm
Elevation mark: (X) Yes ( ) Added ( ) Other
Well diameter: (X) 2-inch ( ) 4-inch ( ) 6-inch ( ) Other
( ) Odor ( ) Comments

Purge Data

Total well depth 23.55 ft ( ) Clean bottom ( ) Muddy bottom (X) Not measured
Depth to product — ft
Depth to water 20.81 ft
Casing volume 2.74 ft (H_2O) X 0.16 gpf = 0.44 X 3 = 1.32
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type: (X) Peristaltic ( ) Centrifugal ( ) Submersible ( ) Other
Purge tubing: ( ) New LDPE (X) New HDPE ( ) New Teflon ( ) New Tygon ( ) Other
Bailer type: ( ) Disposable ( ) Teflon ( ) Stainless ( ) PVC ( ) Other
Purge start time 1105 Purge stop time 1115 Purge rate < 0.1 GPM

Field Parameters

Meter used: (X) HYDAC ( ) pH2Tester ( ) Hach ( ) Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	7.09	69	1001	water is clear, slight odor
CV-2	6.80	68	922	no sheen
CV-3	6.77	68	911	

Dissolved Oxygen ____ Carbon Dioxide ____

Sampling Device

Bailer: (X) Disposable ( ) Stainless ( ) Teflon ( ) Other
Filter: Type ____ Size ____ (micron) ( ) Other
Bailer cord used: (X) Monofillament ( ) Other

Bottles Filled Time 1125

Number	Type	Preservative	Filtration
4	(X) VOA ( ) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None (X) Other	( ) Yes (X) No
	( ) VOA ( ) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None ( ) Other	( ) Yes ( ) No

Samplers Signature Chris Hardy Date 7-23-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-3 | Project name Larsen
Sample no. W3 | Project no.
Date 7-28-99 | Collector CH

Well Information

Monument condition: (X) Good ( ) Needs repair
Well cap condition: ( ) Good (X) Locked ( ) Replaced ( ) Needs replacement
Headspace reading: (X) Not measured ____ ppm
Elevation mark: (X) Yes ( ) Added ( ) Other
Well diameter: (X) 2-inch ( ) 4-inch ( ) 6-inch ( ) Other
( ) Odor ( ) Comments

Purge Data

Total well depth 19.30 ft ( ) Clean bottom ( ) Muddy bottom (X) Not measured
Depth to product — ft
Depth to water 11.42 ft
Casing volume 7.88 ft (H_2O) X 0.16 gpf = 1.26 X 3 = 3.8
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type: (X) Peristaltic ( ) Centrifugal ( ) Submersible ( ) Other
Purge tubing: ( ) New LDPE (X) New HDPE ( ) New Teflon ( ) New Tygon ( ) Other
Bailer type: ( ) Disposable ( ) Teflon ( ) Stainless ( ) PVC ( ) Other
Purge start time 0940 Purge stop time 0955 Purge rate ≤ 0.25 GPM

Field Parameters

Meter used: (X) HYDAC ( ) pH2Tester ( ) Hach ( ) Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	7.21	65	1630	water is clear, NO
CV-2	7.30	65	1641	NO Sheen
CV-3	7.37	65	1635	

Dissolved Oxygen ____ Carbon Dioxide ____

Sampling Device

Bailer: (X) Disposable ( ) Stainless ( ) Teflon ( ) Other
Filter: Type ____ Size ____ (micron) ( ) Other
Bailer cord used: (X) Monofillament ( ) Other

Bottles Filled Time 1000

Number	Type	Preservative	Filtration
4	(X) VOA ( ) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other ____	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other ____	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None (X) Other ____	( ) Yes (X) No
____	( ) VOA ( ) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None ( ) Other ____	( ) Yes ( ) No

Samplers Signature Craig Hutton Date 7-28-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-4 | Project name LARSEN
Sample no. W4 | Project no. _____
Date 7-23-99 | Collector CH

Well Information

Monument condition: (X) Good ( ) Needs repair _____
Well cap condition: ( ) Good (X) Locked ( ) Replaced ( ) Needs replacement
Headspace reading: (X) Not measured _____ ppm
Elevation mark: (X) Yes ( ) Added ( ) Other _____
Well diameter: (X) 2-inch ( ) 4-inch ( ) 6-inch ( ) Other _____
( ) Odor _____ ( ) Comments _____

Purge Data

Total well depth 25.37 ft ( ) Clean bottom ( ) Muddy bottom (X) Not measured
Depth to product — ft
Depth to water 20.83 ft
Casing volume 4.54 ft (H_2O) X 0.16 gpf = 0.72 X 3 = 2.2
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type: (X) Peristaltic ( ) Centrifugal ( ) Submersible ( ) Other _____
Purge tubing: ( ) New LDPE (X) New HDPE ( ) New Teflon ( ) New Tygon ( ) Other _____
Bailer type: ( ) Disposable ( ) Teflon ( ) Stainless ( ) PVC ( ) Other _____
Purge start time 1025 Purge stop time 1040 Purge rate < 0.25 GPM

Field Parameters

Meter used: (X) HYDAC ( ) pH2Tester ( ) Hach ( ) Other _____

Gallons	pH	Temperature	Conductivity	Comments
CV-1	7.48	66	22000	water is clear, no
CV-2	7.52	66	1957	odor, no sheen
CV-3	7.57	66	1927	

Dissolved Oxygen _____ Carbon Dioxide _____

Sampling Device

Bailer: (X) Disposable ( ) Stainless ( ) Teflon ( ) Other _____
Filter: Type _____ Size _____ (micron) ( ) Other _____
Bailer cord used: (X) Monofillament ( ) Other _____

Bottles Filled Time 1050

Number	Type	Preservative	Filtration
4	(X) VOA ( ) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other ___	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL (X) Nitric ( ) Sulfuric ( ) None ( ) Other ___	( ) Yes (X) No
1	( ) VOA (X) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None (X) Other ___	( ) Yes (X) No
_____	( ) VOA ( ) Amber ( ) Poly	HCL ( ) Nitric ( ) Sulfuric ( ) None ( ) Other ___	( ) Yes ( ) No

Samplers Signature Chris Hale Date 7-23-99

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-5
Sample no. W5 / W7 = duplicate
Date 7-23-99

Project name LARSEN
Project no.
Collector CH

Well Information

Monument condition [X] Good [ ] Needs repair
Well cap condition [ ] Good [X] Locked [ ] Replaced [ ] Needs replacement
Headspace reading [X] Not measured ____ ppm
Elevation mark [X] Yes [ ] Added [ ] Other
Well diameter [X] 2-inch [ ] 4-inch [ ] 6-inch [ ] Other
[ ] Odor [ ] Comments

Purge Data

Total well depth 33.26 ft [ ] Clean bottom [ ] Muddy bottom [X] Not measured
Depth to product — ft
Depth to water 22.92 ft
Casing volume 10.34 ft (H_2O) X 0.16 gpf = 1.65 X 3 = 5.0
Casing volumes 2"=0.16 gpf 4"=0.65 gpf 6"= 1.47 gpf

Purge Method

Pump type [X] Peristaltic [ ] Centrifugal [ ] Submersible [ ] Other
Purge tubing [ ] New LDPE [X] New HDPE [ ] New Teflon [ ] New Tygon [ ] Other
Bailer type [ ] Disposable [ ] Teflon [ ] Stainless [ ] PVC [ ] Other
Purge start time 1155 Purge stop time 1220 Purge rate ~0.25 GPM

Field Parameters

Meter used [X] HYDAC [ ] pH2Tester [ ] Hach [ ] Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	6.78	68	1978	water has slight brown tint,
CV-2	6.88	68	1959	NO odor, NO sheen
CV-3	6.91	68	1957	

Dissolved Oxygen ____ Carbon Dioxide ____

Sampling Device

Bailer [X] Disposable [ ] Stainless [ ] Teflon [ ] Other
Filter Type ____ Size ____ (micron) [ ] Other
Bailer cord used [X] Monofillament [ ] Other

Bottles Filled Time 1230 (W5) 1405 (W7) duplicate sample

Number	Type	Preservative	Filtration
8	[X] VOA [ ] Amber [ ] Poly	HCL [X] Nitric [ ] Sulfuric [ ] None [ ] Other	[ ] Yes [X] No
2	[ ] VOA [X] Amber [ ] Poly	HCL [X] Nitric [ ] Sulfuric [ ] None [ ] Other	[ ] Yes [X] No
1	[ ] VOA [X] Amber [ ] Poly	HCL [ ] Nitric [ ] Sulfuric [ ] None [X] Other	[ ] Yes [X] No
____	[ ] VOA [ ] Amber [ ] Poly	HCL [ ] Nitric [ ] Sulfuric [ ] None [ ] Other	[ ] Yes [ ] No

Samplers Signature Craig Hall Date 7-28-99

PNG Environmental

GROUNDWATER
SAMPLE COLLECTION FORM

Well ID no MW-6 | Project name LARSEN
Sample no. W6 | Project no.
Date 7-28-99 | Collector CH

Well Information

Monument condition (X) Good o Needs repair
Well cap condition o Good (X) Locked o Replaced o Needs replacement
Headspace reading (X) Not measured ____ ppm
Elevation mark (X) Yes o Added o Other
Well diameter (X) 2-inch o 4-inch o 6-inch o Other
o Odor ____ o Comments

Purge Data

Total well depth 27.99 ft o Clean bottom o Muddy bottom (X) Not measured
Depth to product ____ ft
Depth to water 17.05 ft
Casing volume 10.94 ft (H_2O) X 0.16 gpf = 1.75 X 3 = 5.25
Casing volumes 2"=0.16 gpf | 4"=0.65 gpf | 6"= 1.47 gpf

Purge Method

Pump type (X) Peristaltic o Centrifugal o Submersible o Other
Purge tubing o New LDPE (X) New HDPE o New Teflon o New Tygon o Other
Bailer type o Disposable o Teflon o Stainless o PVC o Other
Purge start time 1305 Purge stop time 1330 Purge rate < 0.25 GPM

Field Parameters

Meter used (X) HYDAC o pH2Tester o Hach o Other

Gallons	pH	Temperature	Conductivity	Comments
CV-1	6.71	70	1450	Water has slight brown tint,
CV-2		70		no odor, no sheen
CV-3		69		

Dissolved Oxygen ____ Carbon Dioxide ____

Sampling Device

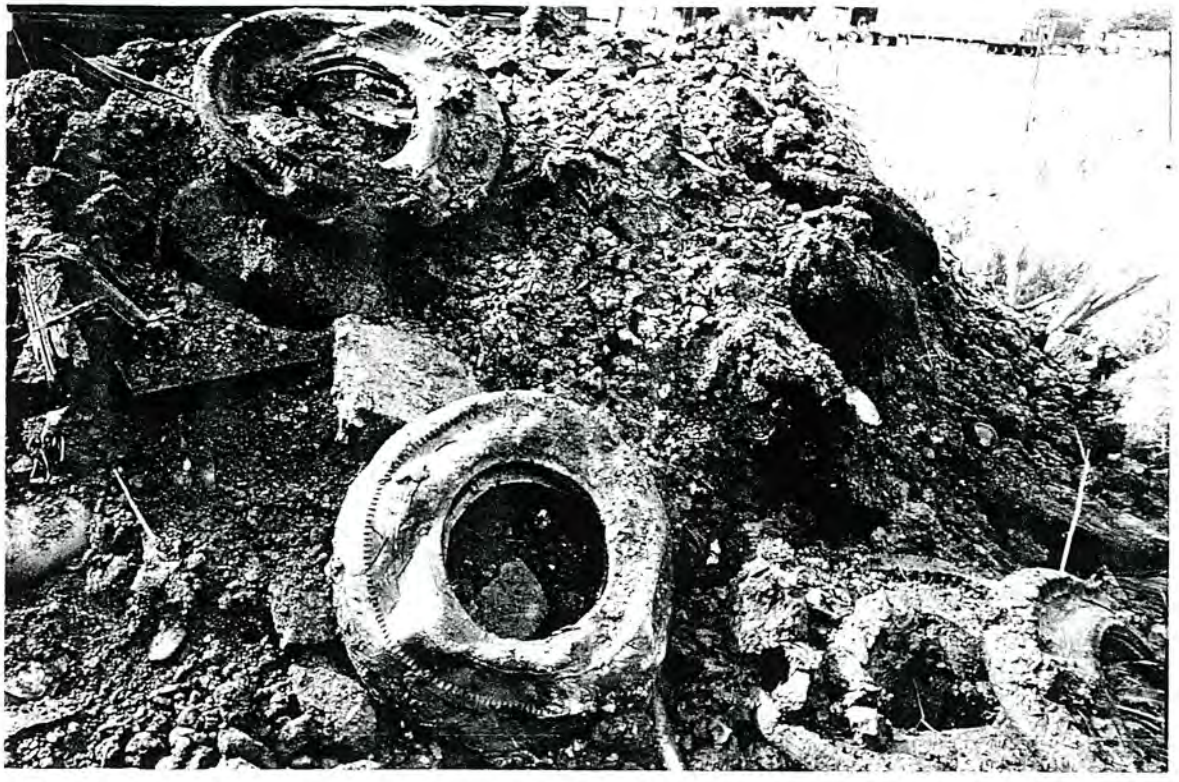
Bailer (X) Disposable o Stainless o Teflon o Other
Filter Type ____ Size ____ (micron) o Other
Bailer cord used (X) Monofillament o Other

Bottles Filled Time 1340

Number	Type	Preservative	Filtration
4	(X) VOA o Amber o Poly	HCL (X) Nitric o Sulfuric o None o Other	o Yes (X) No
1	o VOA (X) Amber o Poly	HCL (X) Nitric o Sulfuric o None o Other	o Yes (X) No
1	o VOA (X) Amber o Poly	HCL o Nitric o Sulfuric o None (X) Other	o Yes (X) No
____	o VOA o Amber o Poly	HCL o Nitric o Sulfuric o None o Other	o Yes o No

Samplers Signature Craig Hutton Date 7-28-99

APPENDIX D
SITE PHOTOGRAPHS

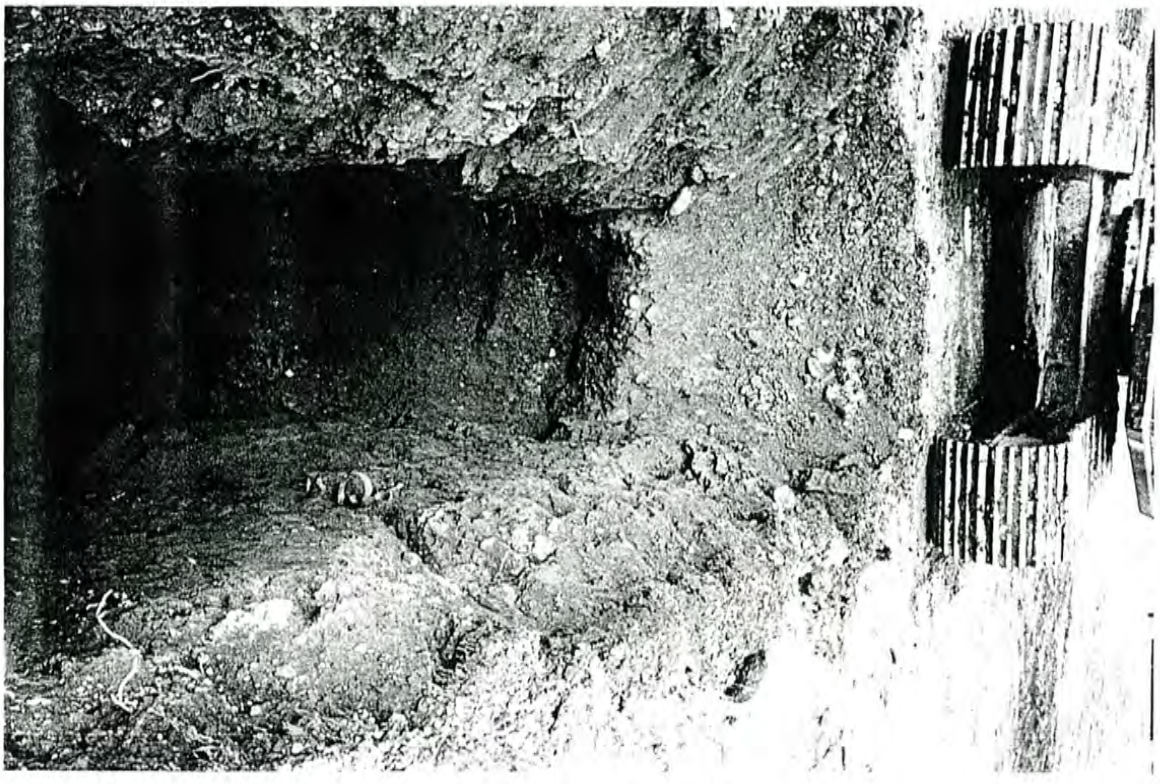


Material from Test Pit TP-1

Perched Water in Test Pit TP-1

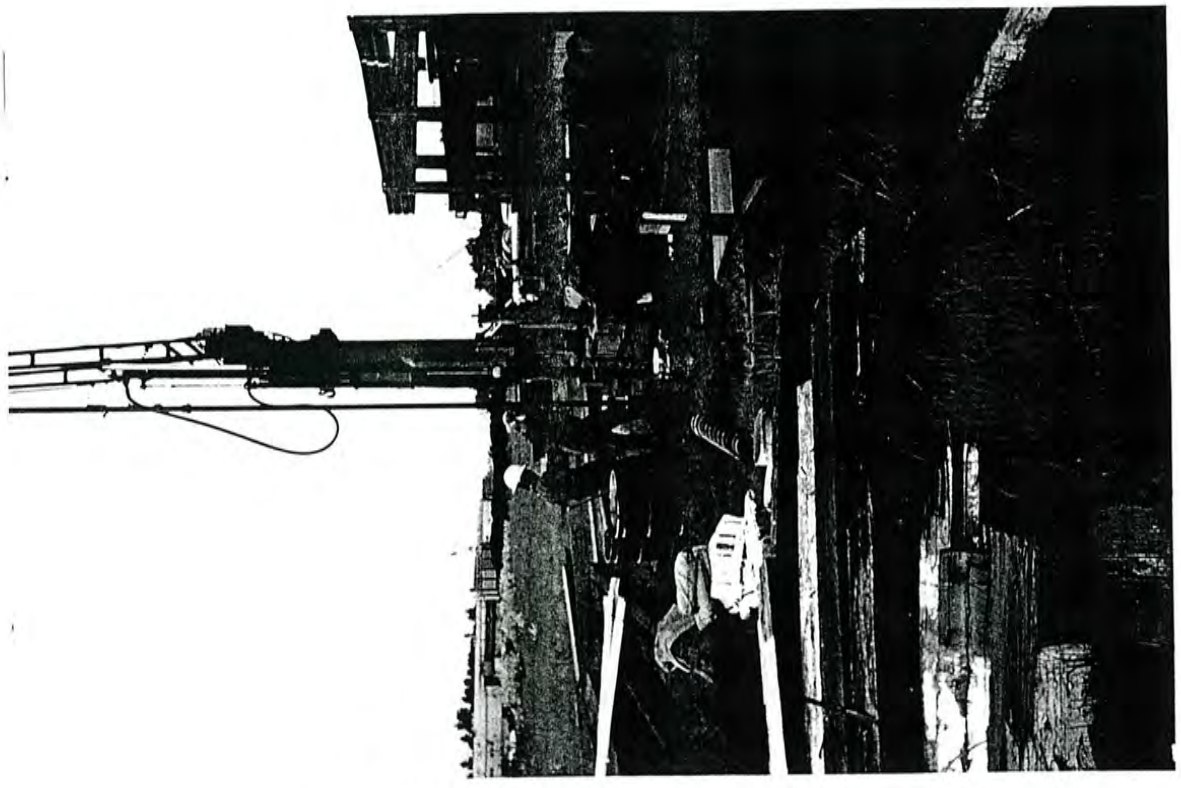
Test Pit TP-1

Test Pit TP-2

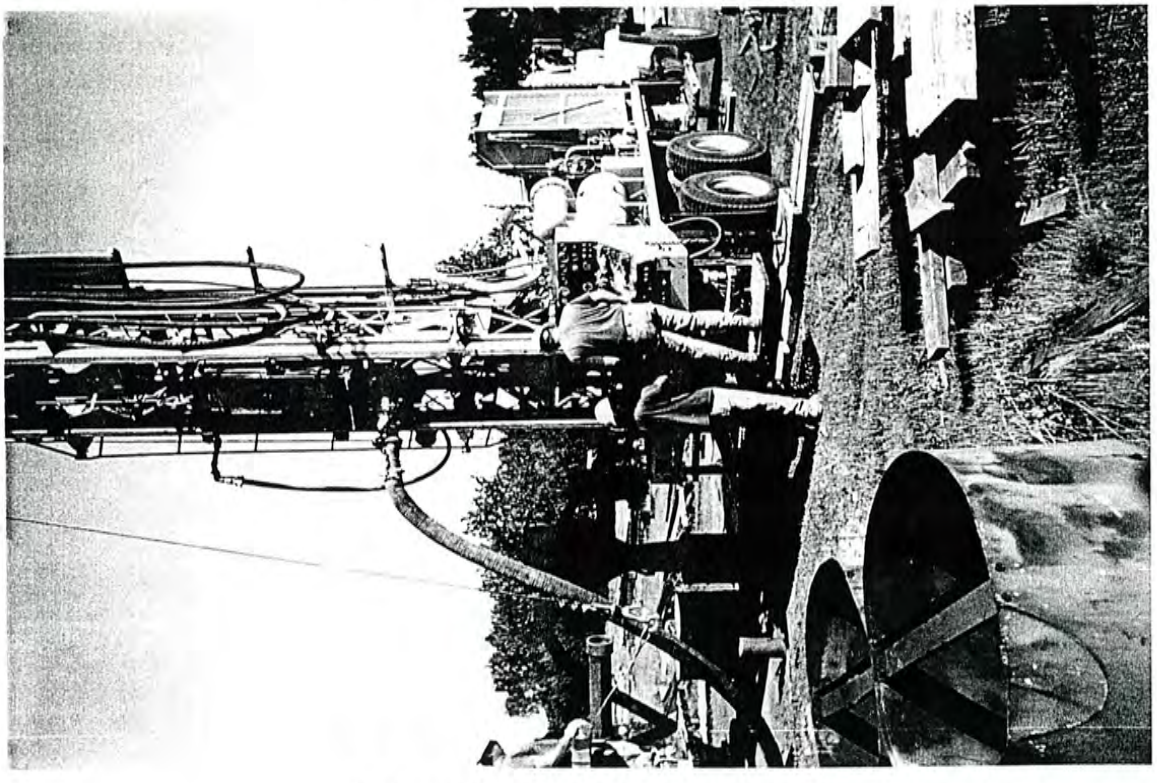


Material from Test Pit TP-3

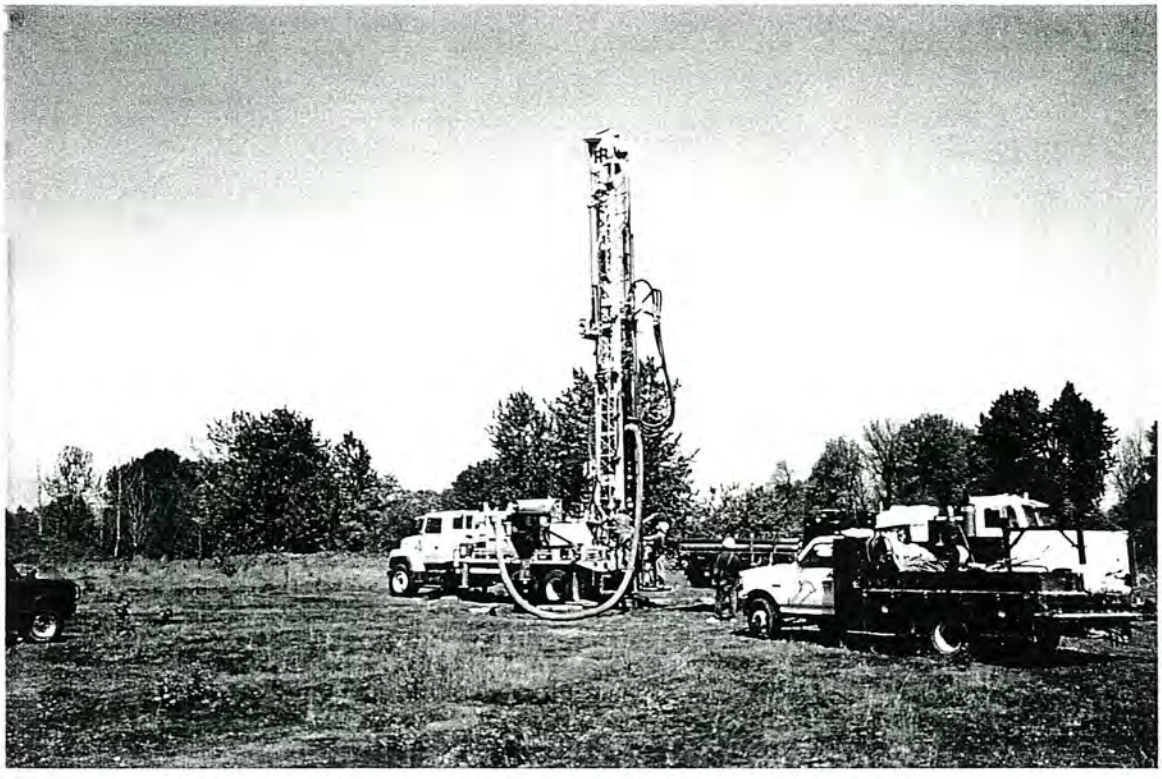
Test Pit TP-3



Drilling Monitoring Well MW-3



Drilling Monitoring Well MW-4



Drilling Monitoring Well MW-5

Drilling Monitoring Well MW-6

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ORIGINAL

LIMITED SITE INVESTIGATION AND GROUNDWATER MONITORING BACKFILLED RETENTION PONDS 10505 NORTH PORTLAND ROAD PORTLAND, OREGON KLEINFELDER PROJECT NO. 60-5395-01

July 6, 2000

TP-6 in the former lagoon - high VOCs

No Analyses for Pesticides PCBs CN⁻

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KLEINFELDER
An employee owned company

July 6, 2000
Kleinfelder Project Number 60-5395-01

Mr. John O'Donovan
City of Portland
Bureau of Environmental Services
1120 SW 5th Avenue, Room 1000
Portland, OR 97204

Subject: **Limited Site Investigation**
And Groundwater Monitoring
Backfilled Retention Ponds
10505 North Portland Road
Portland, Oregon

Dear Mr. O'Donovan:

Kleinfelder, Inc., is pleased to present this report describing limited site investigation and groundwater monitoring for the above-referenced property in Portland, Oregon. The investigation was conducted in accordance with Kleinfelder, Inc.'s, proposal No. 60-YP5521 dated April 27, 2000. We trust this information will meet your needs at this time.

We appreciate the opportunity to be of service on this project. Should you require additional information or if questions arise regarding this report, please contact this office at your convenience.

Very truly yours,

KLEINFELDER, INC.

John M. Day, R.G.
Senior Project Manager

Peter L. Stroud, C.E.G.
Environmental Group Leader

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1.0 INTRODUCTION

This report describes the field activities and results of limited site investigation and groundwater monitoring at a property located at 10505 North Portland Road in Portland, Oregon (Figure 1). The property is informally referred to as the Larsen property. We understand that the City of Portland is considering purchasing the subject property.

Environmental impacts to soil and groundwater were previously detected by others in the area of the backfilled retention ponds located in the western portion of the property. The purpose of the investigation was to provide a preliminary evaluation of the potential presence of contaminants that may be currently present in soil and groundwater beneath the site from historic operations at and in the vicinity of the subject property. The field activities consisted of excavating 16 test pits in and around the former retention ponds for collection and analysis of grab soil samples, and collection and analysis of groundwater samples from six existing, onsite monitoring wells.

2.0 SITE DESCRIPTION

The subject property address is 10505 North Portland Road in Portland, Oregon (Figure 1). The site is situated in the northwest quarter of Section 5, Township 1 North, Range 1 East, Willamette Meridian (U.S. Geological Survey, 1990). The site encompasses approximately 13.3 acres.

The area of concern is located in the northern portion of the property where the former retention ponds are located. The ponds are located in the western portion of the area of concern. A bark dust processing company currently operates in the area of the former ponds. Several large bark dust stockpiles were located over portions of the southern and northeast ponds. The northwest pond is located adjacent to the Columbia Slough. The eastern portion of the area of concern contains a fenced storage area in the southeast corner, a building with a former truck washing pad in the northeast corner, and the remainder of this area is used for materials storage (Figure 2).

The area of concern is essentially level over a majority of the site and slopes moderately to steeply along the northern property boundary adjacent to the Columbia Slough. The property is bounded to the north by the Columbia Slough, to the south by the former Arrow Transportation facility, to the east by North Portland Road and a railroad right-of-way, and to the west by Columbia Steel.

3.0 BACKGROUND

St. John's Motor Express Bulk Liquid/Heavy Haul transportation company began operations at the site in 1964. Tank truck rinsate was discharged to natural ponds onsite. The company was purchased by Glenn Widing in 1967 and renamed Widing Transportation Company, Inc. (Widing). Widing continued the tank truck rinsing practices until 1975 when the ponds were replaced by a six-cell aeration treatment system and 30-acre artificial lagoons (retention ponds). Overflow from the treatment system was discharged to the lagoons. Pretreatment sludges were hauled to Chem-Nuclear in Arlington.

In 1980, Widing was directed by the U.S. Environmental Protection Agency (EPA) and the Oregon Department of Environmental Quality (DEQ) to fill in the lagoons due to the discovery of hazardous materials in the pond sludge layer (several inches thick). Results of sludge and water samples indicated phenols, phthalate, and heavy metals were present, but the concentrations detected did not qualify the sludge as a RCRA hazardous waste. The regulators agreed that the sludge could be left in place as long as a high clay content backfill was used. The lagoons have not been used since filling was accomplished. Truck rinsing continued after 1980, but the rinsate was discharged to the sanitary sewer system.

An estimate of waste generated at the facility in 1980 included 400 gallons per year (gal/yr) of oily waste; 35,000 gal/yr of phenolic resin waste; and 3,000 gal/yr of defoamer waste. Results of a 1978 study showed the following cargos had been carried by trucks being cleaned at the onsite facility: acids, caustics, defoamer, formaldehyde, latex, lignin liquor, organic solvent, phenol, polyvinyl acetate, resins, sodium silicate, sulphur lime, tall oil, wax, and wood preservative (Ecology and Environment, 1981).

Arrow Transportation (Arrow) took over the site operations in 1986 (south of the subject area) and continued to discharge treated rinsate to the sanitary sewer system. Arrow reported a 75 to 100 gallon diesel fuel spill in December 1987. The spill was contained in a man-made collection system and cleaned up. In 1995, several underground storage tanks (USTs) were decommissioned at the subject property. The USTs included a fuel oil, a motor oil, a waste oil, a gasoline fuel, and two diesel fuel USTs. Limited soil contamination was encountered, removed, treated onsite, and used as onsite backfill. A pocket of petroleum hydrocarbon contamination was left in-place beneath an onsite building (approximately 100 to 200 cubic yards of soil). No groundwater was encountered during the decommissioning activities. DEQ issued a No Further Action letter in March 1995 (DEQ, 1995).

A Phase II Environmental Investigation conducted in 1998 for the subject property (PNG Environmental, Inc., 1999) indicates a residual sludge layer was not encountered in three test pits excavated within the former retention ponds, and that compounds related to residual sludge deposits (phenols) were not detected in soil samples. Low levels of petroleum constituents and phenolic compounds were detected in the onsite monitoring wells. The detected constituents were attributed to either the adjacent water treatment process area or to the former retention pond fill soils. Groundwater was calculated to flow towards the northwest toward the Columbia Slough.

4.0 RETENTION POND TEST PITS

On May 17 and 18, 2000, 16 test pits (TP-1 through TP-16) were excavated in the former retention ponds using a Kobelco trackhoe operated by Raven and Associates, Inc., (Raven) based in Gresham, Oregon. The test pits were advanced to observe subsurface soil conditions and to collect soil and select grab groundwater samples for potential laboratory analyses. The test pits were advanced to total depths of approximately 12 to 21 feet below the ground surface (bgs). The test pits were advanced to the maximum reach of the trackhoe (19 to 21 feet bgs), or the test pit was terminated due to abundant seepage that caused excessive soil stockpile runoff (test pit TP-6 was terminated at 15 feet bgs and test pit TP-16 was terminated at 12 feet bgs). The test pit locations are shown on Figure 2.

Soil and grab groundwater samples were collected during trenching as described in the following sections. A Kleinfelder geologist was onsite to observe the subsurface soil conditions and maintain a log of the test pits. Test pit logs are provided in Appendix A. Following completion of the test pitting, the test pits were backfilled with the excavated soil and the surface was trackrolled.

4.1 Soil Sampling and Field Screening

Two or three grab soil samples were collected from each test pit for potential laboratory analysis. The soil samples were collected at various depths based on conditions encountered during test pitting. A summary of the test pit sample numbers and depths is provided in Table 1. The soil samples were collected with the aid of the trackhoe bucket. Care was taken to collect soil that had not contacted the sides of the bucket. New, disposable, nitrile gloves were worn and replaced for each sample collected.

The soil samples were divided into a field screen sample and an archive sample. The field screen samples were screened in the field using a portable photoionization detector (PID) to evaluate the relative concentration of volatile organic vapors. The field screen samples were placed into ziplock plastic bags and allowed to volatilize before measuring the total volatile organic vapor concentration with the PID. The archive samples were placed in laboratory prepared containers, labeled, and immediately stored in a chilled cooler for potential laboratory analysis. The soil samples were transported under chain-of-custody documentation to the analytical laboratory.

4.2 Grab Groundwater Sampling

One grab groundwater sample was collected from test pit TP-6 because hydrocarbon odors and a sheen were noted on the groundwater surface. The sample was collected by lowering a new, disposable, polyethylene bailer into the test pit. The sample was transferred into laboratory prepared containers, labeled, and immediately stored in a chilled cooler for potential laboratory analysis. The water sample was transported under chain-of-custody documentation to the analytical laboratory.

4.3 Analytical Test Methods

If two soil samples were collected from a test pit, both samples were selected for laboratory analyses. If three samples were collected from a test pit, two of the three soil samples were selected for analysis based on the field screening results and site observations. The soil samples were submitted using chain-of-custody documentation to City of Portland, Bureau of Environmental Services, Water Pollution Control Laboratory in Portland, Oregon. All selected soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi-volatile organic compounds (semi-VOCs) by EPA Method 8270, and total RCRA 8 metals by EPA Method 6000/7000 series.

The grab groundwater sample collected from Test Pit TP-6 was analyzed for VOCs and semi-VOCs by the methods described above, and for dissolved RCRA 8 metals by EPA Method 200 series.

Copies of the soil analytical data reports and chain-of-custody forms are provided in Appendix B. A copy of the grab groundwater data report and chain-of custody form is provided in Appendix C. A summary of the soil analytical results is provided in Table 1. A summary of the grab groundwater analytical results is provided in Table 2.

5.0 GROUNDWATER MONITORING METHODS

On May 18, 2000, groundwater levels were measured in all site monitoring wells (MW-01 through MW-06) using an electronic oil-water interface probe. The monitoring well locations are shown on Figure 3.

Kleinfelder personnel sampled groundwater monitoring wells in accordance with the following protocols:

- The height of the water column within the well was calculated by subtracting the depth to water from the total depth of the well. The volume of the water column was calculated using the relationship $V= 3.142r^2h$, where V is the volume of water in cubic feet, r is the radius of the well in feet, and h is the height of the water column in feet.

- Prior to collecting groundwater samples, the monitoring wells were purged using one or a combination of the following equipment: 1) a nondedicated, disposable, polyethylene bailer for each well, or 2) a PVC, submersible electric pump fitted with new, disposable, PVC tubing replaced at each well location. A minimum of three casing volumes of groundwater were removed from the wells, or the wells were purged dry and allowed to recharge, prior to sampling. Temperature, pH, and specific conductivity were monitored during the well purge. Standards of known pH were used to calibrate the field meter prior to use.

- The contract laboratory prepared sample containers to conform with EPA-recommended preservation techniques for the analytes of concern.

- Groundwater samples were collected with new, clean, disposable, polyethylene bailers at each well location (same bailer used to purge the well, if applicable). Sample containers were open only as long as necessary to collect the samples.

- Sample containers were labeled with a sample number, date, and time, and stored in an ice chest containing frozen "blue ice." Chain-of-custody procedures documented sample handling.

- To reduce the potential for cross-contamination, non-disposable developing and sampling equipment were washed in a trisodium phosphate solution and rinsed with distilled water. New, disposable, nitrile gloves were worn and replaced at each well location.

The groundwater samples were submitted for laboratory analyses using chain-of-custody documentation to the City of Portland, Bureau of Environmental Services, Water Pollution Control Laboratory in Portland, Oregon. Similar to the soil samples, the monitoring well groundwater samples were analyzed for VOCs by EPA Method 8260, semi-VOCs by EPA Method 8270, and total RCRA 8 metals by EPA Method 6000/7000 series.

A copy of the analytical laboratory report and chain-of-custody form are provided in Appendix C. A summary of the monitoring well groundwater analytical results is provided in Table 3.

Purge water was transferred into 55-gallon drums, labelled, and left onsite.

6.0 RESULTS

6.1 Former Retention Pond Test Pits

6.1.1 Subsurface Conditions

Subsurface conditions encountered in the test pits generally consisted of clayey to silty fill soils with varying amounts of debris (concrete, wood, plastic, brick, piping and rebar). Abundant large concrete and asphalt debris (up to 3 feet diameter) was encountered in a majority of the test pits from generally 6 to 14 feet bgs, although the thickness at each test pit location varied. The fill soils appeared to extend to a depth of at least 21 feet bgs in the large southern retention pond and the northwest retention pond. It should be noted that test pit TP-2 was excavated east of the pond limits delineated on the map provided by the City of Portland. A sludge layer indicative of bottom retention pond sediments was not observed in any of the test pits.

Potential native soils consisting of gray silt and sandy silt were encountered in the northeast retention pond. These soils were encountered in test pits TP-8 and TP-3 at depths of approximately 20.5 and 18 feet bgs, respectively.

Test pits TP-12, TP-13, and TP-14 were excavated outside of the edge of the ponds as delineated on the map provided by the City of Portland. Similar fill soils as described above were encountered in test pits TP-12, TP-13, and TP-14 to depths of approximately 21, 18, and 11 feet, respectively. Underlying the fill soils were apparent native soils generally consisting of gray or mottled brown and light brown, silt and clay.

Seepage was not encountered in all of the test pits. Where encountered, the observed seepage appeared to occur at depths ranging from approximately 7 to 20 feet bgs. The irregular seepage

depths are likely the result of the inhomogeneous nature of the fill soils. Groundwater was encountered in test pit TP-6 at approximately 13 feet bgs. The groundwater in test pit TP-6 is likely perched and limited in extent based on the absence of significant water bearing zones in the other test pits at this depth.

Fill soils stained black or gray were observed in test pits TP-1, TP-2, and TP-8 located in the northeast corner of the former retention pond area, and in TP-6 where a sheen and hydrocarbon odor were noted in the groundwater seepage. The field screening results indicated volatile organic vapors were not detected except in test pits TP-6 at the seepage depth (13 feet bgs), TP-10 at 16 feet bgs, and TP-12 at 21 feet bgs. No unusual odor or staining were noted in TP-10 or TP-12, and the volatile organic vapor results may be due to biogenic-related sources.

6.1.2 Soil Analytical Results

One VOC analyte, 2-butanone, was detected in all of the soil samples analyzed. It is our opinion that laboratory contamination is the cause of the reported 2-butanone concentrations, and the laboratory results for this analyte do not represent environmental conditions at the site.

Soil samples were collected and analyzed at various depths in the fill soils to assess potential environmental impacts throughout these materials. The analytical results of the fill soil samples indicated that in general, few VOC constituents (except in test pit TP-6) and semi-VOC constituents were detected. Other than in test pit TP-6 at 13 feet bgs, the other test pit VOC constituents detected (excluding 2-butanone) included: naphthalene (408 micrograms per kilogram (µg/kg)) and p-isopropylbenzene (126 µg/kg) in TP-2 at 19 feet bgs and 1,2,4-trimethylbenzene (299 µg/kg) and naphthalene (148 µg/kg) in TP-11 at 11 feet bgs. VOC constituents detected in test pit TP-6 at 13 feet bgs included: 1,1,2-trichloroethane (249 µg/kg); 1,2,4-trimethylbenzene (2,470 µg/kg); 1,2-dichlorobenzene (1,100 µg/kg); 1,4-dichlorobenzene (1,460 µg/kg); chlorobenzene (8,650 µg/kg); isopropylbenzene (402 µg/kg); total xylenes (3,390 µg/kg); n-butylbenzene (571 µg/kg); n-propylbenzene (646 µg/kg); naphthalene (3,020 µg/kg); p-isopropyltoluene (642 µg/kg); and sec-butylbenzene (232 µg/kg).

Semi-VOCs detected in the fill soil samples included: fluoranthene (38.83 milligrams per kilogram (mg/kg)) and pyrene (3.98 mg/kg) in TP-2 at 5 feet bgs; fluoranthene (1.11 mg/kg), phenanthrene (0.67 mg/kg), and pyrene (1.34 mg/kg) in TP-3 at 10 feet bgs; phenanthrene (28.9 mg/kg) in TP-6 at 13 feet bgs; fluoranthene (0.95 mg/kg) and pyrene (0.872 mg/kg) in TP-7 at 17 feet bgs; and benzyl butyl phthalate (0.46 mg/kg) in TP-15 at 21 feet bgs.

The following ranges in total RCRA 8 metals concentrations were detected in the fill soil samples: 2.0 to 21.7 mg/kg (arsenic); 80 to 220 mg/kg (barium); 0.70 to 3.36 mg/kg (cadmium); 14 to 35 mg/kg (chromium); 7.3 to 130 mg/kg (lead); 0.0075 to 4.88 mg/kg (mercury); less than detection limit of 0.25 to 0.32 mg/kg in TP-10 only (selenium); and silver was not detected at or above the laboratory method report limit of 0.30 mg/kg.

Samples of apparent native soils were collected in test pits TP-3 at 21 feet bgs, TP-8 at 19 feet bgs, TP-12 at 21 feet bgs, TP-13 at 19 and 21 feet bgs, and TP-14 at 12 and 20 feet bgs. The analytical results indicated VOCs and semi-VOCs were not detected at or above the laboratory method reporting limits in these samples. The maximum concentrations detected for the RCRA 8 metals were 9.11 mg/kg (arsenic), 220 mg/kg (barium), 0.19 mg/kg (cadmium), 31 mg/kg (chromium) 20 mg/kg (lead), 0.042 mg/kg (mercury), 0.27 mg/kg (selenium), and silver was not detected at the laboratory method reporting limit of 0.30 mg/kg.

6.1.3 Test Pit TP-6 Grab Groundwater Sample

The VOC constituents detected in the groundwater sample included: 1,2,4-trimethylbenzene (6.71 micrograms per liter (µg/L)); 1,2-dichlorobenzene (6.71 µg/L); 1,3,5-trimethylbenzene (1.92 µg/L); 1,4-dichlorobenzene (5.88 µg/L); acetone (43.0 µg/L); benzene (8.59 µg/L); chlorobenzene (129 µg/L); cis-1,2-dichloroethene (2.43 µg/L); ethylbenzene (58.9 µg/L); isopropylbenzene (1.93 µg/L); total xylenes (86.0 µg/L); n-butylbenzene (1.04 µg/L); n-propylbenzene (2.08 µg/L); naphthalene (17.1 µg/L); p-isopropyltoluene (19.2 µg/L); and vinyl chloride (1.71 µg/L).

The semi-VOC constituents detected in the grab groundwater sample included: 2-methylnaphthalene (14.7 µg/L); 3-,4-methylphenol (10.1 µg/L); acenaphthene (10.5 µg/L); anthracene (11.3 µg/L); bis(2-ethylhexyl)phthalate (63.7 µg/L); fluoranthene (16.6 µg/L); naphthalene (23.3 µg/L); phenanthrene (34.0 µg/L); phenol (67.1 µg/L); and pyrene (15.3 µg/L).

The dissolved RCRA 8 metals analytical results indicated arsenic (0.058 milligrams per liter (mg/L)) and barium (0.019 mg/L) were detected. Cadmium, chromium, lead, mercury, selenium, and silver were not detected at or above the laboratory method reporting limits listed in Table 2.

6.2 *Groundwater Monitoring Results*

Free product was not detected in any of the onsite monitoring wells (wells MW-1 through MW-6). Static groundwater levels measured in the monitoring wells ranged from 10.73 to 20.83 feet below the top of the well casings, and the corresponding groundwater elevations ranged from 67.27 to 83.74 feet above mean sea level. The groundwater elevation data indicated the apparent, near-surface groundwater flow direction was towards the north to northwest (towards the Columbia Slough) with an average hydraulic gradient of approximately 0.002 ft/ft (Figure 3). PNG Environmental, Inc., attributed the water level in well MW-3 to a perched water zone. A similar anomalous water level was measured on May 18, 2000, by Kleinfelder, Inc. As a result, the water level in this well was not used in the evaluation of the groundwater flow direction and gradient.

Similar to the soil analytical results, the monitoring well groundwater analytical results indicate that, in general, few VOC constituents were detected and semi-VOCs were not detected at or above the laboratory method reporting limits. The VOC results are described below.

MW-01: VOC constituents detected were: benzene (1.13 micrograms per liter (µg/L)); chlorobenzene (4.21 µg/L); chloroethane (7.46 µg/L); hexachlorobutadiene (2.64 µg/L); and n-butylbenzene (1.01 µg/L).

MW-02: VOC constituents detected included only hexachlorobutadiene (3.01 µg/L).

MW-03: VOC constituents detected included acetone (18.5 µg/L) and hexachlorobutadiene (2.01 µg/L).

MW-04: VOC constituents detected included only 1,1-dichloroethane (1.71 µg/L).

MW-05 and MW-06: VOC constituents were not detected at or above the laboratory method reporting limits.

0.150 = CHRONIC TOX

The following ranges in total RCRA 8 metals concentrations were detected in the monitoring well samples: 0.062 to 0.3 milligrams per liter (mg/L) (arsenic); 0.2 to 4.6 mg/L (barium); 0.049 mg/L (cadmium) detected in well MW-04 only; 0.2 to 1.1 mg/L (chromium); 0.44 to 5.7 mg/L (lead); 0.0005 to 0.0026 mg/L (mercury); selenium was not detected above the method reporting limit in any well; and silver was detected (0.015 mg/L) in well MW-04 only.

0.0043 = ACUTE TOX

0.016 - 0.57 ACUTE TOX

0.065 ACUTE TOX

0.0014 ACUTE TOX

0.0034 ACUTE TOX

7.0 REGULATORY SCREENING LEVELS

State numeric soil cleanup standards for simple sites where groundwater has not been impacted are present in the Oregon Soil Cleanup Table (Oregon Administrative Rule (OAR) 340-122-045, Table 1 and Appendix 1) (DEQ, 1994). These cleanup standards can be used as screening levels where groundwater has been impacted. The state cleanup rules specify the total risk level for contaminants at a site cannot exceed one-in-a-million (risk level of $1x10^{-6}$). Federal Environmental Protection Agency (EPA), Region 9, Preliminary Remediation Goals (PRGs) (EPA, 1996) are also used for preliminary risk screening for soil at contaminated sites. The state and federal soil screening levels are provided in Table 4.

State groundwater numeric groundwater quality screening levels are also specified in the Oregon Soil Cleanup Table (Oregon Administrative Rule (OAR) 340-122-045, Appendix 1) (DEQ, 1994). The federal EPA, Region 9, PRGs (EPA, 1996) are also used for preliminary risk screening for groundwater. The state and federal groundwater screening levels are provided in Table 4. It should be noted that the groundwater PRGs are based on tap water ingestion. These values are used for preliminary evaluation of potential risks that may be posed by site contaminants.

8.0 FINDINGS AND CONCLUSIONS

The following findings and conclusions are based on Kleinfelder's knowledge of the subject property from information provided by the City of Portland, site observations, information gathered during this site characterization, and information collected by others during previous investigations. The conclusions are subject to the limitations presented in this report, and may change if additional information becomes available.

The former retention ponds contain fill soils (most notably evidenced by construction fill debris such as concrete, asphalt, wood, etc.) to depths greater than reported by previous investigations and information provided by the City of Portland. The fill soils extend to depths ranging from approximately 18 to 20.5 feet bgs in the northeast retention pond and greater than 21 feet bgs in the south and northeast retention ponds. A sludge layer was not observed in any of the test pits. Additionally, the fill soils extend beyond the former retention pond limits delineated by a map provided by the City of Portland. The extent of the fill soils was not completely delineated during this investigation and is unknown at this time.

Perched groundwater was observed at variable depths in the fill soils. The variable depths are likely due to the inhomogeneous nature of the fill soils. Seepage was encountered at various depths (7 to 20 feet bgs) in the test pits. Groundwater encountered in test pit TP-6 (13 feet bgs) is apparently perched based on the absence of significant water-bearing zones in the other test pits at the same depth. PNG Environmental, Inc., also noted that the water level in well MW-3 is likely related to a perched water zone. The apparent groundwater flow direction across the site is toward the Columbia Slough (towards the north to northwest). The static groundwater levels in the wells ranged from approximately 10.7 to 20.8 feet bgs.

Generally low total RCRA 8 metals concentrations were detected in all soil samples analyzed (fill soil and apparent native soil samples), and few VOC and semi-VOC constituents were detected except in test pit TP-6 at 13 feet bgs. An apparent, perched groundwater zone was encountered at 13 feet bgs in test pit TP-6. Except for arsenic, the detected constituents did not exceed the regulatory screening levels (DEQ industrial maximum allowable soil concentrations and EPA PRGs).

Arsenic was detected above the screening level (3.0 mg/kg) in 23 of the 33 soil samples analyzed. Arsenic was detected at the site ranging from 2.0 to 21.7 mg/kg with an average concentration of 5.43 mg/kg. It is our opinion that the arsenic concentrations in soil at the site are not significantly elevated compared to background based on the following:

- Background arsenic concentrations in surficial soils in Oregon (Boerngen and Shacklette, 1981) are reported to range from 1.1 to 12.0 mg/kg.
- Arsenic concentrations in test pit TP-6 were 20.9 and 21.7 mg/kg at 5 and 13 feet bgs, respectively, but all other concentrations did not exceed 9.1 mg/kg which is within the range of the reported background concentrations.
- Arsenic concentrations detected in the apparent native soil (3.33 to 9.11 mg/kg) are comparable to the concentrations detected in the fill soils.

Low levels of VOCs were detected in wells MW-01 through MW-04 which are located east of the former retention ponds. VOCs and Semi-VOCs were not detected in wells MW-5 and MW-6 located within the south and northwest ponds, respectively. The data suggest that the environmental impacts detected in wells MW-01 through MW-04 may be related to sources other than the former backfill soils in the former retention ponds. This interpretation is further supported considering that the highest level of VOCs detected were in well MW-01 which is upgradient of the former pond areas. Other potential sources of groundwater impacts are the

former Arrow Transportation facility located south (upgradient) of the pond area, and the former wash pad area east (crossgradient) of the pond area. Constituents that exceeded the regulatory screening levels in the monitoring well samples included: arsenic, barium, cadmium, chromium, lead, mercury, benzene, and hexachlorobutadiene. Considering that the shallow aquifer beneath the site is not currently a drinking water source, and is not likely to be used as a drinking water source in the foreseeable future, the metal contaminants listed above are not considered to be an immediate threat to human health or the environment.

Perched groundwater in the vicinity of test pit TP-6 contained generally low levels of numerous VOC and semi-VOC compounds (Table 2). Constituents that exceeded the screening levels in the grab groundwater sample collected from the test pit included: benzene; 1,4-dichlorobenzene; naphthalene; vinyl chloride; and bis (2-ethylhexyl)phthalate. Dissolved metals screening levels have not been established for comparison. The generally elevated soil and groundwater concentrations detected in test pit TP-6 suggest that the source for the contaminants is likely localized in the area of test pit TP-6.

9.0 RECOMMENDATIONS

The following recommendations are based on the results of this investigation and our knowledge of the site:

- The screening levels presented in this report are for preliminary purposes only and are based on conservative assumptions of potential exposure to the impacted media (i.e., groundwater ingestion). A site-specific risk assessment based on present and future exposure pathways could be conducted to develop site-specific cleanup levels.
- If further assessment of the groundwater conditions is desired, additional investigation could be performed to: 1) evaluate background groundwater concentrations of the constituents of concern, 2) evaluate the potential upgradient source(s) of the contaminants, and 3) further evaluate groundwater conditions within the former retention ponds.
- Additional assessment of the former retention pond backfill soils does not appear to be warranted at this time.

10.0 REFERENCES

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11.0 LIMITATIONS

Kleinfelder has performed the work described in this report in accordance with the generally accepted standard of care existing in the State of Oregon at the time of the assessment. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface and historical conditions applicable to the study area. More extensive studies including historical review, additional site exploration, soil and groundwater sampling, and chemical analyses may be used to supplement the information presented by this assessment. Kleinfelder should be notified for additional consultation if the City of Portland wishes to reduce uncertainties beyond the level associated with this assessment. Our assessment of the property may also change as new data becomes available during additional site exploration, remediation, or development.

Since activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the report.

This report may be used only by the client and DEQ, and only for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both on and off-site) or other factors may change, and additional work may be required with the passage of time. Any party other than the client and DEQ who wishes to use this report shall notify Kleinfelder of such intended use and obtain permission. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the clients or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party.

No warranty, express or implied, is made.

12.0 PROFESSIONAL AUTHENTICATION

This report was prepared and reviewed by the undersigned. This report is void if original seal and signature are not present.

John M. Day, R.G.
Senior Project Manager

Peter L. Stroud, C.E.G.
Environmental Group Leader

TABLE 1 (page 1 of 5)
SUMMARY OF SOIL ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	Sample Depth (ft bgs)	VOCs EPA Method 8260B (ug/kg) [1]		Semi-VOCs EPA Method 8270 (mg/kg) [1]		Total RCRA 8 Metals EPA Method 6000/7000 Series (mg/kg)	
TP-1	5/17/2000	TP-1-7	7	2-butanone	6,440	not detected	ND	Arsenic	2.62
								Barium	120
								Cadmium	0.078
								Chromium	24
								Lead	7.8
								Mercury	0.0075
								Selenium	<0.25
								Silver	<0.3
TP-1	5/17/2000	TP-1-19	19	2-butanone	1,140	not detected	ND	Arsenic	7.19
								Barium	220
								Cadmium	0.26
								Chromium	24
								Lead	74
								Mercury	0.03
								Selenium	<0.25
								Silver	<0.3
TP-2	5/17/2000	TP-2-5	5	2-butanone	1,170	fluoranthene	3.83	Arsenic	6.93
						pyrene	3.98	Barium	110
								Cadmium	0.4
								Chromium	22
								Lead	24
								Mercury	0.03
								Selenium	<0.25
								Silver	<0.3
TP-2	5/17/2000	TP-2-19	19	2-butanone	1,850	not detected	ND	Arsenic	6.45
				naphthalene	408			Barium	120
				p-isopropyltoluene	126			Cadmium	0.19
								Chromium	14
								Lead	76
								Mercury	4.88
								Selenium	<0.25
								Silver	<0.3
TP-3	5/17/2000	TP-3-10	10	2-butanone	1,100	fluoranthene	1.11	Arsenic	7.7
						phenanthrene	0.67	Barium	180
						pyrene	1.34	Cadmium	0.2
								Chromium	26
								Lead	31
								Mercury	0.077
								Selenium	<0.25
								Silver	<0.3
TP-3	5/17/2000	TP-3-21	21	2-butanone	1,370	not detected	ND	Arsenic	5.33
								Barium	220
								Cadmium	0.19
								Chromium	31
								Lead	20
								Mercury	0.027
								Selenium	<0.25
								Silver	<0.3
TP-4	5/17/2000	TP-4-11	11	2-butanone	1,250	not detected	ND	Arsenic	4.91
								Barium	170
								Cadmium	0.17
								Chromium	25
								Lead	22
								Mercury	0.032
								Selenium	<0.25
								Silver	<0.3
TP-4	5/17/2000	TP-4-21	21	2-butanone	1,070	not detected	ND	Arsenic	4.97
								Barium	190
								Cadmium	0.25
								Chromium	26
								Lead	130
								Mercury	0.053
								Selenium	<0.25
								Silver	<0.3

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TABLE 1 (page 2 of 5)
SUMMARY OF SOIL ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	Sample Depth (ft bgs)	VOCs EPA Method 8260B (ug/kg) [1]		Semi-VOCs EPA Method 8270 (mg/kg) [1]		Total RCRA 8 Metals EPA Method 6000/7000 Series (mg/kg)	
TP-5	5/17/2000	TP-5-11	11	2-butanone	1,010	not detected	ND	Arsenic	2.76
								Barium	150
								Cadmium	0.08
								Chromium	27
								Lead	7.4
								Mercury	0.021
								Selenium	<0.25
								Silver	<0.3
TP-5	5/17/2000	TP-5-21	21	2-butanone	1,060	not detected	ND	Arsenic	6.94
								Barium	150
								Cadmium	0.27
								Chromium	23
								Lead	13
								Mercury	0.025
								Selenium	<0.25
								Silver	<0.3
TP-6	5/17/2000	TP-6-5	5	2-butanone	1,210	not detected	ND	Arsenic	20.9
								Barium	210
								Cadmium	0.13
								Chromium	30
								Lead	17
								Mercury	0.037
								Selenium	<0.25
								Silver	<0.3
TP-6	5/17/2000	TP-6-13	13	1,1,2-trichloroethane	249	phenanthrene	28.9	Arsenic	21.7
				1,2,4-trimethylbenzene	2,470			Barium	140
				1,2-dichlorobenzene	1,100			Cadmium	3.36
				1,4-dichlorobenzene	1,460			Chromium	45
				chlorobenzene	8,650			Lead	81
				isopropylbenzene	402			Mercury	0.13
				m,p-xylene	2,040			Selenium	<0.3
				o-xylene	1,350			Silver	<0.32
				n-butylbenzene	571				
				n-propylbenzene	646				
				naphthalene	3,020				
				p-isopropyltoluene	642				
				sec-butylbenzene	232				
TP-7	5/17/2000	TP-7-5	5	2-butanone	1,220	not detected	ND	Arsenic	2.69
								Barium	130
								Cadmium	0.13
								Chromium	18
								Lead	27
								Mercury	0.04
								Selenium	<0.25
								Silver	<0.3
TP-7	5/17/2000	TP-7-17	17	2-butanone	1,220	fluoranthene	0.95	Arsenic	2.56
						pyrene	0.872	Barium	80
								Cadmium	0.11
								Chromium	21
								Lead	17
								Mercury	0.024
								Selenium	<0.25
								Silver	<0.3
TP-8	5/17/2000	TP-8-5	5	2-butanone	1,320	not detected	ND	Arsenic	6.38
								Barium	130
								Cadmium	0.17
								Chromium	20
								Lead	9.9
								Mercury	0.018
								Selenium	<0.25
								Silver	<0.3

TABLE 1 (page 3 of 5)
SUMMARY OF SOIL ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	Sample Depth (ft bgs)	VOCs EPA Method 8260B (ug/kg) [1]		Semi-VOCs EPA Method 8270 (mg/kg) [1]		Total RCRA 8 Metals EPA Method 6000/7000 Series (mg/kg)	
TP-8	5/17/2000	TP-8-19	19	2-butanone	1,300	not detected	ND	Arsenic	3.56
								Barium	110
								Cadmium	0.12
								Chromium	17
								Lead	7.3
								Mercury	0.011
								Selenium	<0.25
								Silver	<0.3
TP-9	5/17/2000	TP-9-5	5	2-butanone	1,160	not detected	ND	Arsenic	3.0
								Barium	110
								Cadmium	0.13
								Chromium	18
								Lead	18
								Mercury	0.021
								Selenium	<0.25
								Silver	<0.3
TP-9	5/17/2000	TP-9-11	11	2-butanone	1,230	not detected	ND	Arsenic	6.04
								Barium	200
								Cadmium	0.11
								Chromium	25
								Lead	17
								Mercury	0.017
								Selenium	<0.25
								Silver	<0.3
TP-10	5/17/2000	TP-10-10	10	2-butanone	1,130	not detected	ND	Arsenic	5.25
		Brown SWL						Barium	150
								Cadmium	0.14
								Chromium	27
								Lead	56
								Mercury	0.025
								Selenium	<0.25
								Silver	<0.3
TP-10	5/17/2000	TP-10-16	16	2-butanone	1,020	not detected	ND	Arsenic	4.45
		Brown SWL						Barium	200
PID 11.8								Cadmium	0.47
								Chromium	25
								Lead	74
								Mercury	0.064
								Selenium	0.32
								Silver	<0.3
TP-11	5/17/2000	TP-11-5	5	2-butanone	1,100	not detected	ND	Arsenic	3.8
								Barium	150
								Cadmium	0.13
								Chromium	22
								Lead	17
								Mercury	0.02
								Selenium	<0.25
								Silver	<0.3
TP-11	5/17/2000	TP-11-11	11	1,2,4-trimethylbenzene	299	not detected	ND	Arsenic	4.51
		Brown SWL		2-butanone	1,300			Barium	110
				naphthalene	148			Cadmium	0.3
								Chromium	17
								Lead	45
								Mercury	0.028
								Selenium	<0.25
								Silver	<0.3
TP-11	5/17/2000	TP-11-21	21	2-butanone	1,180	not detected	ND	Arsenic	2.0
		Brown SWL						Barium	100
								Cadmium	0.083
								Chromium	21
								Lead	11
								Mercury	0.0087
								Selenium	<0.25
								Silver	<0.3

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TABLE 1 (page 4 of 5)
SUMMARY OF SOIL ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	Sample Depth (ft bgs)	VOCs EPA Method 8260B (ug/kg) [1]		Semi-VOCs EPA Method 8270 (mg/kg) [1]		Total RCRA 8 Metals EPA Method 6000/7000 Series (mg/kg)	
TP-12	5/18/2000	TP-12-5	5	2-butanone	1,580	not detected	ND	Arsenic	2.4
								Barium	140
								Cadmium	0.07
								Chromium	35
								Lead	8.4
								Mercury	0.036
								Selenium	<0.25
								Silver	<0.3
TP-12	5/18/2000	TP-12-21	21	2-butanone	1,390	not detected	ND	Arsenic	7.62
		PID 33						Barium	180
								Cadmium	0.11
								Chromium	25
								Lead	15
								Mercury	0.024
								Selenium	<0.25
								Silver	<0.3
TP-13	5/18/2000	TP-13-19	19	2-butanone	1,190	not detected	ND	Arsenic	3.33
								Barium	140
								Cadmium	0.15
								Chromium	22
								Lead	4.8
								Mercury	0.021
								Selenium	0.27
								Silver	<0.3
TP-13	5/18/2000	TP-13-21	21	2-butanone	1,250	not detected	ND	Arsenic	2.97
								Barium	140
								Cadmium	0.1
								Chromium	25
								Lead	4.7
								Mercury	0.02
								Selenium	<0.25
								Silver	<0.3
TP-14	5/18/2000	TP-14-12	12	2-butanone	1,080	not detected	ND	Arsenic	9.11
								Barium	180
								Cadmium	0.19
								Chromium	26
								Lead	19
								Mercury	0.042
								Selenium	<0.25
								Silver	<0.3
TP-14	5/18/2000	TP-14-20	20	2-butanone	1,360	not detected	ND	Arsenic	3.6
								Barium	160
								Cadmium	0.14
								Chromium	19
								Lead	6.7
								Mercury	0.024
								Selenium	<0.25
								Silver	<0.3
TP-15	5/18/2000	TP-15-12	12	2-butanone	1,290	not detected	ND	Arsenic	4.78
								Barium	200
								Cadmium	0.21
								Chromium	22
								Lead	22
								Mercury	0.031
								Selenium	<0.25
								Silver	<0.3
TP-15	5/18/2000	TP-15-21	21	2-butanone	1,200	benzyl butyl phthalate	0.46	Arsenic	16.3
								Barium	140
								Cadmium	0.14
								Chromium	28
								Lead	8.9
								Mercury	0.018
								Selenium	<0.25
								Silver	<0.3

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TABLE 1 (page 5 of 5)
SUMMARY OF SOIL ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	Sample Depth (ft bgs)	VOCs EPA Method 8260B (ug/kg) [1]		Semi-VOCs EPA Method 8270 (mg/kg) [1]		Total RCRA 8 Metals EPA Method 6000/7000 Series (mg/kg)	
TP-16	5/18/2000	TP-16-5	5	2-butanone	1,270	not detected	ND	Arsenic	2.98
								Barium	150
								Cadmium	0.13
								Chromium	19
								Lead	11
								Mercury	0.014
								Selenium	<0.25
								Silver	<0.3
TP-16	5/18/2000	TP-16-9	9	2-butanone	1,210	not detected	ND	Arsenic	2.35
								Barium	100
								Cadmium	0.11
								Chromium	17
								Lead	12
								Mercury	0.026
								Selenium	<0.25
								Silver	<0.3

1. Only analytes detected at or above the laboratory method reporting limits are listed. The reporting limits are provided in the analytical data reports included in Appendix B.

VOCs Volatile Organic Compounds
RCRA Resource Conservation and Recovery Act
ug/kg Micrograms per kilogram, parts per billion.
mg/kg Milligrams per kilogram, parts per million.
<0.25 Not detected at or above the laboratory method reporting limit listed.
ND Analytes not detected at or above the laboratory method reporting limits. The reporting limits are provided in the analytical data reports included in Appendix B.

TABLE 2
SUMMARY OF GRAB GROUNDWATER (TP-6) ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Test Pit No.	Sample Date	Sample Identification Number	VOCs EPA Method 8260B (ug/L) [1]		Semi-VOCs EPA Method 8270 (ug/L) [1]		Dissolved RCRA 8 Metals EPA Method 200 Series (mg/L)	
TP-6	5/17/2000	TP-6	1,2,4-trimethylbenzene	10.4	2-methylnaphthalene	14.7	Arsenic	0.058
			1,2-dichlorobenzene	6.71	3-,4-methylphenol	10.1	Barium	0.019
			1,3,5-trimethylbenzene	19.2	acenaphthene	10.5	Cadmium	<0.03
			1,4-dichlorobenzene	5.88	anthracene	11.3	Chromium	<0.03
			acetone	43	bis(2-ethylhexyl)phthalat	63.7	Lead	<0.10
			benzene	8.59	fluoranthene	16.6	Mercury	<0.0002
			chlorobenzene	129	naphthalene	23.3	Selenium	<0.01
			cis-1,2-dichloroethene	2.53	phenanthrene	34	Silver	<0.01
			ethylbenzene	58.9	phenol	67.1		
			total xylenes	86	pyrene	15.3		
			isopropylbenzene	1.93				
			n-butylbenzene	1.04				
			n-propylbenzene	2.08				
			naphthalene	17.1				
			p-isopropyltoluene	28.3				
			vinyl chloride	1.71				

1. Only analytes detected at or above the laboratory method reporting limits are listed. The reporting limits are provided in the analytical data reports included in Appendix C.

VOCs Volatile Organic Compounds
RCRA Resource Conservation and Recovery Act
ug/L Micrograms per liter, parts per billion.
mg/L Milligrams per kilogram, parts per million.
<0.03 Not detected at or above the laboratory method reporting limit listed.

TABLE 3
SUMMARY OF MONITORING WELL GROUNDWATER ANALYTICAL RESULTS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Well No. *Elevation[1]* *Diameter [2]* *Well Depth [3]*	Sample Date	Sample Identification Number	Depth to Ground-water [3]	Ground-water Elevation [4]	Product Thickness [5]	VOCs EPA Methods 8260B (ug/L) [6]		Semi-VOCs EPA Method 8270 (ug/L) [6]		Total RCRA 8 Metals EPA Method 200 Series (mg/L)	
MW-01 96.62 2 25	5/18/2000	MW1-05180	17.67	78.95	0.0	benzene chlorobenzene chloroethane hexachlorobutadiene n-butylbenzene	1.13 4.21 7.46 2.64 1.01	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	<0.01 0.24 <0.03 <0.03 <0.1 0.0007 <0.01 <0.01
MW-02 88.08 2 23	5/18/2000	MW2-05180	20.81	67.27	0.0	hexachlorobutadiene	3.01	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	0.02 0.2 <0.03 <0.03 <0.1 <0.0002 <0.01 <0.01
MW-03 94.47 2 20	5/18/2000	MW3-05180	10.73	83.74	0.0	acetone hexachlorobutadiene	18.5 2.01	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	0.06 2.7 <0.03 0.5 1.5 0.0026 <0.01 <0.01
MW-04 94.01 2 22	5/18/2000	MW4-05180	19.76	74.25	0.0	1,1-dichloroethane	1.71	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	0.3 4.6 0.049 1.1 5.7 0.0024 <0.01 0.015
MW-05 94.18 2 33	5/18/2000	MW5-05180	20.83	73.35	0.0	not detected	ND	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	0.062 1.7 <0.03 0.2 0.44 0.0005 <0.01 <0.01
MW-06 98.38 2 28	5/18/2000	MW6-05180	16.56	81.82	0.0	not detected	ND	not detected	ND	Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	0.021 0.59 <0.03 0.032 <0.10 <0.0002 <0.01 <0.01

1. Mean Sea Level elevation in feet, surveyed to top of PVC well casing.
2. Well casing diameter in inches.
3. Depth in feet, measured from top of PVC well casing.
4. Mean Sea Level elevation in feet corrected for floating product, if applicable.
5. Non-aqueous phase floating product thickness in feet.
6. Only analytes detected at or above the laboratory method reporting limits are listed. The reporting limits are provided in the analytical data reports included in Appendix C.

<0.01 Concentration less than detection limit listed.
VOCs Volatile Organic Compounds
RCRA Resource Conservation and Recovery Act
ug/L Micrograms per liter, parts per billion.
mg/L Milligrams per liter, parts per million.
ND Analytes not detected at or above the laboratory method reporting limits. The reporting limits are provided in the analytical data reports included in Appendix C.

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TABLE 4 (page 1 of 3)
SOIL AND GROUNDWATER SCREENING LEVELS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Analyte	Maximum Concentration of Detected Analytes	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Industrial Maximum Allowable Soil Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Industrial Sites	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Groundwater Reference Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Tap Water
Analytes Detected in Soil					
TOTAL RCRA 8 METALS (mg/kg)					
Arsenic	20.9	3	3	NA	NA
barium	220	140,000	100,000	NA	NA
cadmium	3.36	1,000	930	NA	NA
chromium	35	1,500	450	NA	NA
lead	130	2,000	1,000	NA	NA
mercury	4.88	600	560	NA	NA
selenium	0.32	NA	9,400	NA	NA
silver	<0.3	10,000	9,400	NA	NA
VOCs (mg/kg)					
2-butanone	6.44	NA	NA	NA	NA
naphthalene	3.02	8,000	190	NA	NA
p-isopropyltoluene	0.642	NA	NA	NA	NA
isopropylbenzene	0.402	NA	NA	NA	NA
1,1,2-trichloroethane	0.249	9,000	1.9	NA	NA
1,2,4-trimethylbenzene	2.46	NA	170	NA	NA
1,2-dichlorobenzene	1.10	NA	370	NA	NA
1,4-dichlorobenzene	1.46	NA	7.3	NA	NA
chlorobenzene	8.65	40,000	180	NA	NA
m,p-xylene and o-xylene	3.39	2,500	860	NA	NA
n-butylbenzene	0.571	NA	550	NA	NA
n-propylbenzene	0.646	NA	550	NA	NA
sec-butylbenzene	0.323	NA	410	NA	NA
SEMI-VOCs (mg/kg)					
fluoranthene	3.83	80,000	37,000	NA	NA
phenanthrene	0.67	NA	NA	NA	NA
pyrene	3.98	60,000	26,000	NA	NA
benzyl butyl phthalate	0.46	NA	930	NA	NA

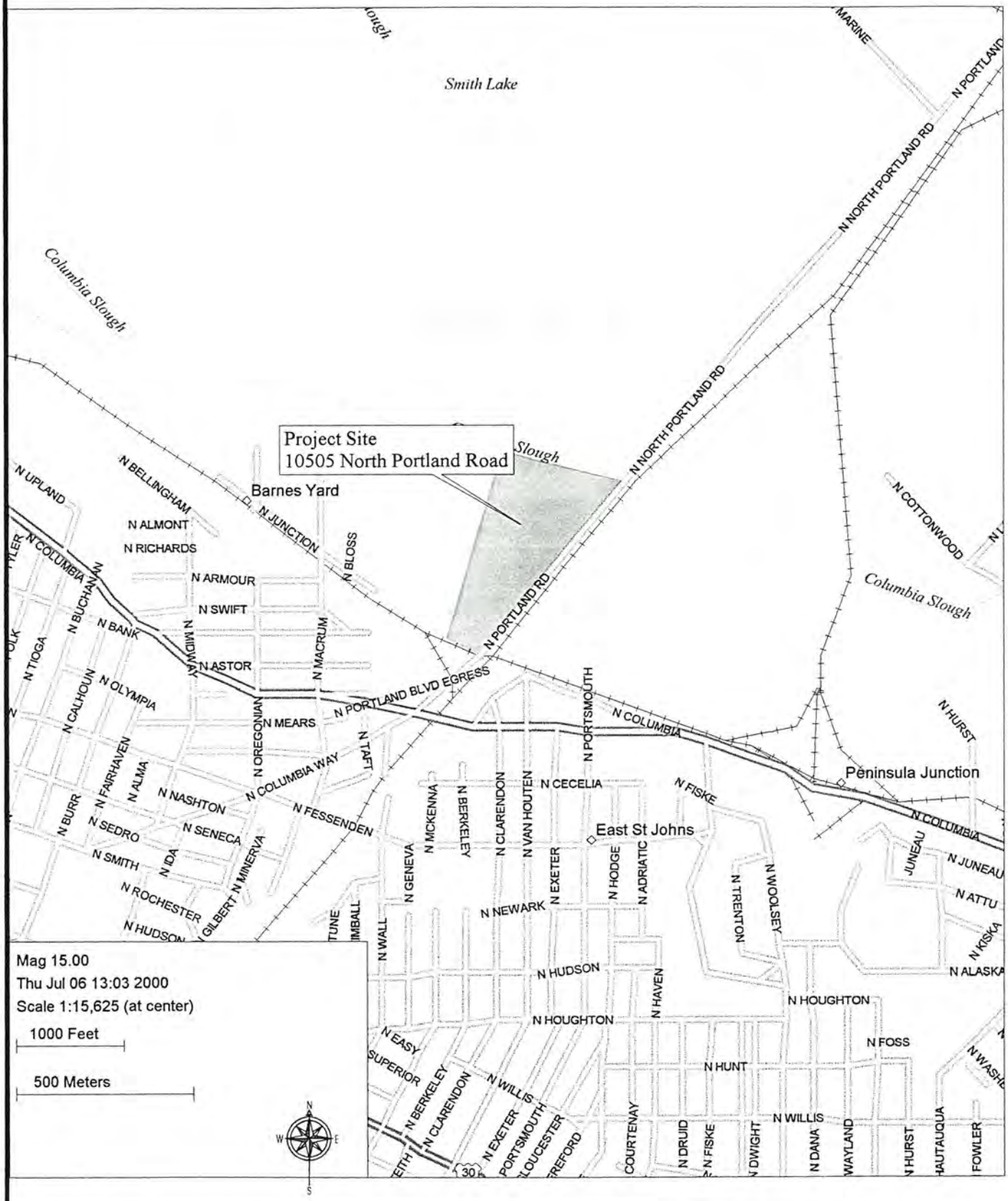
TABLE 4 (page 2 of 3)
SOIL AND GROUNDWATER SCREENING LEVELS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Analyte	Maximum Concentration of Detected Analytes	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Industrial Maximum Allowable Soil Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Industrial Sites	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Groundwater Reference Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Tap Water
Analytes Detected in Groundwater					
TOTAL RCRA 8 METALS (mg/L)					
Arsenic	0.3	NA	NA	0.00004	0.000045
barium	4.6	NA	NA	1	2.6
cadmium	0.049	NA	NA	0.005	0.018
chromium	1.1	NA	NA	0.1	NA
lead	5.7	NA	NA	0.015	0.004
mercury	0.0026	NA	NA	0.002	0.011
selenium	<0.01	NA	NA	0.01	0.18
silver	0.015	NA	NA	0.05	0.18
VOCs (ug/L)					
acetone	43	NA	NA	NA	610
benzene	8.59	NA	NA	0.005	0.39
ethylbenzene	58.9	NA	NA	700	1,300
total xylenes	86	NA	NA	7,000	2,800
1,1-dichloroethane	1.71	NA	NA	NA	810
n-butylbenzene	1.04	NA	NA	NA	61
n-propylbenzene	2.08	NA	NA	700	61
chlorobenzene	129	NA	NA	NA	390
chloroethane	7.46	NA	NA	NA	NA
hexachlorobutadiene	2.64	NA	NA	NA	0.86
1,2,4-trimethylbenzene	10.4	NA	NA	NA	12
1,3,5-trimethylbenzene	19.2	NA	NA	NA	12
1,2-dichlorobenzene	6.71	NA	NA	NA	370
1,4-dichlorobenzene	5.88	NA	NA	NA	0.47
cis-1,2-dichloroethene	2.53	NA	NA	70	61
isopropylbenzene	1.93	NA	NA	NA	NA
naphthalene	17.1	NA	NA	100	6.2
p-isopropyltoluene	28.3	NA	NA	NA	NA
vinyl chloride	1.71	NA	NA	0.04	0.02

TABLE 4 (page 3 of 3)
SOIL AND GROUNDWATER SCREENING LEVELS
CITY OF PORTLAND
10505 NORTH PORTLAND ROAD
BACKFILLED RETENTION PONDS
PORTLAND, OREGON

Analyte	Maximum Concentration of Detected Analytes	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Industrial Maximum Allowable Soil Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Industrial Sites	OAR 340-122-045 DEQ Oregon Soil Cleanup Table Appendix 1 Groundwater Reference Concentration [1]	EPA Region 9 Preliminary Remediation Goals (PRGs) Tap Water
Analytes Detected in Groundwater					
SEMI-VOCs (ug/L)					
Test Pit TP-6 Only					
2-methylnaphthalene	14.7	NA	NA	NA	NA
3-,-methylphenol	10.1	NA	NA	NA	1,800
acenaphthene	10.5	NA	NA	2,000	370
anthracene	11.3	NA	NA	10,000	1,800
bis(2-ethylhexyl)phthalate	**63.7**	NA	NA	4	**4.8**
fluoranthene	16.6	NA	NA	1,000	1,500
naphthalene	**23.3**	NA	NA	100	**6.2**
phenanthrene	34.0	NA	NA	NA	NA
phenol	67.1	NA	NA	NA	22,000
pyrene	15.3	NA	NA	1,000	180

1. DEQ Environmental Cleanup Manual, June 1994.
mg/kg Milligrams per kilogram, parts per million.
ug/L Micrograms per liter, parts per billion
mg/L Milligrams per liter, parts per million.
<0.3 Not detected at or above the maximum laboratory method report limit listed.
NA Cleanup level not established or not applicable.
bold Exceeds one or more of the screening levels.



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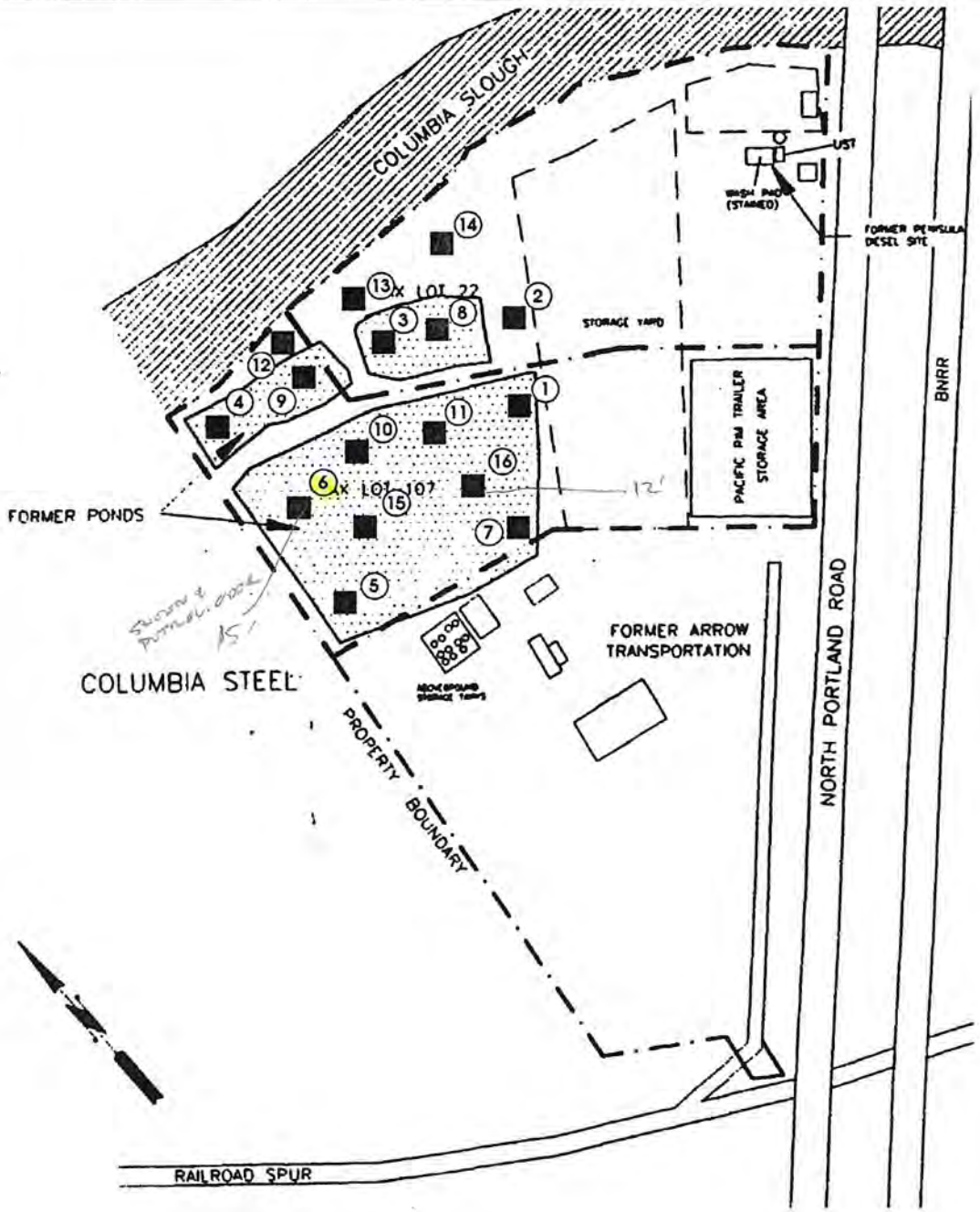
VICINITY MAP
10505 NORTH PORTLAND ROAD
CITY OF PORTLAND BES
PORTLAND, OREGON

Project # 60-5395-01

FIGURE 1



■① Approximate test pit location and designation

Scale Approximate at 1" = 280'

Reference: Site map provided by City of Portland, From Phase II Environemental Investigation, Larsen Property, 10505 North Portland Road, Portland Oregon, Project #850-02, PNG Environemental Inc. Nov. 12, 1999

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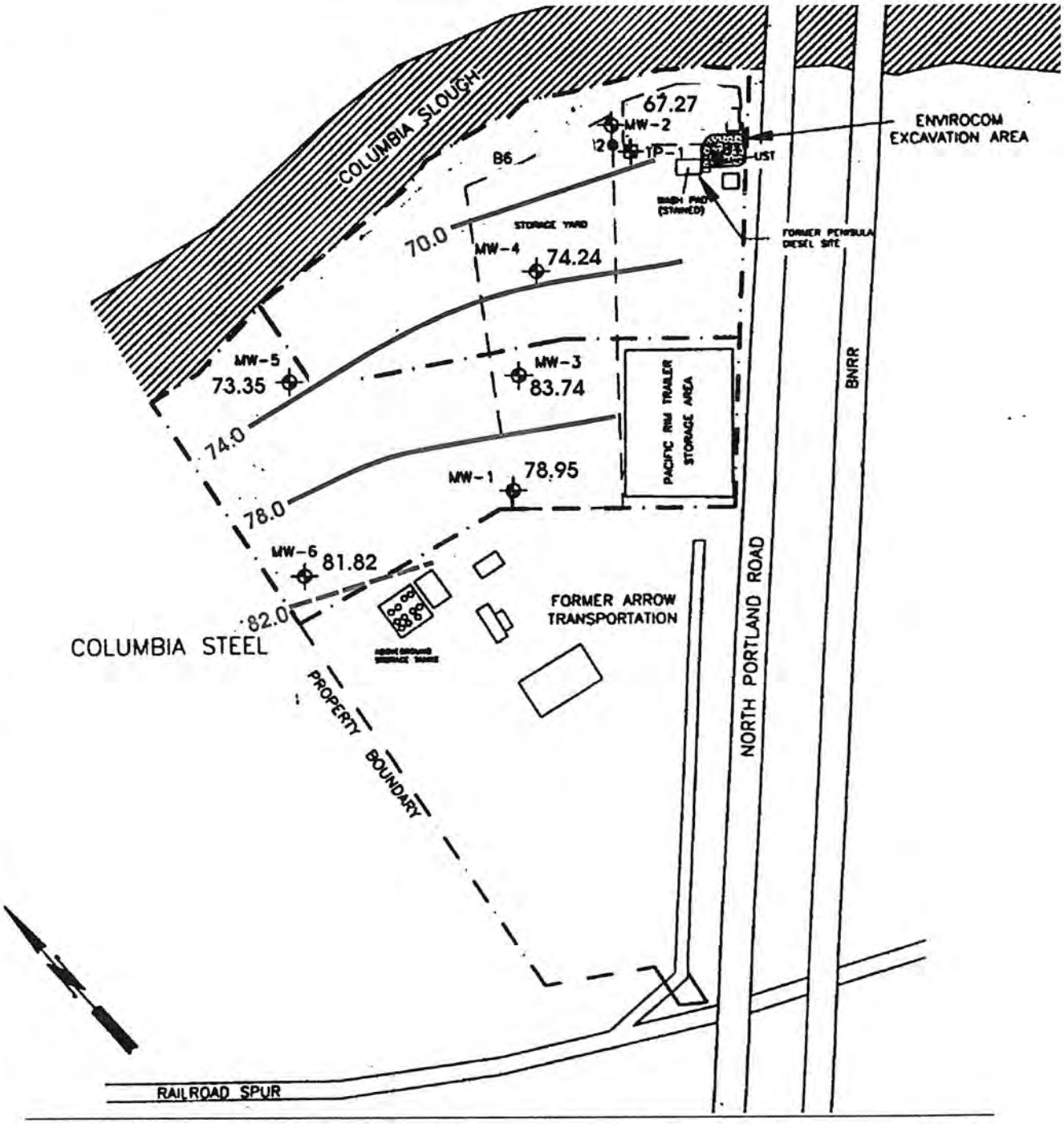
SITE PLAN AND TEST PIT LOCATION MAP
10505 NORTH PORTLAND ROAD
CITY OF PORTLAND BES
PORTLAND, OREGON

Project # 60-5395-01

FIGURE 2



MW-6 ⊕ Monitoring Well Location and Designation (Installed by PNG Environmental Inc.)

81.82 Groundwater Elevation in Feet above mean sea level (msl)

82.0 Groundwater contour (feet above msl) dashed were uncertain

→ Inferred Groundwater flow direction.

Scale Approximate at 1" = 300'

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GROUNDWATER ELEVATION CONTOUR MAP
10505 NORTH PORTLAND ROAD
CITY OF PORTLAND BES
PORTLAND, OREGON

Project # 60-5395-01

FIGURE 3

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

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SOIL CLASSIFICATION LEGEND

Project # 60-5395-01

FIGURE A-1

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay (ML/CL), moist, some concrete and asphalt chunks, no odor.				
			- grades to predominately gray and black				
5			Abundant concrete/asphalt from 6-10', predominately black and gray, faint hydrocarbon odor, concrete up to 3' diameter.		TP-1-7'		PID = 0 ppmv
10			- less concrete				
15					TP-1-19'		PID = 0 ppmv
			Test pit completed at 19' bgs.				
20							
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-1

FIGURE
A-2

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay (ML/CL), brown and gray, moist, with concrete, asphalt, piping, plastic, no odor.				
5					TP-2-5'		PID = 0 ppmv
			Abundant concrete/asphalt from 6-10'				
10			Becomes granular, gray, abundant brick, concrete, wood, no odor. Moisture increases with depth.				
15			- seepage at 17'		TP-2-19'		PID = 0 ppmv
			Test pit completed at 19' bgs.				
20							
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF EXCAVATION. GROUNDWATER CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____

BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-2

FIGURE
A-3

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay (ML/CL), mottled gray and brown with scattered concrete, no odor.				
5			Abundant concrete and brick 6-10'.				PID = 0 ppmv
10			Silty SAND, (SM), gray and black, moist, minor brick, wood and trash debris, no odor. Moisture increases with depth.		TP-3-10'		PID = 0 ppmv
15							
20			- slight seepage - Sandy SILT, moist to wet, olive-gray, no odor. Possible native soil. Test pit completed at 21' bgs.		TP-3-21'		PID = 0 ppmv
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

THIS SUMMARY APPLIES ONLY AT THIS LOCATION AND AT THE TIME OF LOGGING. CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH TIME. DATA PRESENTED IS A SIMPLIFICATION.

APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-3

FIGURE
A-4

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silty/Clay, (ML/CL), moist, mottled light brown with slight gray, scattered debris (plastic, small concrete chunks), no odor.				
5							PID = 0 ppmv
10			Silty/Clay, (ML/CL), gray, moist to wet, some large concrete chunks, scattered wood, brick, no odor.		TP-4-11'		PID = 0 ppmv
15							
20			- seepage at 20'		TP-4-21'		PID = 0 ppmv
25			Test pit completed at 21' bgs.				

DATE EXCAVATED: 5/17/2000
REVIEWED BY: John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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BY: _____ APPROV: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-4

FIGURE
A-5

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silty/Clay, (ML/CL), brown, moist, small concrete chunks, no odor.				
			- becomes gray				
5							PID = 0 ppmv
			Abundant large concrete debris to 3' diameter from 9-12', some seepage				
10					TP-5-11'		PID = 0 ppmv
			Clay/Silt, (CL/ML), with some sand, mottled brown and gray, predominately gray, moist to wet, scattered brick, concrete, wood debris, no odor.				
15							
20							PID = 0 ppmv
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-5

FIGURE
A-6

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), with some sand, black and gray with some brown mottling, moist, some sand, no odor.				
5					TP-6-5'		PID = 0 ppmv
			Abundant concrete debris				
10							
			Water table encountered. Sheen and hydrocarbon odor noted. Sand 20-30%.		TP-6-13'		PID = 30.5 ppmv
15			Test pit terminated at 15' bgs due to excessive soil stockpile runoff.				
20							
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-6

FIGURE
A-7

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			SILT, (ML), brown, moist, abundant cobbles/boulders to 1.5' diameter, no odor.				
5			Silty with some sand, (SM), predominately gray with brown mottling, abundant large concrete and asphalt debris, no odor. - slight seepage at 7'		TP-7-5'		PID = 0 ppmv
10			Large concrete debris, less abundant than above.				
15					TP-7-17'		PID = 0 ppmv
20			Refusal at 19' bgs due to concrete.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-7

FIGURE
A-8

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Clay/Silt, (CL/ML), gray with brown mottling, moist, some sand and gravel, some small concrete chunks, no odor.				
5				▮	TP-8-5'		PID = 0 ppmv
			Black to gray, slight increase in sand, abundant large concrete and asphalt debris, with brick and wood, no odor.				
10							
			- less large debris	▮			PID = 0 ppmv
15							
			Silty Sand/Sandy Silt, (SM/ML), gray, wet, no debris (possible native soil), no odor.				
20					TP-8-19'		PID = 0 ppmv
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▮▮ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-8

FIGURE
A-9

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), moist with some sand, plastic and small concrete debris, no odor.				
5					TP-9-5'		PID = 0 ppmv
			Abundant concrete and asphalt, some brick. Seepage at 8'.				
10					TP-9-11'		PID = 0 ppmv
			Silt/Clay, (ML/CL), with some sand, gray, wet, minor fill debris (wood, brick, rebar), no odor. Moisture increases with depth.				
15							
							PID = 0 ppmv
20			- saturated at 20'				
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY: John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-9

FIGURE
A-10

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), brown with gray mottling, moist, minor pipe and small concrete debris, no odor.				
5							PID = 0 ppmv
			Abundant large concrete, debris, gray, wet. Seepage at 8'.				
10					TP-10-10'		PID = 0 ppmv
			Silt/Clay, (ML/CL), with some sand, gray, moist, minor fill debris (wood, brick), no odor.				
15					TP-10-16'		PID = 11.8 ppmv
20							PID = 0 ppmv
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-10

FIGURE
A-11

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), brown with gray mottling, moist, no odor.				
5					TP-11-5'		PID = 0 ppmv
			Sandy clay/Clayey sand, (SC/CL), gray, wet, large concrete and asphalt, rebar, no odor. Seepage at 10'.				
10					TP-11-11'		PID = 0 ppmv
			Sandy clay, gray, saturated, moderate amount of concrete, wood, no odor.				
15							
20					TP-11-21'		PID = 0 ppmv
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/17/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ *BY:* _____

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-11

FIGURE
A-12

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), brown with slight gray and olive mottling, moist, moderate small concrete debris, no odor.				
5					TP-12-5'		PID = 0 ppmv
10			Silt/Clay, (ML/CL), gray, moist to wet, large concrete up to 3' diameter, pipe, brick, no odor.				
15					TP-12-15'		PID = 0 ppmv
20			Clay, (CL), mottled brown, orange brown and olive, moist to wet, no debris, no odor. Possible native soil.		TP-12-21'		PID = 33 ppmv (possible biorganic)
25			Test pit completed at 21' bgs.				

DATE EXCAVATED: 5/18/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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BY: _____ APPROV: _____

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-12

FIGURE
A-13

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), mottled brown and olive-gray, moist, some small concrete debris, no odor.				
5					TP-13-5'		PID = 0 ppmv
10			Clay/Silt, (CL/ML), gray with brown mottling, moist to wet, abundant large concrete chunks, plastic, large wood, brick, no odor.				
15					TP-13-15'		PID = 0 ppmv
			Silt, (ML), gray, moist to wet, jumbled appearance, no fill debris, slight septic odor.		TP-13-19'		PID = 0 ppmv
20					TP-13-20'		PID = 0 ppmv
			Test pit completed at 21' bgs.				
25							

DATE EXCAVATED: 5/18/2000
REVIEWED BY: John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

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SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-13

FIGURE
A-14

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), brown, moist, abundant large concrete wood, brick, no odor.				
5					TP-14-5'		PID = 0 ppm
10			Clay, (CL), gray, moist to wet, roots and rootlets, organic odor. Possible native soil.		TP-14-12'		PID = 0 ppm
15			Mottled tan and light brown, moist to wet, no odor.				
20					TP-14-20'		PID = 0 ppmv
25			Test pit completed at 20' bgs.				

DATE EXCAVATED: 5/18/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-14

FIGURE
A-15

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), mottled brown and gray, moist, abundant asphalt and concrete, brick.				
5					TP-15-5'		PID = 0 ppmv
10			Sandy clay, (CL), abundant rounded cobbles, mottled brown and gray. Fast seepage at 9'.				
			Clay, (CL), dark gray, moist to wet, some concrete.		TP-15-12'		PID = 0 ppmv
15			Silt/Clay, (ML/CL), mottled gray and brown, moist to wet, few scattered large asphalt and concrete chunks.				
20					TP-15-21'		PID = 0 ppmv
25			Test pit completed at 21' bgs.				

DATE EXCAVATED: 5/18/2000
REVIEWED BY: John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-15

FIGURE
A-16

DEPTH (feet)	NAME	SYMBOL	SOIL DESCRIPTION NOTES:	SAMPLE	SAMPLE NUMBER	MOISTURE CONTENT %	OTHER TESTS*
0			Silt/Clay, (ML/CL), with some sand, brown with some gray mottling, moist, no odor. Moderate amount of concrete chunks.				
5					TP-16-5'		PID = 0 ppmv
			Silt/Clay, (ML/CL), gray, wet, abundant large concrete chunks, no odor.				
10			- abundant rounded cobbles, abundant seepage		TP-16-9'		PID = 0 ppmv
			Test pit terminated at 12' due to excessive soil stockpile runoff.				
15							
20							
25							

DATE EXCAVATED: 5/18/2000
REVIEWED BY:John Day

LOGGED BY: D. Lamadrid
EQUIPMENT: Kobelco Trackhoe

+ **SAMPLE TYPE:** ☒ *Bulk* ▮ *Grab* ▯ *Shelby Tube*

***TESTS:** *M=Moisture Content(%), D=Dry Density(pcf), Tv=Torvane, Pp=Pocket Penetrometer, G=Grain Size, G2=% Passing No. 200 Sieve, A=Atterberg Limits*

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APPROV: _____ BY: _____

KLEINFELDER
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
SOILS AND MATERIALS TESTING

PROJECT NO. *60-5395-01*

City of Portland
10505 N. Portland Road
Portland, Oregon
TEST PIT LOG TP-16

FIGURE
A-17

KLEINFELDER

sheet 1 of 2

PROJECT NO. 60-539 5.01

PROJECT NAME 10505 N Portland Road

L.P. NO. (P.O. NO.)

SAMPLERS: (Signature/Number) David Lamadrid

RECEIVING LAB: City of Portland

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS: VOCs (8260)	Semi-VOCs (8270)	Total RCRA 8 Metals	Dissolved RCRA 8 Metals	INSTRUCTIONS/REMARKS
1	5/17/00	0845	TP-1-7'	Soil	4	4	X	X	X		LAB 000697
2		0900	TP-1-19'		4	4	X	X	X		LAB 000698
3		0925	TP-2-5'		4	4	X	X	X		LAB 000699
4		0940	TP-2-19'		4	4	X	X	X		LAB 000700
5		1010	TP-3-10'		1	4	X	X	X		LAB 000701
6		1025	TP-3-21'			4	X	X	X		LAB 000702
7		1045	TP-4-11'			4	X	X	X		LAB 000703
8		1050	TP-4-21'			4	X	X	X		LAB 000704
9		1115	TP-5-11'			4	X	X	X		LAB 000705
10		1145	TP-5-21'		4	4	X	X	X		LAB 000706
11		1200	TP-6-5'		4	4	X	X	X		LAB 000707
12		1215	TP-6-13'		2	4	X	X	X		LAB 000708
13		1250	TP-7-5'		0	4	X	X	X		LAB 000709
14		1300	TP-7-17'		2	4	X	X	X		LAB 000710
15		1355	TP-8-5'			4	X	X	X		LAB 000711
16		1405	TP-8-19'			4	X	X	X		LAB 000712
17		1430	TP-9-5'			4	X	X	X		LAB 000713
18		1435	TP-9-11'			4	X	X	X		LAB 000714
19		1500	TP-10-10'			4	X	X	X		LAB 000715
20		1505	TP-10-16'			4	X	X	X		LAB 000716

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[signature]	5/17/00 0750	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Day

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

No. 0832

Standard 5070.000 5/17/00

sheet 2 of 2

KLEINFELDER

PROJECT NO.	PROJECT NAME
60-5395-01	10505 N Portland Road

L.P. NO. (P.O. NO.)

SAMPLERS: (Signature/Number) David Lamadrid

RECEIVING LAB: City of Portland

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS: VOCs (8260)	Semi-VOCs (8270)	Total RCRA 8 metals	Dissolved RCRA 8 metals	INSTRUCTIONS/REMARKS
1	5/17/00	1530	TP-11-5'	Soil	1	4					LAB 000717
2	"	1535	TP-11-11'	Soil	1	4	X	X	X		LAB 000718
3	"	1550	TP-11-21'	Soil	1	4	X	X	X		LAB 000719
4											
5	"	1220	TP-6	WATER		5	X	X		X	LAB 000720
6											
7											
8											
9											
10											
11											
12											
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16											
17											
18											
19											
20											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
David Lamadrid	5/19/00 0750	J. Cooke
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Day

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 0833

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 8:45	**System ID**	AE04608	**Sample ID**	**LAB000697**

		Page:	1
Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-1-7 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.62	mg/Kg	0.025	EPA 6020
BARIUM	120	mg/Kg	1.0	EPA 6010
CADMIUM	0.078	mg/Kg	0.025	EPA 6020
CHROMIUM	24	mg/Kg	1.0	EPA 6010
LEAD	7.8	mg/Kg	3.0	EPA 6010
MERCURY	0.0075	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 8:45	**System ID**	AE04608	**Sample ID**	LAB000697

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-7 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	8:45	System ID	AE04608	Sample ID	LAB000697

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-7 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 8:45	**System ID**	AE04608	**Sample ID**	**LAB000697**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-7 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	6440	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	8:45	**System ID** AE04608	**Sample ID**	**LAB000697**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-1-7 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000697

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:00	**System ID**	AE04609	**Sample ID**	**LAB000698**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	7.19	mg/Kg	0.025	EPA 6020
BARIUM	220	mg/Kg	1.0	EPA 6010
CADMIUM	0.26	mg/Kg	0.025	EPA 6020
CHROMIUM	24	mg/Kg	1.0	EPA 6010
LEAD	74	mg/Kg	3.0	EPA 6010
MERCURY	0.030	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 9:00 **System ID** AE04609 **Sample ID** **LAB000698**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:00	**System ID**	AE04609	**Sample ID**	**LAB000698**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	9:00	System ID	AE04609	Sample ID	LAB000698

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-1-19 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1140	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:00	**System ID**	AE04609	**Sample ID**	**LAB000698**

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-1-19 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000698

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	9:25	System ID	AE04610	Sample ID	LAB000699

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-2-5 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	6.93	mg/Kg	0.025	EPA 6020
BARIUM	110	mg/Kg	1.0	EPA 6010
CADMIUM	0.40	mg/Kg	0.025	EPA 6020
CHROMIUM	22	mg/Kg	1.0	EPA 6010
LEAD	24	mg/Kg	3.0	EPA 6010
MERCURY	0.030	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4,6-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Chlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylnaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitrophenol	<3.30	mg/Kg	3.30	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
3-Nitroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:25	**System ID**	AE04610	**Sample ID**	**LAB000699**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-2-5 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B
4-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<3.30	mg/Kg	3.30	EPA 8270B
Acenaphthylene	<3.30	mg/Kg	3.30	EPA 8270B
Anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(b)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(g,h,i)perylene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(k)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzoic acid	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl alcohol	<3.30	mg/Kg	3.30	EPA 8270B
Benzyl butyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethoxy) methane	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroisopropyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<3.30	mg/Kg	3.30	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzo(a,h)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzofuran	<3.30	mg/Kg	3.30	EPA 8270B
Diethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dimethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Fluoranthene	3.83	mg/Kg	3.30	EPA 8270B
Fluorene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 9:25 **System ID** AE04610 **Sample ID** LAB000699

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Isophorone	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodi-n-propylamine	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodiphenylamine	<3.30	mg/Kg	3.30	EPA 8270B
Naphthalene	<3.30	mg/Kg	3.30	EPA 8270B
Nitrobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<3.30	mg/Kg	3.30	EPA 8270B
Phenol	<3.30	mg/Kg	3.30	EPA 8270B
Pyrene	3.98	mg/Kg	3.30	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:25	**System ID**	AE04610	**Sample ID**	**LAB000699**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1170	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	9:25	**System ID** AE04610	**Sample ID**	**LAB000699**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000699

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 9:40	**System ID**	AE04611	**Sample ID**	**LAB000700**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	6.45	mg/Kg	0.025	EPA 6020
BARIUM	120	mg/Kg	1.0	EPA 6010
CADMIUM	0.19	mg/Kg	0.025	EPA 6020
CHROMIUM	14	mg/Kg	1.0	EPA 6010
LEAD	76	mg/Kg	3.0	EPA 6010
MERCURY	4.88	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4,6-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Chlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylnaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitrophenol	<3.30	mg/Kg	3.30	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
3-Nitroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	9:40	**System ID** AE04611	**Sample ID**	**LAB000700**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B
4-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<3.30	mg/Kg	3.30	EPA 8270B
Acenaphthylene	<3.30	mg/Kg	3.30	EPA 8270B
Anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(b)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(g,h,i)perylene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(k)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzoic acid	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl alcohol	<3.30	mg/Kg	3.30	EPA 8270B
Benzyl butyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethoxy) methane	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroisopropyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<3.30	mg/Kg	3.30	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzo(a,h)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzofuran	<3.30	mg/Kg	3.30	EPA 8270B
Diethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dimethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Fluorene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 9:40 **System ID** AE04611 **Sample ID** LAB000700

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Isophorone	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodi-n-propylamine	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodiphenylamine	<3.30	mg/Kg	3.30	EPA 8270B
Naphthalene	<3.30	mg/Kg	3.30	EPA 8270B
Nitrobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<3.30	mg/Kg	3.30	EPA 8270B
Phenol	<3.30	mg/Kg	3.30	EPA 8270B
Pyrene	<3.30	mg/Kg	3.30	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	9:40	System ID	AE04611	Sample ID	LAB000700

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-19 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1850	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 9:40 **System ID** AE04611 **Sample ID** **LAB000700**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-2-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	408	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	126	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000700

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:10 **System ID** AE04612 **Sample ID** **LAB000701**

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	7.70	mg/Kg	0.025	EPA 6020
BARIUM	180	mg/Kg	1.0	EPA 6010
CADMIUM	0.20	mg/Kg	0.025	EPA 6020
CHROMIUM	26	mg/Kg	1.0	EPA 6010
LEAD	31	mg/Kg	3.0	EPA 6010
MERCURY	0.077	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:10	**System ID**	AE04612	**Sample ID**	**LAB000701**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	1.11	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:10 **System ID** AE04612 **Sample ID** **LAB000701**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	0.670	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	1.34	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:10	**System ID**	AE04612	**Sample ID**	**LAB000701**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1100	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:10	**System ID**	AE04612	**Sample ID**	**LAB000701**

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-3-10 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000701

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:25 **System ID** AE04613 **Sample ID** LAB000702

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	5.33	mg/Kg	0.025	EPA 6020
BARIUM	220	mg/Kg	1.0	EPA 6010
CADMIUM	0.19	mg/Kg	0.025	EPA 6020
CHROMIUM	31	mg/Kg	1.0	EPA 6010
LEAD	20	mg/Kg	3.0	EPA 6010
MERCURY	0.027	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:25 **System ID** AE04613 **Sample ID** **LAB000702**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:25	**System ID**	AE04613	**Sample ID**	**LAB000702**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	10:25	**System ID** AE04613	**Sample ID**	**LAB000702**

		Page:	4
Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-3-21 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1370	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:25	**System ID**	AE04613	**Sample ID**	**LAB000702**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-3-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000702

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:45 **System ID** AE04614 **Sample ID** LAB000703

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	4.91	mg/Kg	0.025	EPA 6020
BARIUM	170	mg/Kg	1.0	EPA 6010
CADMIUM	0.17	mg/Kg	0.025	EPA 6020
CHROMIUM	25	mg/Kg	1.0	EPA 6010
LEAD	22	mg/Kg	3.0	EPA 6010
MERCURY	0.032	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	10:45	System ID	AE04614	Sample ID	LAB000703

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-11 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 10:45 **System ID** AE04614 **Sample ID** LAB000703

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-11 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 10:45	**System ID**	AE04614	**Sample ID**	**LAB000703**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-11 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1250	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	10:45	**System ID** AE04614	**Sample ID**	**LAB000703**

		Page:	5
Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-4-11 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000703

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report
PRELIMINARY

Sample Date/Time	5/17/00	10:50	System ID	AE04615	Sample ID	LAB000704

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: INCOMPLETE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

TCLP-Pb pending

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	4.97	mg/Kg	0.025	EPA 6020
BARIUM	190	mg/Kg	1.0	EPA 6010
CADMIUM	0.25	mg/Kg	0.025	EPA 6020
CHROMIUM	26	mg/Kg	1.0	EPA 6010
LEAD	130	mg/Kg	3.0	EPA 6010
MERCURY	0.053	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report
PRELIMINARY

Sample Date/Time	5/17/00 10:50	**System ID**	AE04615	**Sample ID**	**LAB000704**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-4-21 PROJECT 6064	**Sample Status:**	INCOMPLETE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report
PRELIMINARY

Sample Date/Time 5/17/00 10:50 **System ID** AE04615 **Sample ID** **LAB000704**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: INCOMPLETE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report
PRELIMINARY

Sample Date/Time	5/17/00	10:50	System ID	AE04615	Sample ID	LAB000704

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-4-21 PROJECT 6064	**Sample Status:**	INCOMPLETE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1070	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report
PRELIMINARY

Sample Date/Time 5/17/00 10:50 **System ID** AE04615 **Sample ID** **LAB000704**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-4-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: INCOMPLETE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000704

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 11:15	**System ID**	AE04616	**Sample ID**	**LAB000705**

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-5-11 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.76	mg/Kg	0.025	EPA 6020
BARIUM	150	mg/Kg	1.0	EPA 6010
CADMIUM	0.080	mg/Kg	0.025	EPA 6020
CHROMIUM	27	mg/Kg	1.0	EPA 6010
LEAD	7.4	mg/Kg	3.0	EPA 6010
MERCURY	0.021	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 11:15 **System ID** AE04616 **Sample ID** **LAB000705**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-5-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 11:15 **System ID** AE04616 **Sample ID** **LAB000705**

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Address/Location: 10505 N NORTH PORTLAND RD
TP-5-11 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 11:15 **System ID** AE04616 **Sample ID** LAB000705

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-5-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1010	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 11:15	**System ID**	AE04616	**Sample ID**	**LAB000705**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-5-11 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000705

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	11:45	**System ID** AE04617	**Sample ID**	**LAB000706**

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-5-21 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	6.94	mg/Kg	0.025	EPA 6020
BARIUM	150	mg/Kg	1.0	EPA 6010
CADMIUM	0.27	mg/Kg	0.025	EPA 6020
CHROMIUM	23	mg/Kg	1.0	EPA 6010
LEAD	13	mg/Kg	3.0	EPA 6010
MERCURY	0.025	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 11:45	**System ID**	AE04617	**Sample ID**	**LAB000706**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-5-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 11:45 **System ID** AE04617 **Sample ID** LAB000706

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-5-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 11:45	**System ID**	AE04617	**Sample ID**	**LAB000706**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-5-21 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1060	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 11:45 **System ID** AE04617 **Sample ID** LAB000706

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-5-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000706

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	12:00	System ID	AE04618	Sample ID	LAB000707

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	20.9	mg/Kg	0.025	EPA 6020
BARIUM	210	mg/Kg	1.0	EPA 6010
CADMIUM	0.13	mg/Kg	0.025	EPA 6020
CHROMIUM	30	mg/Kg	1.0	EPA 6010
LEAD	17	mg/Kg	3.0	EPA 6010
MERCURY	0.037	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.30	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 12:00 **System ID** AE04618 **Sample ID** LAB000707

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	12:00	System ID	AE04618	Sample ID	LAB000707

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	12:00	**System ID** AE04618	**Sample ID**	**LAB000707**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1210	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	12:00	**System ID** AE04618	**Sample ID**	**LAB000707**

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Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-6-5 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000707

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:15	**System ID**	AE04619	**Sample ID**	**LAB000708**

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-13 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	21.7	mg/Kg	0.025	EPA 6020
BARIUM	140	mg/Kg	1.0	EPA 6010
CADMIUM	3.36	mg/Kg	0.025	EPA 6020
CHROMIUM	45	mg/Kg	1.0	EPA 6010
LEAD	81	mg/Kg	3.0	EPA 6010
MERCURY	0.13	mg/Kg	0.003	EPA 7471
SELENIUM	<0.30	mg/Kg	0.30	EPA 6020
SILVER	<0.32	mg/Kg	0.32	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<26.9	mg/Kg	26.9	EPA 8270B
1,2-Dichlorobenzene	<81.5	mg/Kg	81.5	EPA 8270B
1,3-Dichlorobenzene	<81.5	mg/Kg	81.5	EPA 8270B
1,4-Dichlorobenzene	<81.5	mg/Kg	81.5	EPA 8270B
2,4,5-Trichlorophenol	<26.9	mg/Kg	26.9	EPA 8270B
2,4,6-Trichlorophenol	<26.9	mg/Kg	26.9	EPA 8270B
2,4-Dichlorophenol	<26.9	mg/Kg	26.9	EPA 8270B
2,4-Dimethylphenol	<81.5	mg/Kg	81.5	EPA 8270B
2,4-Dinitrophenol	<163	mg/Kg	163	EPA 8270B
2,4-Dinitrotoluene	<40.8	mg/Kg	40.8	EPA 8270B
2,6-Dinitrotoluene	<40.8	mg/Kg	40.8	EPA 8270B
2-Chloronaphthalene	<26.9	mg/Kg	26.9	EPA 8270B
2-Chlorophenol	<26.9	mg/Kg	26.9	EPA 8270B
2-Methylnaphthalene	<26.9	mg/Kg	26.9	EPA 8270B
2-Methylphenol	<26.9	mg/Kg	26.9	EPA 8270B
2-Nitroaniline	<26.9	mg/Kg	26.9	EPA 8270B
2-Nitrophenol	<26.9	mg/Kg	26.9	EPA 8270B
3,3'-Dichlorobenzidine	<81.5	mg/Kg	81.5	EPA 8270B
3-Nitroaniline	<81.5	mg/Kg	81.5	EPA 8270B
4,6-Dinitro-2-methylphenol	<81.5	mg/Kg	81.5	EPA 8270B
4-Bromophenylphenyl ether	<26.9	mg/Kg	26.9	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:15	**System ID**	AE04619	**Sample ID**	**LAB000708**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-13 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<26.9	mg/Kg	26.9	EPA 8270B
4-Chloroaniline	<163	mg/Kg	163	EPA 8270B
4-Chlorophenylphenyl ether	<26.9	mg/Kg	26.9	EPA 8270B
4-Methylphenol	<26.9	mg/Kg	26.9	EPA 8270B
4-Nitroaniline	<26.9	mg/Kg	26.9	EPA 8270B
4-Nitrophenol	<81.5	mg/Kg	81.5	EPA 8270B
Acenaphthene	<26.9	mg/Kg	26.9	EPA 8270B
Acenaphthylene	<26.9	mg/Kg	26.9	EPA 8270B
Anthracene	<26.9	mg/Kg	26.9	EPA 8270B
Benzo(a)anthracene	<26.9	mg/Kg	26.9	EPA 8270B
Benzo(a)pyrene	<26.9	mg/Kg	26.9	EPA 8270B
Benzo(b)fluoranthene	<26.9	mg/Kg	26.9	EPA 8270B
Benzo(g,h,i)perylene	<26.9	mg/Kg	26.9	EPA 8270B
Benzo(k)fluoranthene	<26.9	mg/Kg	26.9	EPA 8270B
Benzoic acid	<81.5	mg/Kg	81.5	EPA 8270B
Benzyl alcohol	<26.9	mg/Kg	26.9	EPA 8270B
Benzyl butyl phthalate	<26.9	mg/Kg	26.9	EPA 8270B
Bis(2-chloroethoxy) methane	<26.9	mg/Kg	26.9	EPA 8270B
Bis(2-chloroethyl) ether	<26.9	mg/Kg	26.9	EPA 8270B
Bis(2-chloroisopropyl) ether	<26.9	mg/Kg	26.9	EPA 8270B
Bis(2-ethylhexyl) phthalate	<163	mg/Kg	163	EPA 8270B
Chrysene	<26.9	mg/Kg	26.9	EPA 8270B
Di-n-butyl phthalate	<81.5	mg/Kg	81.5	EPA 8270B
Di-n-octyl phthalate	<26.9	mg/Kg	26.9	EPA 8270B
Dibenzo(a,h)anthracene	<26.9	mg/Kg	26.9	EPA 8270B
Dibenzofuran	<26.9	mg/Kg	26.9	EPA 8270B
Diethyl phthalate	<26.9	mg/Kg	26.9	EPA 8270B
Dimethyl phthalate	<26.9	mg/Kg	26.9	EPA 8270B
Fluoranthene	<26.9	mg/Kg	26.9	EPA 8270B
Fluorene	<26.9	mg/Kg	26.9	EPA 8270B
Hexachlorobenzene	<26.9	mg/Kg	26.9	EPA 8270B
Hexachlorobutadiene	<81.5	mg/Kg	81.5	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 12:15 **System ID** AE04619 **Sample ID** **LAB000708**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-13 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<81.5	mg/Kg	81.5	EPA 8270B
Hexachloroethane	<81.5	mg/Kg	81.5	EPA 8270B
Indeno(1,2,3-cd)pyrene	<26.9	mg/Kg	26.9	EPA 8270B
Isophorone	<26.9	mg/Kg	26.9	EPA 8270B
N-Nitrosodi-n-propylamine	<26.9	mg/Kg	26.9	EPA 8270B
N-Nitrosodiphenylamine	<26.9	mg/Kg	26.9	EPA 8270B
Naphthalene	<26.9	mg/Kg	26.9	EPA 8270B
Nitrobenzene	<26.9	mg/Kg	26.9	EPA 8270B
Pentachlorophenol	<81.5	mg/Kg	81.5	EPA 8270B
Phenanthrene	28.9	mg/Kg	26.9	EPA 8270B
Phenol	<26.9	mg/Kg	26.9	EPA 8270B
Pyrene	<26.9	mg/Kg	26.9	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<204	µg/Kg	204	EPA 8260B
1,1,1-Trichloroethane	<204	µg/Kg	204	EPA 8260B
1,1,2,2-Tetrachloroethane	<204	µg/Kg	204	EPA 8260B
1,1,2-Trichloroethane	249	µg/Kg	204	EPA 8260B
1,1-Dichloroethane	<204	µg/Kg	204	EPA 8260B
1,1-Dichloroethene	<204	µg/Kg	204	EPA 8260B
1,1-Dichloropropene	<204	µg/Kg	204	EPA 8260B
1,2,3-Trichlorobenzene	<204	µg/Kg	204	EPA 8260B
1,2,3-Trichloropropane	<204	µg/Kg	204	EPA 8260B
1,2,4-Trichlorobenzene	<204	µg/Kg	204	EPA 8260B
1,2,4-Trimethylbenzene	2470	µg/Kg	204	EPA 8260B
1,2-Dibromo-3-chloropropane	<1020	µg/Kg	1020	EPA 8260B
1,2-Dibromoethane	<204	µg/Kg	204	EPA 8260B
1,2-Dichlorobenzene	1100	µg/Kg	204	EPA 8260B
1,2-Dichloroethane	<204	µg/Kg	204	EPA 8260B
1,2-Dichloropropane	<204	µg/Kg	204	EPA 8260B
1,3,5-Trimethylbenzene	<204	µg/Kg	204	EPA 8260B
1,3-Dichlorobenzene	<204	µg/Kg	204	EPA 8260B
1,3-Dichloropropane	<204	µg/Kg	204	EPA 8260B

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Report Date: 6/13/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:15	**System ID**	AE04619	**Sample ID**	**LAB000708**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-13 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	1460	µg/Kg	204	EPA 8260B
2,2-Dichloropropane	<204	µg/Kg	204	EPA 8260B
2-Butanone	<2040	µg/Kg	2040	EPA 8260B
2-Chlorotoluene	<204	µg/Kg	204	EPA 8260B
2-Hexanone	<2040	µg/Kg	2040	EPA 8260B
4-Chlorotoluene	<204	µg/Kg	204	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<1020	µg/Kg	1020	EPA 8260B
Acetone	<2040	µg/Kg	2040	EPA 8260B
Benzene	<204	µg/Kg	204	EPA 8260B
Bromobenzene	<204	µg/Kg	204	EPA 8260B
Bromochloromethane	<204	µg/Kg	204	EPA 8260B
Bromodichloromethane	<204	µg/Kg	204	EPA 8260B
Bromoform	<204	µg/Kg	204	EPA 8260B
Bromomethane	<1020	µg/Kg	1020	EPA 8260B
Carbon disulfide	<2040	µg/Kg	2040	EPA 8260B
Carbon tetrachloride	<204	µg/Kg	204	EPA 8260B
Chlorobenzene	8650	µg/Kg	204	EPA 8260B
Chloroethane	<204	µg/Kg	204	EPA 8260B
Chloroform	<204	µg/Kg	204	EPA 8260B
Chloromethane	<1020	µg/Kg	1020	EPA 8260B
cis-1,2-Dichloroethene	<204	µg/Kg	204	EPA 8260B
cis-1,3-Dichloropropene	<204	µg/Kg	204	EPA 8260B
Dibromochloromethane	<204	µg/Kg	204	EPA 8260B
Dibromomethane	<204	µg/Kg	204	EPA 8260B
Dichlorodifluoromethane	<1020	µg/Kg	1020	EPA 8260B
Ethylbenzene	<204	µg/Kg	204	EPA 8260B
Hexachlorobutadiene	<408	µg/Kg	408	EPA 8260B
Isopropylbenzene	402	µg/Kg	204	EPA 8260B
m,p-Xylene	2040	µg/Kg	408	EPA 8260B
Methylene chloride	<1020	µg/Kg	1020	EPA 8260B
n-Butylbenzene	571	µg/Kg	204	EPA 8260B
n-Propylbenzene	646	µg/Kg	204	EPA 8260B

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Report Date: 6/13/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:15	**System ID**	AE04619	**Sample ID**	**LAB000708**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6-13 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
Naphthalene	3020	µg/Kg	204	EPA 8260B
o-Xylene	1350	µg/Kg	204	EPA 8260B
p-Isopropyltoluene	642	µg/Kg	204	EPA 8260B
sec-Butylbenzene	232	µg/Kg	204	EPA 8260B
Styrene	<204	µg/Kg	204	EPA 8260B
tert-Butylbenzene	<204	µg/Kg	204	EPA 8260B
Tetrachloroethene	<204	µg/Kg	204	EPA 8260B
Toluene	<204	µg/Kg	204	EPA 8260B
trans-1,2-Dichloroethene	<204	µg/Kg	204	EPA 8260B
trans-1,3-Dichloropropene	<204	µg/Kg	204	EPA 8260B
Trichloroethene	<204	µg/Kg	204	EPA 8260B
Trichlorofluoromethane	<204	µg/Kg	204	EPA 8260B
Vinyl chloride	<204	µg/Kg	204	EPA 8260B

End of Report for Sample ID: LAB000708

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Report Date: 6/13/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:50	**System ID**	AE04620	**Sample ID**	**LAB000709**

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.69	mg/Kg	0.025	EPA 6020
BARIUM	130	mg/Kg	1.0	EPA 6010
CADMIUM	0.13	mg/Kg	0.025	EPA 6020
CHROMIUM	18	mg/Kg	1.0	EPA 6010
LEAD	27	mg/Kg	3.0	EPA 6010
MERCURY	0.040	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 12:50 **System ID** AE04620 **Sample ID** **LAB000709**

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:50	**System ID**	AE04620	**Sample ID**	**LAB000709**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 12:50 **System ID** AE04620 **Sample ID** **LAB000709**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1220	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 12:50	**System ID**	AE04620	**Sample ID**	**LAB000709**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000709

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	13:00	System ID	AE04621	Sample ID	LAB000710

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-17 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.56	mg/Kg	0.025	EPA 6020
BARIUM	80	mg/Kg	1.0	EPA 6010
CADMIUM	0.11	mg/Kg	0.025	EPA 6020
CHROMIUM	21	mg/Kg	1.0	EPA 6010
LEAD	17	mg/Kg	3.0	EPA 6010
MERCURY	0.024	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:00 **System ID** AE04621 **Sample ID** **LAB000710**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-17 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	0.950	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:00 **System ID** AE04621 **Sample ID** LAB000710

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-17 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	0.872	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 13:00	**System ID**	AE04621	**Sample ID**	**LAB000710**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-17 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1220	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:00 **System ID** AE04621 **Sample ID** **LAB000710**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-7-17 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000710

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:55 **System ID** AE04622 **Sample ID** **LAB000711**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	6.38	mg/Kg	0.025	EPA 6020
BARIUM	130	mg/Kg	1.0	EPA 6010
CADMIUM	0.17	mg/Kg	0.025	EPA 6020
CHROMIUM	20	mg/Kg	1.0	EPA 6010
LEAD	9.9	mg/Kg	3.0	EPA 6010
MERCURY	0.018	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:55 **System ID** AE04622 **Sample ID** **LAB000711**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 13:55	**System ID**	AE04622	**Sample ID**	**LAB000711**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 13:55 **System ID** AE04622 **Sample ID** **LAB000711**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1320	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 13:55	**System ID**	AE04622	**Sample ID**	**LAB000711**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000711

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:05 **System ID** AE04623 **Sample ID** **LAB000712**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	3.56	mg/Kg	0.025	EPA 6020
BARIUM	110	mg/Kg	1.0	EPA 6010
CADMIUM	0.12	mg/Kg	0.025	EPA 6020
CHROMIUM	17	mg/Kg	1.0	EPA 6010
LEAD	7.3	mg/Kg	3.0	EPA 6010
MERCURY	0.011	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:05 **System ID** AE04623 **Sample ID** **LAB000712**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:05 **System ID** AE04623 **Sample ID** **LAB000712**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:05 **System ID** AE04623 **Sample ID** **LAB000712**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-8-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1300	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 14:05	**System ID**	AE04623	**Sample ID**	**LAB000712**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-8-19 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000712

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 14:30	**System ID**	AE04624	**Sample ID**	**LAB000713**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	3.00	mg/Kg	0.025	EPA 6020
BARIUM	110	mg/Kg	1.0	EPA 6010
CADMIUM	0.13	mg/Kg	0.025	EPA 6020
CHROMIUM	18	mg/Kg	1.0	EPA 6010
LEAD	18	mg/Kg	3.0	EPA 6010
MERCURY	0.021	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4,6-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Chlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylnaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitrophenol	<3.30	mg/Kg	3.30	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
3-Nitroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:30 **System ID** AE04624 **Sample ID** **LAB000713**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B
4-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<3.30	mg/Kg	3.30	EPA 8270B
Acenaphthylene	<3.30	mg/Kg	3.30	EPA 8270B
Anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(b)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(g,h,i)perylene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(k)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzoic acid	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl alcohol	<3.30	mg/Kg	3.30	EPA 8270B
Benzyl butyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethoxy) methane	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroisopropyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<3.30	mg/Kg	3.30	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzo(a,h)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzofuran	<3.30	mg/Kg	3.30	EPA 8270B
Diethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dimethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Fluorene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	14:30	System ID	AE04624	Sample ID	LAB000713

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Isophorone	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodi-n-propylamine	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodiphenylamine	<3.30	mg/Kg	3.30	EPA 8270B
Naphthalene	<3.30	mg/Kg	3.30	EPA 8270B
Nitrobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<3.30	mg/Kg	3.30	EPA 8270B
Phenol	<3.30	mg/Kg	3.30	EPA 8270B
Pyrene	<3.30	mg/Kg	3.30	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	14:30	**System ID** AE04624	**Sample ID**	**LAB000713**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1160	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 14:30	**System ID**	AE04624	**Sample ID**	**LAB000713**

		Page:	5
Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-9-5 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000713

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:35 **System ID** AE04625 **Sample ID** **LAB000714**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	6.04	mg/Kg	0.025	EPA 6020
BARIUM	200	mg/Kg	1.0	EPA 6010
CADMIUM	0.11	mg/Kg	0.025	EPA 6020
CHROMIUM	25	mg/Kg	1.0	EPA 6010
LEAD	17	mg/Kg	3.0	EPA 6010
MERCURY	0.017	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
1,2-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,3-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,4-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
2,4,5-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4,6-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dimethylphenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dinitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2,6-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2-Chloronaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Chlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylnaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitrophenol	<1.65	mg/Kg	1.65	EPA 8270B
3,3'-Dichlorobenzidine	<5.00	mg/Kg	5.00	EPA 8270B
3-Nitroaniline	<5.00	mg/Kg	5.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Bromophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:35 **System ID** AE04625 **Sample ID** **LAB000714**

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Chloroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4-Chlorophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B
4-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthene	<1.65	mg/Kg	1.65	EPA 8270B
Acenaphthylene	<1.65	mg/Kg	1.65	EPA 8270B
Anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(b)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(g,h,i)perylene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(k)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzoic acid	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl alcohol	<1.65	mg/Kg	1.65	EPA 8270B
Benzyl butyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethoxy) methane	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroisopropyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-ethylhexyl) phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Chrysene	<1.65	mg/Kg	1.65	EPA 8270B
Di-n-butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-octyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzo(a,h)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzofuran	<1.65	mg/Kg	1.65	EPA 8270B
Diethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dimethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Fluorene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobutadiene	<5.00	mg/Kg	5.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 14:35 **System ID** AE04625 **Sample ID** **LAB000714**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachloroethane	<5.00	mg/Kg	5.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Isophorone	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodi-n-propylamine	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodiphenylamine	<1.65	mg/Kg	1.65	EPA 8270B
Naphthalene	<1.65	mg/Kg	1.65	EPA 8270B
Nitrobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Pentachlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
Phenanthrene	<1.65	mg/Kg	1.65	EPA 8270B
Phenol	<1.65	mg/Kg	1.65	EPA 8270B
Pyrene	<1.65	mg/Kg	1.65	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	14:35	System ID	AE04625	Sample ID	LAB000714

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-11 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1230	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	14:35	System ID	AE04625	Sample ID	LAB000714

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-9-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000714

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:00 **System ID** AE04626 **Sample ID** **LAB000715**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	5.25	mg/Kg	0.025	EPA 6020
BARIUM	150	mg/Kg	1.0	EPA 6010
CADMIUM	0.14	mg/Kg	0.025	EPA 6020
CHROMIUM	27	mg/Kg	1.0	EPA 6010
LEAD	56	mg/Kg	3.0	EPA 6010
MERCURY	0.025	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
1,2-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,3-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,4-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
2,4,5-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4,6-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dimethylphenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dinitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2,6-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2-Chloronaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Chlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylnaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitrophenol	<1.65	mg/Kg	1.65	EPA 8270B
3,3'-Dichlorobenzidine	<5.00	mg/Kg	5.00	EPA 8270B
3-Nitroaniline	<5.00	mg/Kg	5.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Bromophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B

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Report Date: 6/12/00

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:00	**System ID**	AE04626	**Sample ID**	**LAB000715**

Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-10-10 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Chloroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4-Chlorophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B
4-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthene	<1.65	mg/Kg	1.65	EPA 8270B
Acenaphthylene	<1.65	mg/Kg	1.65	EPA 8270B
Anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(b)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(g,h,i)perylene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(k)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzoic acid	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl alcohol	<1.65	mg/Kg	1.65	EPA 8270B
Benzyl butyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethoxy) methane	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroisopropyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-ethylhexyl) phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Chrysene	<1.65	mg/Kg	1.65	EPA 8270B
Di-n-butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-octyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzo(a,h)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzofuran	<1.65	mg/Kg	1.65	EPA 8270B
Diethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dimethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Fluorene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobutadiene	<5.00	mg/Kg	5.00	EPA 8270B

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Report Date: 6/12/00

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Laboratory Analysis Report

Sample Date/Time 5/17/00 15:00 **System ID** AE04626 **Sample ID** **LAB000715**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachloroethane	<5.00	mg/Kg	5.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Isophorone	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodi-n-propylamine	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodiphenylamine	<1.65	mg/Kg	1.65	EPA 8270B
Naphthalene	<1.65	mg/Kg	1.65	EPA 8270B
Nitrobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Pentachlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
Phenanthrene	<1.65	mg/Kg	1.65	EPA 8270B
Phenol	<1.65	mg/Kg	1.65	EPA 8270B
Pyrene	<1.65	mg/Kg	1.65	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:00	**System ID**	AE04626	**Sample ID**	**LAB000715**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1130	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:00 **System ID** AE04626 **Sample ID** **LAB000715**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-10 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000715

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:05 **System ID** AE04627 **Sample ID** **LAB000716**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-16 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	4.45	mg/Kg	0.025	EPA 6020
BARIUM	200	mg/Kg	1.0	EPA 6010
CADMIUM	0.47	mg/Kg	0.025	EPA 6020
CHROMIUM	25	mg/Kg	1.0	EPA 6010
LEAD	74	mg/Kg	3.0	EPA 6010
MERCURY	0.064	mg/Kg	0.003	EPA 7471
SELENIUM	0.32	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:05 **System ID** AE04627 **Sample ID** **LAB000716**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-16 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Report Date: 6/12/00

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Sample Date/Time 5/17/00 15:05 **System ID** AE04627 **Sample ID** **LAB000716**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-16 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:05	**System ID**	AE04627	**Sample ID**	**LAB000716**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-16 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1020	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:05	**System ID**	AE04627	**Sample ID**	**LAB000716**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-10-16 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000716

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:30	**System ID**	AE04628	**Sample ID**	**LAB000717**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	3.80	mg/Kg	0.025	EPA 6020
BARIUM	150	mg/Kg	1.0	EPA 6010
CADMIUM	0.13	mg/Kg	0.025	EPA 6020
CHROMIUM	22	mg/Kg	1.0	EPA 6010
LEAD	17	mg/Kg	3.0	EPA 6010
MERCURY	0.020	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:30	**System ID**	AE04628	**Sample ID**	**LAB000717**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:30 **System ID** AE04628 **Sample ID** **LAB000717**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:30	**System ID**	AE04628	**Sample ID**	**LAB000717**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1100	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:30 **System ID** AE04628 **Sample ID** **LAB000717**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000717

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	15:35	System ID	AE04629	Sample ID	LAB000718

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	4.51	mg/Kg	0.025	EPA 6020
BARIUM	110	mg/Kg	1.0	EPA 6010
CADMIUM	0.30	mg/Kg	0.025	EPA 6020
CHROMIUM	17	mg/Kg	1.0	EPA 6010
LEAD	45	mg/Kg	3.0	EPA 6010
MERCURY	0.028	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4,6-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Chlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylnaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitrophenol	<3.30	mg/Kg	3.30	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
3-Nitroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B

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City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:35	**System ID**	AE04629	**Sample ID**	**LAB000718**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B
4-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<3.30	mg/Kg	3.30	EPA 8270B
Acenaphthylene	<3.30	mg/Kg	3.30	EPA 8270B
Anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(b)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(g,h,i)perylene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(k)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzoic acid	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl alcohol	<3.30	mg/Kg	3.30	EPA 8270B
Benzyl butyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethoxy) methane	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroisopropyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<3.30	mg/Kg	3.30	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzo(a,h)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzofuran	<3.30	mg/Kg	3.30	EPA 8270B
Diethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dimethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Fluorene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:35 **System ID** AE04629 **Sample ID** **LAB000718**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Isophorone	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodi-n-propylamine	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodiphenylamine	<3.30	mg/Kg	3.30	EPA 8270B
Naphthalene	<3.30	mg/Kg	3.30	EPA 8270B
Nitrobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<3.30	mg/Kg	3.30	EPA 8270B
Phenol	<3.30	mg/Kg	3.30	EPA 8270B
Pyrene	<3.30	mg/Kg	3.30	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	299	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00	15:35	System ID	AE04629	Sample ID	LAB000718

		Page:	4
Proj./Company Name:	SPECIAL WASTE MISC SAMP	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-11-11 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.000	**Collected By:**	DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1300	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:35	**System ID**	AE04629	**Sample ID**	**LAB000718**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-11 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Naphthalene	148	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000718

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:50 **System ID** AE04630 **Sample ID** **LAB000719**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.00	mg/Kg	0.025	EPA 6020
BARIUM	100	mg/Kg	1.0	EPA 6010
CADMIUM	0.083	mg/Kg	0.025	EPA 6020
CHROMIUM	21	mg/Kg	1.0	EPA 6010
LEAD	11	mg/Kg	3.0	EPA 6010
MERCURY	0.0087	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
1,2-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,3-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
1,4-Dichlorobenzene	<10.0	mg/Kg	10.0	EPA 8270B
2,4,5-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4,6-Trichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dichlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2,4-Dimethylphenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrophenol	<20.0	mg/Kg	20.0	EPA 8270B
2,4-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2,6-Dinitrotoluene	<5.00	mg/Kg	5.00	EPA 8270B
2-Chloronaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Chlorophenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylnaphthalene	<3.30	mg/Kg	3.30	EPA 8270B
2-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
2-Nitrophenol	<3.30	mg/Kg	3.30	EPA 8270B
3,3'-Dichlorobenzidine	<10.0	mg/Kg	10.0	EPA 8270B
3-Nitroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4,6-Dinitro-2-methylphenol	<10.0	mg/Kg	10.0	EPA 8270B
4-Bromophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:50 **System ID** AE04630 **Sample ID** **LAB000719**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Chloroaniline	<20.0	mg/Kg	20.0	EPA 8270B
4-Chlorophenylphenyl ether	<3.30	mg/Kg	3.30	EPA 8270B
4-Methylphenol	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitroaniline	<3.30	mg/Kg	3.30	EPA 8270B
4-Nitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
Acenaphthene	<3.30	mg/Kg	3.30	EPA 8270B
Acenaphthylene	<3.30	mg/Kg	3.30	EPA 8270B
Anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(a)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(b)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(g,h,i)perylene	<3.30	mg/Kg	3.30	EPA 8270B
Benzo(k)fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Benzoic acid	<10.0	mg/Kg	10.0	EPA 8270B
Benzyl alcohol	<3.30	mg/Kg	3.30	EPA 8270B
Benzyl butyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethoxy) methane	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroethyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-chloroisopropyl) ether	<3.30	mg/Kg	3.30	EPA 8270B
Bis(2-ethylhexyl) phthalate	<20.0	mg/Kg	20.0	EPA 8270B
Chrysene	<3.30	mg/Kg	3.30	EPA 8270B
Di-n-butyl phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Di-n-octyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzo(a,h)anthracene	<3.30	mg/Kg	3.30	EPA 8270B
Dibenzofuran	<3.30	mg/Kg	3.30	EPA 8270B
Diethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Dimethyl phthalate	<3.30	mg/Kg	3.30	EPA 8270B
Fluoranthene	<3.30	mg/Kg	3.30	EPA 8270B
Fluorene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Hexachlorobutadiene	<10.0	mg/Kg	10.0	EPA 8270B

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Report Date: 6/12/00

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Water Pollution Control Laboratory
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Sample Date/Time	5/17/00	15:50	**System ID** AE04630	**Sample ID**	**LAB000719**

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Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10.0	mg/Kg	10.0	EPA 8270B
Hexachloroethane	<10.0	mg/Kg	10.0	EPA 8270B
Indeno(1,2,3-cd)pyrene	<3.30	mg/Kg	3.30	EPA 8270B
Isophorone	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodi-n-propylamine	<3.30	mg/Kg	3.30	EPA 8270B
N-Nitrosodiphenylamine	<3.30	mg/Kg	3.30	EPA 8270B
Naphthalene	<3.30	mg/Kg	3.30	EPA 8270B
Nitrobenzene	<3.30	mg/Kg	3.30	EPA 8270B
Pentachlorophenol	<10.0	mg/Kg	10.0	EPA 8270B
Phenanthrene	<3.30	mg/Kg	3.30	EPA 8270B
Phenol	<3.30	mg/Kg	3.30	EPA 8270B
Pyrene	<3.30	mg/Kg	3.30	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/17/00 15:50 **System ID** AE04630 **Sample ID** **LAB000719**

Page: 4

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1180	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/17/00 15:50	**System ID**	AE04630	**Sample ID**	**LAB000719**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-11-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: DL

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION. THIS SAMPLE WAS ANALYZED FOR VOLATILE ORGANIC COMPOUNDS ONE DAY PAST THE 14-DAY HOLDING TIME.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000719

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Report Date: 6/12/00

PROJECT NO.	PROJECT NAME			NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS	VOCs (8260)	Semi-VOCs 8270	Total RCRA 8 Me		RECEIVING LAB: City of Portland
60-5395-01	10505 N. Portland Rd.										INSTRUCTIONS/REMARKS
L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number) David Lamadrid David Lamadrid										
DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX								
5/18/00	0811	TP-12-5'	Soil	2	6 oz jars		X	X		X	LAB 000731
	0815	TP-12-15'									
	0825	TP-12-21'					X	X		X	LAB 000732
	0900	TP-13-5'									
	0910	TP-13-16'									
	0915	TP-13-19'					X	X	X	X	LAB 000733
	0920	TP-13-21'					X	X	X	X	LAB 000734
	0945	TP-14-5'									
	0950	TP-14-12'					X	X		X	LAB 000735
	1000	TP-14-20'					X	X		X	LAB 000736
	1105	TP-15-5'									
	1110	TP-15-12'					X	X		X	LAB 000737
	1120	TP-15-21'					X	X		X	LAB 000738
	1150	TP-16-5'					X	X		X	LAB 000739
	1200	TP-16-9'					X	X		X	LAB 000740

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	5/19/00 1605	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Day

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 0831

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 8:11	**System ID**	AE04669	**Sample ID**	**LAB000731**

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.40	mg/Kg	0.025	EPA 6020
BARIUM	140	mg/Kg	1.0	EPA 6010
CADMIUM	0.070	mg/Kg	0.025	EPA 6020
CHROMIUM	35	mg/Kg	1.0	EPA 6010
LEAD	8.4	mg/Kg	3.0	EPA 6010
MERCURY	0.036	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
1,2-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,3-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,4-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
2,4,5-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4,6-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dimethylphenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dinitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2,6-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2-Chloronaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Chlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylnaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitrophenol	<1.65	mg/Kg	1.65	EPA 8270B
3,3'-Dichlorobenzidine	<5.00	mg/Kg	5.00	EPA 8270B
3-Nitroaniline	<5.00	mg/Kg	5.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Bromophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:11	**System ID** AE04669	**Sample ID**	LAB000731

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Chloroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4-Chlorophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B
4-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthene	<1.65	mg/Kg	1.65	EPA 8270B
Acenaphthylene	<1.65	mg/Kg	1.65	EPA 8270B
Anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(b)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(g,h,i)perylene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(k)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzoic acid	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl alcohol	<1.65	mg/Kg	1.65	EPA 8270B
Benzyl butyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethoxy) methane	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroisopropyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-ethylhexyl) phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Chrysene	<1.65	mg/Kg	1.65	EPA 8270B
Di-n-butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-octyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzo(a,h)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzofuran	<1.65	mg/Kg	1.65	EPA 8270B
Diethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dimethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Fluorene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobutadiene	<5.00	mg/Kg	5.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 8:11 **System ID** AE04669 **Sample ID** LAB000731

Page: 3

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachloroethane	<5.00	mg/Kg	5.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Isophorone	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodi-n-propylamine	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodiphenylamine	<1.65	mg/Kg	1.65	EPA 8270B
Naphthalene	<1.65	mg/Kg	1.65	EPA 8270B
Nitrobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Pentachlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
Phenanthrene	<1.65	mg/Kg	1.65	EPA 8270B
Phenol	<1.65	mg/Kg	1.65	EPA 8270B
Pyrene	<1.65	mg/Kg	1.65	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:11	System ID	AE04669	Sample ID	LAB000731

Page: 4

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1580	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:11	**System ID** AE04669	**Sample ID**	LAB000731

Page: 5

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000731

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:25	**System ID** AE04670	**Sample ID**	LAB000732

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	7.62	mg/Kg	0.025	EPA 6020
BARIUM	180	mg/Kg	1.0	EPA 6010
CADMIUM	0.11	mg/Kg	0.025	EPA 6020
CHROMIUM	25	mg/Kg	1.0	EPA 6010
LEAD	15	mg/Kg	3.0	EPA 6010
MERCURY	0.024	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:25	System ID	AE04670	Sample ID	LAB000732

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 8:25	**System ID**	AE04670	**Sample ID**	**LAB000732**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 8:25 **System ID** AE04670 **Sample ID** LAB000732

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-12-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1390	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	8:25	System ID	AE04670	Sample ID	LAB000732

Proj./Company Name:	LARSON PROPERTY	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-12-21 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.007	**Collected By:**	KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000732

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:15	**System ID** AE04671	**Sample ID**	LAB000733

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	3.33	mg/Kg	0.025	EPA 6020
BARIUM	140	mg/Kg	1.0	EPA 6010
CADMIUM	0.15	mg/Kg	0.025	EPA 6020
CHROMIUM	22	mg/Kg	1.0	EPA 6010
LEAD	4.8	mg/Kg	3.0	EPA 6010
MERCURY	0.021	mg/Kg	0.003	EPA 7471
SELENIUM	0.27	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
1,2-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,3-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
1,4-Dichlorobenzene	<5.00	mg/Kg	5.00	EPA 8270B
2,4,5-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4,6-Trichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dichlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2,4-Dimethylphenol	<5.00	mg/Kg	5.00	EPA 8270B
2,4-Dinitrophenol	<10.0	mg/Kg	10.0	EPA 8270B
2,4-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2,6-Dinitrotoluene	<2.50	mg/Kg	2.50	EPA 8270B
2-Chloronaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Chlorophenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylnaphthalene	<1.65	mg/Kg	1.65	EPA 8270B
2-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
2-Nitrophenol	<1.65	mg/Kg	1.65	EPA 8270B
3,3'-Dichlorobenzidine	<5.00	mg/Kg	5.00	EPA 8270B
3-Nitroaniline	<5.00	mg/Kg	5.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<5.00	mg/Kg	5.00	EPA 8270B
4-Bromophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:15	System ID	AE04671	Sample ID	LAB000733

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-19 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Chloroaniline	<10.0	mg/Kg	10.0	EPA 8270B
4-Chlorophenylphenyl ether	<1.65	mg/Kg	1.65	EPA 8270B
4-Methylphenol	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitroaniline	<1.65	mg/Kg	1.65	EPA 8270B
4-Nitrophenol	<5.00	mg/Kg	5.00	EPA 8270B
Acenaphthene	<1.65	mg/Kg	1.65	EPA 8270B
Acenaphthylene	<1.65	mg/Kg	1.65	EPA 8270B
Anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(a)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(b)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(g,h,i)perylene	<1.65	mg/Kg	1.65	EPA 8270B
Benzo(k)fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Benzoic acid	<5.00	mg/Kg	5.00	EPA 8270B
Benzyl alcohol	<1.65	mg/Kg	1.65	EPA 8270B
Benzyl butyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethoxy) methane	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroethyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-chloroisopropyl) ether	<1.65	mg/Kg	1.65	EPA 8270B
Bis(2-ethylhexyl) phthalate	<10.0	mg/Kg	10.0	EPA 8270B
Chrysene	<1.65	mg/Kg	1.65	EPA 8270B
Di-n-butyl phthalate	<5.00	mg/Kg	5.00	EPA 8270B
Di-n-octyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzo(a,h)anthracene	<1.65	mg/Kg	1.65	EPA 8270B
Dibenzofuran	<1.65	mg/Kg	1.65	EPA 8270B
Diethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Dimethyl phthalate	<1.65	mg/Kg	1.65	EPA 8270B
Fluoranthene	<1.65	mg/Kg	1.65	EPA 8270B
Fluorene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Hexachlorobutadiene	<5.00	mg/Kg	5.00	EPA 8270B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:15	System ID	AE04671	Sample ID	LAB000733

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<5.00	mg/Kg	5.00	EPA 8270B
Hexachloroethane	<5.00	mg/Kg	5.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<1.65	mg/Kg	1.65	EPA 8270B
Isophorone	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodi-n-propylamine	<1.65	mg/Kg	1.65	EPA 8270B
N-Nitrosodiphenylamine	<1.65	mg/Kg	1.65	EPA 8270B
Naphthalene	<1.65	mg/Kg	1.65	EPA 8270B
Nitrobenzene	<1.65	mg/Kg	1.65	EPA 8270B
Pentachlorophenol	<5.00	mg/Kg	5.00	EPA 8270B
Phenanthrene	<1.65	mg/Kg	1.65	EPA 8270B
Phenol	<1.65	mg/Kg	1.65	EPA 8270B
Pyrene	<1.65	mg/Kg	1.65	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:15	**System ID** AE04671	**Sample ID**	**LAB000733**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1190	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:15	System ID	AE04671	Sample ID	LAB000733

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-19 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000733

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:20	**System ID** AE04672	**Sample ID**	LAB000734

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.97	mg/Kg	0.025	EPA 6020
BARIUM	140	mg/Kg	1.0	EPA 6010
CADMIUM	0.10	mg/Kg	0.025	EPA 6020
CHROMIUM	25	mg/Kg	1.0	EPA 6010
LEAD	4.7	mg/Kg	3.0	EPA 6010
MERCURY	0.020	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:20	System ID	AE04672	Sample ID	LAB000734

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:20	System ID	AE04672	Sample ID	LAB000734

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:20	**System ID** AE04672	**Sample ID**	LAB000734

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1250	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:20	System ID	AE04672	Sample ID	LAB000734

Page: 5

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-13-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000734

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:50	System ID	AE04673	Sample ID	LAB000735

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-12 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	9.11	mg/Kg	0.025	EPA 6020
BARIUM	180	mg/Kg	1.0	EPA 6010
CADMIUM	0.19	mg/Kg	0.025	EPA 6020
CHROMIUM	26	mg/Kg	1.0	EPA 6010
LEAD	19	mg/Kg	3.0	EPA 6010
MERCURY	0.042	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:50	System ID	AE04673	Sample ID	LAB000735

Page: 2

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-12 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:50	**System ID** AE04673	**Sample ID**	LAB000735

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-12 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:50	**System ID** AE04673	**Sample ID**	LAB000735

Page: 4

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-12 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1080	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	9:50	**System ID** AE04673	**Sample ID**	**LAB000735**

Proj./Company Name:	LARSON PROPERTY	**Date Received:**	5/19/00
Address/Location:	10505 N NORTH PORTLAND RD TP-14-12 PROJECT 6064	**Sample Status:**	REPORT QUEUE
Proj Subcategory:	SPECIAL WASTE	**Sample Type:**	GRAB
Sample Point Code:	0	**Sample Matrix:**	SOIL
IMS File/Invoice #:	3030.007	**Collected By:**	KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000735

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 10:00	**System ID**	AE04674	**Sample ID**	LAB000736

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-20 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	3.60	mg/Kg	0.025	EPA 6020
BARIUM	160	mg/Kg	1.0	EPA 6010
CADMIUM	0.14	mg/Kg	0.025	EPA 6020
CHROMIUM	19	mg/Kg	1.0	EPA 6010
LEAD	6.7	mg/Kg	3.0	EPA 6010
MERCURY	0.024	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 10:00 **System ID** AE04674 **Sample ID** LAB000736

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-20 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 10:00	**System ID**	AE04674	**Sample ID**	LAB000736

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-20 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 10:00 **System ID** AE04674 **Sample ID** LAB000736

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-20 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1360	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	10:00	**System ID**	AE04674	**Sample ID** LAB000736

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-14-20 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000736

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:10	**System ID** AE04675	**Sample ID**	LAB000737

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-12 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	4.78	mg/Kg	0.025	EPA 6020
BARIUM	200	mg/Kg	1.0	EPA 6010
CADMIUM	0.21	mg/Kg	0.025	EPA 6020
CHROMIUM	22	mg/Kg	1.0	EPA 6010
LEAD	22	mg/Kg	3.0	EPA 6010
MERCURY	0.031	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 11:10 **System ID** AE04675 **Sample ID** LAB000737

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-12 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:10	System ID	AE04675	Sample ID	LAB000737

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-12 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:10	System ID	AE04675	Sample ID	LAB000737

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-12 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1290	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 11:10 **System ID** AE04675 **Sample ID** LAB000737

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-12 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000737

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 11:20	**System ID**	AE04676	**Sample ID**	LAB000738

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	16.3	mg/Kg	0.025	EPA 6020
BARIUM	140	mg/Kg	1.0	EPA 6010
CADMIUM	0.14	mg/Kg	0.025	EPA 6020
CHROMIUM	28	mg/Kg	1.0	EPA 6010
LEAD	8.9	mg/Kg	3.0	EPA 6010
MERCURY	0.018	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
1,2-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,3-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
1,4-Dichlorobenzene	<1.00	mg/Kg	1.00	EPA 8270B
2,4,5-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4,6-Trichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dichlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2,4-Dimethylphenol	<1.00	mg/Kg	1.00	EPA 8270B
2,4-Dinitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2,6-Dinitrotoluene	<0.500	mg/Kg	0.500	EPA 8270B
2-Chloronaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Chlorophenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylnaphthalene	<0.330	mg/Kg	0.330	EPA 8270B
2-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
2-Nitrophenol	<0.330	mg/Kg	0.330	EPA 8270B
3,3'-Dichlorobenzidine	<1.00	mg/Kg	1.00	EPA 8270B
3-Nitroaniline	<1.00	mg/Kg	1.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<1.00	mg/Kg	1.00	EPA 8270B
4-Bromophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B

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Report Date: 6/12/00

City of Portland

Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:20	System ID	AE04676	Sample ID	LAB000738

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Chloroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.330	mg/Kg	0.330	EPA 8270B
4-Methylphenol	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitroaniline	<0.330	mg/Kg	0.330	EPA 8270B
4-Nitrophenol	<1.00	mg/Kg	1.00	EPA 8270B
Acenaphthene	<0.330	mg/Kg	0.330	EPA 8270B
Acenaphthylene	<0.330	mg/Kg	0.330	EPA 8270B
Anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(a)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(b)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(g,h,i)perylene	<0.330	mg/Kg	0.330	EPA 8270B
Benzo(k)fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Benzoic acid	<1.00	mg/Kg	1.00	EPA 8270B
Benzyl alcohol	<0.330	mg/Kg	0.330	EPA 8270B
Benzyl butyl phthalate	0.460	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethoxy) methane	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroethyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.330	mg/Kg	0.330	EPA 8270B
Bis(2-ethylhexyl) phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Chrysene	<0.330	mg/Kg	0.330	EPA 8270B
Di-n-butyl phthalate	<1.00	mg/Kg	1.00	EPA 8270B
Di-n-octyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzo(a,h)anthracene	<0.330	mg/Kg	0.330	EPA 8270B
Dibenzofuran	<0.330	mg/Kg	0.330	EPA 8270B
Diethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Dimethyl phthalate	<0.330	mg/Kg	0.330	EPA 8270B
Fluoranthene	<0.330	mg/Kg	0.330	EPA 8270B
Fluorene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Hexachlorobutadiene	<1.00	mg/Kg	1.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:20	**System ID** AE04676	**Sample ID**	LAB000738

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<1.00	mg/Kg	1.00	EPA 8270B
Hexachloroethane	<1.00	mg/Kg	1.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.330	mg/Kg	0.330	EPA 8270B
Isophorone	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodi-n-propylamine	<0.330	mg/Kg	0.330	EPA 8270B
N-Nitrosodiphenylamine	<0.330	mg/Kg	0.330	EPA 8270B
Naphthalene	<0.330	mg/Kg	0.330	EPA 8270B
Nitrobenzene	<0.330	mg/Kg	0.330	EPA 8270B
Pentachlorophenol	<1.00	mg/Kg	1.00	EPA 8270B
Phenanthrene	<0.330	mg/Kg	0.330	EPA 8270B
Phenol	<0.330	mg/Kg	0.330	EPA 8270B
Pyrene	<0.330	mg/Kg	0.330	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:20	**System ID** AE04676	**Sample ID**	LAB000738

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-21 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1200	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:20	System ID	AE04676	Sample ID	LAB000738

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-15-21 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000738

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 11:50	**System ID**	AE04677	**Sample ID**	**LAB000739**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.98	mg/Kg	0.025	EPA 6020
BARIUM	150	mg/Kg	1.0	EPA 6010
CADMIUM	0.13	mg/Kg	0.025	EPA 6020
CHROMIUM	19	mg/Kg	1.0	EPA 6010
LEAD	11	mg/Kg	3.0	EPA 6010
MERCURY	0.014	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 11:50	**System ID**	AE04677	**Sample ID**	LAB000739

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 11:50 **System ID** AE04677 **Sample ID** **LAB000739**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-5 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:50	System ID	AE04677	Sample ID	LAB000739

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1270	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	11:50	**System ID** AE04677	**Sample ID**	**LAB000739**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-5 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000739

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 12:00	**System ID**	AE04678	**Sample ID**	LAB000740

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-9 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	2.35	mg/Kg	0.025	EPA 6020
BARIUM	100	mg/Kg	1.0	EPA 6010
CADMIUM	0.11	mg/Kg	0.025	EPA 6020
CHROMIUM	17	mg/Kg	1.0	EPA 6010
LEAD	12	mg/Kg	3.0	EPA 6010
MERCURY	0.026	mg/Kg	0.003	EPA 7471
SELENIUM	<0.25	mg/Kg	0.25	EPA 6020
SILVER	<0.3	mg/Kg	0.3	EPA 6010
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
1,2-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,3-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
1,4-Dichlorobenzene	<2.00	mg/Kg	2.00	EPA 8270B
2,4,5-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4,6-Trichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dichlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2,4-Dimethylphenol	<2.00	mg/Kg	2.00	EPA 8270B
2,4-Dinitrophenol	<4.00	mg/Kg	4.00	EPA 8270B
2,4-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2,6-Dinitrotoluene	<1.00	mg/Kg	1.00	EPA 8270B
2-Chloronaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Chlorophenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylnaphthalene	<0.660	mg/Kg	0.660	EPA 8270B
2-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
2-Nitrophenol	<0.660	mg/Kg	0.660	EPA 8270B
3,3'-Dichlorobenzidine	<2.00	mg/Kg	2.00	EPA 8270B
3-Nitroaniline	<2.00	mg/Kg	2.00	EPA 8270B
4,6-Dinitro-2-methylphenol	<2.00	mg/Kg	2.00	EPA 8270B
4-Bromophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	12:00	**System ID** AE04678	**Sample ID**	**LAB000740**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-9 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
4-Chloro-3-methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Chloroaniline	<4.00	mg/Kg	4.00	EPA 8270B
4-Chlorophenylphenyl ether	<0.660	mg/Kg	0.660	EPA 8270B
4-Methylphenol	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitroaniline	<0.660	mg/Kg	0.660	EPA 8270B
4-Nitrophenol	<2.00	mg/Kg	2.00	EPA 8270B
Acenaphthene	<0.660	mg/Kg	0.660	EPA 8270B
Acenaphthylene	<0.660	mg/Kg	0.660	EPA 8270B
Anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(a)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(b)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(g,h,i)perylene	<0.660	mg/Kg	0.660	EPA 8270B
Benzo(k)fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Benzoic acid	<2.00	mg/Kg	2.00	EPA 8270B
Benzyl alcohol	<0.660	mg/Kg	0.660	EPA 8270B
Benzyl butyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethoxy) methane	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroethyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-chloroisopropyl) ether	<0.660	mg/Kg	0.660	EPA 8270B
Bis(2-ethylhexyl) phthalate	<4.00	mg/Kg	4.00	EPA 8270B
Chrysene	<0.660	mg/Kg	0.660	EPA 8270B
Di-n-butyl phthalate	<2.00	mg/Kg	2.00	EPA 8270B
Di-n-octyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzo(a,h)anthracene	<0.660	mg/Kg	0.660	EPA 8270B
Dibenzofuran	<0.660	mg/Kg	0.660	EPA 8270B
Diethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Dimethyl phthalate	<0.660	mg/Kg	0.660	EPA 8270B
Fluoranthene	<0.660	mg/Kg	0.660	EPA 8270B
Fluorene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Hexachlorobutadiene	<2.00	mg/Kg	2.00	EPA 8270B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	12:00	**System ID**	AE04678	**Sample ID** LAB000740

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-9 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<2.00	mg/Kg	2.00	EPA 8270B
Hexachloroethane	<2.00	mg/Kg	2.00	EPA 8270B
Indeno(1,2,3-cd)pyrene	<0.660	mg/Kg	0.660	EPA 8270B
Isophorone	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodi-n-propylamine	<0.660	mg/Kg	0.660	EPA 8270B
N-Nitrosodiphenylamine	<0.660	mg/Kg	0.660	EPA 8270B
Naphthalene	<0.660	mg/Kg	0.660	EPA 8270B
Nitrobenzene	<0.660	mg/Kg	0.660	EPA 8270B
Pentachlorophenol	<2.00	mg/Kg	2.00	EPA 8270B
Phenanthrene	<0.660	mg/Kg	0.660	EPA 8270B
Phenol	<0.660	mg/Kg	0.660	EPA 8270B
Pyrene	<0.660	mg/Kg	0.660	EPA 8270B
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,1-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2,2-Tetrachloroethane	<100	µg/Kg	100	EPA 8260B
1,1,2-Trichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,1-Dichloroethene	<100	µg/Kg	100	EPA 8260B
1,1-Dichloropropene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,3-Trichloropropane	<100	µg/Kg	100	EPA 8260B
1,2,4-Trichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2,4-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dibromo-3-chloropropane	<500	µg/Kg	500	EPA 8260B
1,2-Dibromoethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,2-Dichloroethane	<100	µg/Kg	100	EPA 8260B
1,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
1,3,5-Trimethylbenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
1,3-Dichloropropane	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	12:00	System ID	AE04678	Sample ID	LAB000740

Page: 4

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-9 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<100	µg/Kg	100	EPA 8260B
2,2-Dichloropropane	<100	µg/Kg	100	EPA 8260B
2-Butanone	1210	µg/Kg	1000	EPA 8260B
2-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
2-Hexanone	<1000	µg/Kg	1000	EPA 8260B
4-Chlorotoluene	<100	µg/Kg	100	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<500	µg/Kg	500	EPA 8260B
Acetone	<1000	µg/Kg	1000	EPA 8260B
Benzene	<100	µg/Kg	100	EPA 8260B
Bromobenzene	<100	µg/Kg	100	EPA 8260B
Bromochloromethane	<100	µg/Kg	100	EPA 8260B
Bromodichloromethane	<100	µg/Kg	100	EPA 8260B
Bromoform	<100	µg/Kg	100	EPA 8260B
Bromomethane	<500	µg/Kg	500	EPA 8260B
Carbon disulfide	<1000	µg/Kg	1000	EPA 8260B
Carbon tetrachloride	<100	µg/Kg	100	EPA 8260B
Chlorobenzene	<100	µg/Kg	100	EPA 8260B
Chloroethane	<100	µg/Kg	100	EPA 8260B
Chloroform	<100	µg/Kg	100	EPA 8260B
Chloromethane	<500	µg/Kg	500	EPA 8260B
cis-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
cis-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Dibromochloromethane	<100	µg/Kg	100	EPA 8260B
Dibromomethane	<100	µg/Kg	100	EPA 8260B
Dichlorodifluoromethane	<500	µg/Kg	500	EPA 8260B
Ethylbenzene	<100	µg/Kg	100	EPA 8260B
Hexachlorobutadiene	<200	µg/Kg	200	EPA 8260B
Isopropylbenzene	<100	µg/Kg	100	EPA 8260B
m,p-Xylene	<200	µg/Kg	200	EPA 8260B
Methylene chloride	<500	µg/Kg	500	EPA 8260B
n-Butylbenzene	<100	µg/Kg	100	EPA 8260B
n-Propylbenzene	<100	µg/Kg	100	EPA 8260B

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Report Date: 6/12/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	12:00	**System ID** AE04678	**Sample ID**	LAB000740

Page: 5

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
TP-16-9 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: SOIL
Collected By: KLEINFELDER

Comments: LAB: THE VOLATILE ORGANIC COMPOUND 2-BUTANONE WAS DETECTED IN THE METHOD BLANK; ITS PRESENCE IN THE SAMPLE MAY BE ATTRIBUTABLE TO LABORATORY CONTAMINATION.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<100	µg/Kg	100	EPA 8260B
o-Xylene	<100	µg/Kg	100	EPA 8260B
p-Isopropyltoluene	<100	µg/Kg	100	EPA 8260B
sec-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Styrene	<100	µg/Kg	100	EPA 8260B
tert-Butylbenzene	<100	µg/Kg	100	EPA 8260B
Tetrachloroethene	<100	µg/Kg	100	EPA 8260B
Toluene	<100	µg/Kg	100	EPA 8260B
trans-1,2-Dichloroethene	<100	µg/Kg	100	EPA 8260B
trans-1,3-Dichloropropene	<100	µg/Kg	100	EPA 8260B
Trichloroethene	<100	µg/Kg	100	EPA 8260B
Trichlorofluoromethane	<100	µg/Kg	100	EPA 8260B
Vinyl chloride	<100	µg/Kg	100	EPA 8260B

End of Report for Sample ID: LAB000740

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/12/00

KLEINFELDER

CARGO PACKER 10505 N Portland Rd. SPECIFIC WASTE 5/19/00

PROJECT NO.	PROJECT NAME
60639501	BES N. Port

L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number)
	Jessica Eckert

RECEIVING LAB: City of Portland

INSTRUCTIONS/REMARKS

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CON-TAINERS	TYPE OF CON-TAINERS	ANALYSIS 8260 VOCs	8270 Semi-VOCs	RCRA 8 Metals (Total)	
1	5/19/00	330	MW1-05180	W	8		X	X	X	LAB 000741
2		515	MW2-05180				X	X	X	LAB 000742
3		440	MW3-05180				X	X	X	LAB 000743
4		1005	MW 4-05180				X	X	X	LAB 000744
5		105	MW5-05180				X	X	X	LAB 000745
6		215	MW6-05180				X	X	X	LAB 000746
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
[signature]	5/19/00 1605	[signature]
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Daly

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 0803

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 15:30 **System ID** AE04679 **Sample ID** **LAB000741**

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW1-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THIS SAMPLE REQUIRED DILUTION BY A FACTOR OF 5 FOR SEMI-VOLATILE ORGANICS ANALYSIS DUE TO THE MATRIX.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	<0.01	mg/L	0.01	EPA 200.8
BARIUM	0.24	mg/L	0.01	EPA 200.7
CADMIUM	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM	<0.030	mg/L	0.03	EPA 200.7
LEAD	<0.100	mg/L	0.1	EPA 200.7
MERCURY	0.0007	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<25	µg/L	25	EPA 8270
1,2-Dichlorobenzene	<25	µg/L	25	EPA 8270
1,3-Dichlorobenzene	<25	µg/L	25	EPA 8270
1,4-Dichlorobenzene	<25	µg/L	25	EPA 8270
2,4,5-Trichlorophenol	<25	µg/L	25	EPA 8270
2,4,6-Trichlorophenol	<25	µg/L	25	EPA 8270
2,4-Dichlorophenol	<25	µg/L	25	EPA 8270
2,4-Dimethylphenol	<50	µg/L	50	EPA 8270
2,4-Dinitrophenol	<125	µg/L	125	EPA 8270
2,4-Dinitrotoluene	<25	µg/L	25	EPA 8270
2,6-Dinitrotoluene	<25	µg/L	25	EPA 8270
2-Chloronaphthalene	<25	µg/L	25	EPA 8270
2-Chlorophenol	<25	µg/L	25	EPA 8270
2-Methylnaphthalene	<25	µg/L	25	EPA 8270
2-Methylphenol	<25	µg/L	25	EPA 8270
2-Nitroaniline	<25	µg/L	25	EPA 8270
2-Nitrophenol	<25	µg/L	25	EPA 8270
3,3'-Dichlorobenzidine	<25	µg/L	25	EPA 8270
3,4-Methylphenol	<25	µg/L	25	EPA 8270
3-Nitroaniline	<50	µg/L	50	EPA 8270
4,6-Dinitro-2-methylphenol	<50	µg/L	50	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	15:30	System ID	AE04679	Sample ID	LAB000741

Page: 2

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW1-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THIS SAMPLE REQUIRED DILUTION BY A FACTOR OF 5 FOR SEMI-VOLATILE ORGANICS ANALYSIS DUE TO THE MATRIX.

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<25	µg/L	25	EPA 8270
4-Chloro-3-methylphenol	<25	µg/L	25	EPA 8270
4-Chloroaniline	<100	µg/L	100	EPA 8270
4-chlorophenylphenyl ether	<25	µg/L	25	EPA 8270
4-Nitroaniline	<25	µg/L	25	EPA 8270
4-Nitrophenol	<125	µg/L	125	EPA 8270
Acenaphthene	<25	µg/L	25	EPA 8270
Acenaphthylene	<25	µg/L	25	EPA 8270
Anthracene	<25	µg/L	25	EPA 8270
Benzo(a)anthracene	<25	µg/L	25	EPA 8270
Benzo(a)pyrene	<25	µg/L	25	EPA 8270
Benzo(b)fluoranthene	<25	µg/L	25	EPA 8270
Benzo(g,h,i)perylene	<25	µg/L	25	EPA 8270
Benzo(k)fluoranthene	<25	µg/L	25	EPA 8270
Benzoic acid	<250	µg/L	250	EPA 8270
Benzyl alcohol	<50	µg/L	50	EPA 8270
Benzyl butyl phthalate	<25	µg/L	25	EPA 8270
Bis(2-chloroethoxy) methane	<50	µg/L	50	EPA 8270
Bis(2-chloroethyl) ether	<25	µg/L	25	EPA 8270
Bis(2-chloroisopropyl) ether	<50	µg/L	50	EPA 8270
Bis(2-ethylhexyl) phthalate	<50	µg/L	50	EPA 8270
Carbazole	<25	µg/L	25	EPA 8270
Chrysene	<25	µg/L	25	EPA 8270
Di-n-butyl phthalate	<25	µg/L	25	EPA 8270
Di-n-octyl phthalate	<25	µg/L	25	EPA 8270
Dibenzo(a,h)anthracene	<25	µg/L	25	EPA 8270
Dibenzofuran	<25	µg/L	25	EPA 8270
Diethyl phthalate	<25	µg/L	25	EPA 8270
Dimethyl phthalate	<25	µg/L	25	EPA 8270
Fluoranthene	<25	µg/L	25	EPA 8270
Fluorene	<25	µg/L	25	EPA 8270
Hexachlorobenzene	<25	µg/L	25	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 15:30 **System ID** AE04679 **Sample ID** **LAB000741**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW1-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THIS SAMPLE REQUIRED DILUTION BY A FACTOR OF 5 FOR SEMI-VOLATILE ORGANICS ANALYSIS DUE TO THE MATRIX.

Test Parameter	Result	Units	MRL	Method
Hexachlorobutadiene	<50	µg/L	50	EPA 8270
Hexachlorocyclopentadiene	<50	µg/L	50	EPA 8270
Hexachloroethane	<50	µg/L	50	EPA 8270
Indeno(1,2,3-cd) pyrene	<25	µg/L	25	EPA 8270
Isophorone	<25	µg/L	25	EPA 8270
N-Nitroso-di-n-propylamine	<50	µg/L	50	EPA 8270
N-Nitrosodiphenylamine	<25	µg/L	25	EPA 8270
Naphthalene	<25	µg/L	25	EPA 8270
Nitrobenzene	<25	µg/L	25	EPA 8270
Pentachlorophenol	<50	µg/L	50	EPA 8270
Phenanthrene	<25	µg/L	25	EPA 8270
Phenol	<25	µg/L	25	EPA 8270
Pyrene	<25	µg/L	25	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 15:30 **System ID** AE04679 **Sample ID** LAB000741

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW1-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THIS SAMPLE REQUIRED DILUTION BY A FACTOR OF 5 FOR SEMI-VOLATILE ORGANICS ANALYSIS DUE TO THE MATRIX.

Test Parameter	Result	Units	MRL	Method
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	<10.0	µg/L	10.0	EPA 8260B
Benzene	1.13	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	4.21	µg/L	1.00	EPA 8260B
Chloroethane	7.46	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	1.44	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	2.64	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	1.01	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 15:30 **System ID** AE04679 **Sample ID** **LAB000741**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW1-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THIS SAMPLE REQUIRED DILUTION BY A FACTOR OF 5 FOR SEMI-VOLATILE ORGANICS ANALYSIS DUE TO THE MATRIX.

Test Parameter	Result	Units	MRL	Method
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000741

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 17:15 **System ID** AE04680 **Sample ID** **LAB000742**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW2-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	0.020	mg/L	0.01	EPA 200.8
BARIUM	0.20	mg/L	0.01	EPA 200.7
CADMIUM	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM	<0.030	mg/L	0.03	EPA 200.7
LEAD	<0.100	mg/L	0.1	EPA 200.7
MERCURY	<0.0002	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,2-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,3-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,4-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
2,4,5-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4,6-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dimethylphenol	<10	µg/L	10	EPA 8270
2,4-Dinitrophenol	<25	µg/L	25	EPA 8270
2,4-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2,6-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2-Chloronaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Chlorophenol	<5.0	µg/L	5.0	EPA 8270
2-Methylnaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Methylphenol	<10	µg/L	10	EPA 8270
2-Nitroaniline	<5.0	µg/L	5.0	EPA 8270
2-Nitrophenol	<5.0	µg/L	5.0	EPA 8270
3,3'-Dichlorobenzidine	<5.0	µg/L	5.0	EPA 8270
3-,4-Methylphenol	<5.0	µg/L	5.0	EPA 8270
3-Nitroaniline	<10	µg/L	10	EPA 8270
4,6-Dinitro-2-methylphenol	<10	µg/L	10	EPA 8270

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 17:15 **System ID** AE04680 **Sample ID** **LAB000742**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW2-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Page: 2
Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Chloro-3-methylphenol	<5.0	µg/L	5.0	EPA 8270
4-Chloroaniline	<20	µg/L	20	EPA 8270
4-chlorophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Nitroaniline	<10	µg/L	10	EPA 8270
4-Nitrophenol	<25	µg/L	25	EPA 8270
Acenaphthene	<5.0	µg/L	5.0	EPA 8270
Acenaphthylene	<5.0	µg/L	5.0	EPA 8270
Anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)pyrene	<5.0	µg/L	5.0	EPA 8270
Benzo(b)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzo(g,h,i)perylene	<5.0	µg/L	5.0	EPA 8270
Benzo(k)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzoic acid	<50	µg/L	50	EPA 8270
Benzyl alcohol	<10	µg/L	10	EPA 8270
Benzyl butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroethoxy) methane	<10	µg/L	10	EPA 8270
Bis(2-chloroethyl) ether	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroisopropyl) ether	<10	µg/L	10	EPA 8270
Bis(2-ethylhexyl) phthalate	<10	µg/L	10	EPA 8270
Chrysene	<5.0	µg/L	5.0	EPA 8270
Di-n-butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Di-n-octyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dibenzo(a,h)anthracene	<5.0	µg/L	5.0	EPA 8270
Dibenzofuran	<5.0	µg/L	5.0	EPA 8270
Diethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dimethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Fluoranthene	<5.0	µg/L	5.0	EPA 8270
Fluorene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobenzene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobutadiene	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 17:15 **System ID** AE04680 **Sample ID** LAB000742

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW2-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10	µg/L	10	EPA 8270
Hexachloroethane	<10	µg/L	10	EPA 8270
Indeno(1,2,3-cd) pyrene	<5.0	µg/L	5.0	EPA 8270
Isophorone	<5.0	µg/L	5.0	EPA 8270
N-Nitroso-di-n-propylamine	<10	µg/L	10	EPA 8270
N-Nitrosodiphenylamine	<5.0	µg/L	5.0	EPA 8270
Naphthalene	<5.0	µg/L	5.0	EPA 8270
Nitrobenzene	<5.0	µg/L	5.0	EPA 8270
Pentachlorophenol	<10	µg/L	10	EPA 8270
Phenanthrene	<5.0	µg/L	5.0	EPA 8270
Phenol	<5.0	µg/L	5.0	EPA 8270
Pyrene	<5.0	µg/L	5.0	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 17:15 **System ID** AE04680 **Sample ID** LAB000742

Page: 4

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW2-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments:

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	<10.0	µg/L	10.0	EPA 8260B
Benzene	<1.00	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	<1.00	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	<1.00	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	3.01	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 17:15	**System ID**	AE04680	**Sample ID**	**LAB000742**

Page: 5

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW2-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000742

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 16:40 **System ID** AE04681 **Sample ID** **LAB000743**

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW3-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	0.060	mg/L	0.01	EPA 200.8
BARIUM	2.7	mg/L	0.01	EPA 200.7
CADMIUM	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM	0.50	mg/L	0.03	EPA 200.7
LEAD	1.5	mg/L	0.1	EPA 200.7
MERCURY	0.0026	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,2-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,3-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,4-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
2,4,5-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4,6-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dimethylphenol	<10	µg/L	10	EPA 8270
2,4-Dinitrophenol	<25	µg/L	25	EPA 8270
2,4-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2,6-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2-Chloronaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Chlorophenol	<5.0	µg/L	5.0	EPA 8270
2-Methylnaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Methylphenol	<10	µg/L	10	EPA 8270
2-Nitroaniline	<5.0	µg/L	5.0	EPA 8270
2-Nitrophenol	<5.0	µg/L	5.0	EPA 8270
3,3-Dichlorobenzidine	<5.0	µg/L	5.0	EPA 8270
3-,4-Methylphenol	<5.0	µg/L	5.0	EPA 8270
3-Nitroaniline	<10	µg/L	10	EPA 8270
4,6-Dinitro-2-methylphenol	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 16:40	**System ID**	AE04681	**Sample ID**	**LAB000743**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW3-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Chloro-3-methylphenol	<5.0	µg/L	5.0	EPA 8270
4-Chloroaniline	<20	µg/L	20	EPA 8270
4-chlorophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Nitroaniline	<10	µg/L	10	EPA 8270
4-Nitrophenol	<25	µg/L	25	EPA 8270
Acenaphthene	<5.0	µg/L	5.0	EPA 8270
Acenaphthylene	<5.0	µg/L	5.0	EPA 8270
Anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)pyrene	<5.0	µg/L	5.0	EPA 8270
Benzo(b)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzo(g,h,i)perylene	<5.0	µg/L	5.0	EPA 8270
Benzo(k)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzoic acid	<50	µg/L	50	EPA 8270
Benzyl alcohol	<10	µg/L	10	EPA 8270
Benzyl butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroethoxy) methane	<10	µg/L	10	EPA 8270
Bis(2-chloroethyl) ether	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroisopropyl) ether	<10	µg/L	10	EPA 8270
Bis(2-ethylhexyl) phthalate	<10	µg/L	10	EPA 8270
Chrysene	<5.0	µg/L	5.0	EPA 8270
Di-n-butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Di-n-octyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dibenzo(a,h)anthracene	<5.0	µg/L	5.0	EPA 8270
Dibenzofuran	<5.0	µg/L	5.0	EPA 8270
Diethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dimethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Fluoranthene	<5.0	µg/L	5.0	EPA 8270
Fluorene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobenzene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobutadiene	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 16:40 **System ID** AE04681 **Sample ID** **LAB000743**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW3-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments:

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10	µg/L	10	EPA 8270
Hexachloroethane	<10	µg/L	10	EPA 8270
Indeno(1,2,3-cd) pyrene	<5.0	µg/L	5.0	EPA 8270
Isophorone	<5.0	µg/L	5.0	EPA 8270
N-Nitroso-dl-n-propylamine	<10	µg/L	10	EPA 8270
N-Nitrosodiphenylamine	<5.0	µg/L	5.0	EPA 8270
Naphthalene	<5.0	µg/L	5.0	EPA 8270
Nitrobenzene	<5.0	µg/L	5.0	EPA 8270
Pentachlorophenol	<10	µg/L	10	EPA 8270
Phenanthrene	<5.0	µg/L	5.0	EPA 8270
Phenol	<5.0	µg/L	5.0	EPA 8270
Pyrene	<5.0	µg/L	5.0	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 16:40 **System ID** AE04681 **Sample ID** LAB000743

Page: 4

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW3-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	18.5	µg/L	10.0	EPA 8260B
Benzene	<1.00	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	<1.00	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	<1.00	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	2.01	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 16:40 **System ID** AE04681 **Sample ID** **LAB000743**

Page: 5

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW3-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Comments:

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Test Parameter	Result	Units	MRL	Method
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000743

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 12:05 **System ID** AE04682 **Sample ID** **LAB000744**

Page: 1

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW4-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	0.30	mg/L	0.01	EPA 200.8
BARIUM	4.6	mg/L	0.01	EPA 200.7
CADMIUM	0.049	mg/L	0.03	EPA 200.7
CHROMIUM	1.1	mg/L	0.03	EPA 200.7
LEAD	5.7	mg/L	0.1	EPA 200.7
MERCURY	0.0024	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	0.015	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,2-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,3-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,4-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
2,4,5-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4,6-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dimethylphenol	<10	µg/L	10	EPA 8270
2,4-Dinitrophenol	<25	µg/L	25	EPA 8270
2,4-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2,6-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2-Chloronaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Chlorophenol	<5.0	µg/L	5.0	EPA 8270
2-Methylnaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Methylphenol	<10	µg/L	10	EPA 8270
2-Nitroaniline	<5.0	µg/L	5.0	EPA 8270
2-Nitrophenol	<5.0	µg/L	5.0	EPA 8270
3,3'-Dichlorobenzidine	<5.0	µg/L	5.0	EPA 8270
3-,4-Methylphenol	<5.0	µg/L	5.0	EPA 8270
3-Nitroaniline	<10	µg/L	10	EPA 8270
4,6-Dinitro-2-methylphenol	<10	µg/L	10	EPA 8270

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 12:05 **System ID** AE04682 **Sample ID** **LAB000744**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW4-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Chloro-3-methylphenol	<5.0	µg/L	5.0	EPA 8270
4-Chloroaniline	<20	µg/L	20	EPA 8270
4-chlorophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Nitroaniline	<10	µg/L	10	EPA 8270
4-Nitrophenol	<25	µg/L	25	EPA 8270
Acenaphthene	<5.0	µg/L	5.0	EPA 8270
Acenaphthylene	<5.0	µg/L	5.0	EPA 8270
Anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)pyrene	<5.0	µg/L	5.0	EPA 8270
Benzo(b)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzo(g,h,i)perylene	<5.0	µg/L	5.0	EPA 8270
Benzo(k)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzoic acid	<50	µg/L	50	EPA 8270
Benzyl alcohol	<10	µg/L	10	EPA 8270
Benzyl butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroethoxy) methane	<10	µg/L	10	EPA 8270
Bis(2-chloroethyl) ether	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroisopropyl) ether	<10	µg/L	10	EPA 8270
Bis(2-ethylhexyl) phthalate	<10	µg/L	10	EPA 8270
Chrysene	<5.0	µg/L	5.0	EPA 8270
Di-n-butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Di-n-octyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dibenzo(a,h)anthracene	<5.0	µg/L	5.0	EPA 8270
Dibenzofuran	<5.0	µg/L	5.0	EPA 8270
Diethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dimethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Fluoranthene	<5.0	µg/L	5.0	EPA 8270
Fluorene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobenzene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobutadiene	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 12:05 **System ID** AE04682 **Sample ID** **LAB000744**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW4-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10	µg/L	10	EPA 8270
Hexachloroethane	<10	µg/L	10	EPA 8270
Indeno(1,2,3-cd) pyrene	<5.0	µg/L	5.0	EPA 8270
Isophorone	<5.0	µg/L	5.0	EPA 8270
N-Nitroso-di-n-propylamine	<10	µg/L	10	EPA 8270
N-Nitrosodiphenylamine	<5.0	µg/L	5.0	EPA 8270
Naphthalene	<5.0	µg/L	5.0	EPA 8270
Nitrobenzene	<5.0	µg/L	5.0	EPA 8270
Pentachlorophenol	<10	µg/L	10	EPA 8270
Phenanthrene	<5.0	µg/L	5.0	EPA 8270
Phenol	<5.0	µg/L	5.0	EPA 8270
Pyrene	<5.0	µg/L	5.0	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	1.71	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 12:05	**System ID**	AE04682	**Sample ID**	**LAB000744**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW4-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	<10.0	µg/L	10.0	EPA 8260B
Benzene	<1.00	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	<1.00	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	4.82	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	<1.00	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	<2.00	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 12:05	**System ID**	AE04682	**Sample ID**	**LAB000744**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW4-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000744

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 13:05	**System ID**	AE04683	**Sample ID**	**LAB000745**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW5-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	0.062	mg/L	0.01	EPA 200.8
BARIUM	1.7	mg/L	0.01	EPA 200.7
CADMIUM	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM	0.20	mg/L	0.03	EPA 200.7
LEAD	0.44	mg/L	0.1	EPA 200.7
MERCURY	0.0005	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,2-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,3-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,4-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
2,4,5-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4,6-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dimethylphenol	<10	µg/L	10	EPA 8270
2,4-Dinitrophenol	<25	µg/L	25	EPA 8270
2,4-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2,6-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2-Chloronaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Chlorophenol	<5.0	µg/L	5.0	EPA 8270
2-Methylnaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Methylphenol	<10	µg/L	10	EPA 8270
2-Nitroaniline	<5.0	µg/L	5.0	EPA 8270
2-Nitrophenol	<5.0	µg/L	5.0	EPA 8270
3,3-Dichlorobenzidine	<5.0	µg/L	5.0	EPA 8270
3-,4-Methylphenol	<5.0	µg/L	5.0	EPA 8270
3-Nitroaniline	<10	µg/L	10	EPA 8270
4,6-Dinitro-2-methylphenol	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 13:05	**System ID**	AE04683	**Sample ID**	**LAB000745**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW5-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Chloro-3-methylphenol	<5.0	µg/L	5.0	EPA 8270
4-Chloroaniline	<20	µg/L	20	EPA 8270
4-chlorophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Nitroaniline	<10	µg/L	10	EPA 8270
4-Nitrophenol	<25	µg/L	25	EPA 8270
Acenaphthene	<5.0	µg/L	5.0	EPA 8270
Acenaphthylene	<5.0	µg/L	5.0	EPA 8270
Anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)pyrene	<5.0	µg/L	5.0	EPA 8270
Benzo(b)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzo(g,h,i)perylene	<5.0	µg/L	5.0	EPA 8270
Benzo(k)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzoic acid	<50	µg/L	50	EPA 8270
Benzyl alcohol	<10	µg/L	10	EPA 8270
Benzyl butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroethoxy) methane	<10	µg/L	10	EPA 8270
Bis(2-chloroethyl) ether	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroisopropyl) ether	<10	µg/L	10	EPA 8270
Bis(2-ethylhexyl) phthalate	<10	µg/L	10	EPA 8270
Chrysene	<5.0	µg/L	5.0	EPA 8270
Di-n-butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Di-n-octyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dibenzo(a,h)anthracene	<5.0	µg/L	5.0	EPA 8270
Dibenzofuran	<5.0	µg/L	5.0	EPA 8270
Diethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dimethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Fluoranthene	<5.0	µg/L	5.0	EPA 8270
Fluorene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobenzene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobutadiene	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 13:05 **System ID** AE04683 **Sample ID** **LAB000745**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW5-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10	µg/L	10	EPA 8270
Hexachloroethane	<10	µg/L	10	EPA 8270
Indeno(1,2,3-cd) pyrene	<5.0	µg/L	5.0	EPA 8270
Isophorone	<5.0	µg/L	5.0	EPA 8270
N-Nitroso-dl-n-propylamine	<10	µg/L	10	EPA 8270
N-Nitrosodiphenylamine	<5.0	µg/L	5.0	EPA 8270
Naphthalene	<5.0	µg/L	5.0	EPA 8270
Nitrobenzene	<5.0	µg/L	5.0	EPA 8270
Pentachlorophenol	<10	µg/L	10	EPA 8270
Phenanthrene	<5.0	µg/L	5.0	EPA 8270
Phenol	<5.0	µg/L	5.0	EPA 8270
Pyrene	<5.0	µg/L	5.0	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 13:05 **System ID** AE04683 **Sample ID** LAB000745

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW5-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	<10.0	µg/L	10.0	EPA 8260B
Benzene	<1.00	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	<1.00	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	<1.00	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	<2.00	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 13:05	**System ID**	AE04683	**Sample ID**	**LAB000745**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW5-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000745

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00 14:15	**System ID**	AE04684	**Sample ID**	**LAB000746**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW6-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC	0.021	mg/L	0.01	EPA 200.8
BARIUM	0.59	mg/L	0.01	EPA 200.7
CADMIUM	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM	0.032	mg/L	0.03	EPA 200.7
LEAD	<0.100	mg/L	0.1	EPA 200.7
MERCURY	<0.0002	mg/L	0.0002	EPA 245.1
SELENIUM	<0.01	mg/L	0.01	EPA 200.8
SILVER	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,2-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,3-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
1,4-Dichlorobenzene	<5.0	µg/L	5.0	EPA 8270
2,4,5-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4,6-Trichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dichlorophenol	<5.0	µg/L	5.0	EPA 8270
2,4-Dimethylphenol	<10	µg/L	10	EPA 8270
2,4-Dinitrophenol	<25	µg/L	25	EPA 8270
2,4-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2,6-Dinitrotoluene	<5.0	µg/L	5.0	EPA 8270
2-Chloronaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Chlorophenol	<5.0	µg/L	5.0	EPA 8270
2-Methylnaphthalene	<5.0	µg/L	5.0	EPA 8270
2-Methylphenol	<10	µg/L	10	EPA 8270
2-Nitroaniline	<5.0	µg/L	5.0	EPA 8270
2-Nitrophenol	<5.0	µg/L	5.0	EPA 8270
3,3'-Dichlorobenzidine	<5.0	µg/L	5.0	EPA 8270
3-4-Methylphenol	<5.0	µg/L	5.0	EPA 8270
3-Nitroaniline	<10	µg/L	10	EPA 8270
4,6-Dinitro-2-methylphenol	<10	µg/L	10	EPA 8270

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time	5/18/00	14:15	System ID	AE04684	Sample ID	LAB000746

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW6-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Chloro-3-methylphenol	<5.0	µg/L	5.0	EPA 8270
4-Chloroaniline	<20	µg/L	20	EPA 8270
4-chlorophenylphenyl ether	<5.0	µg/L	5.0	EPA 8270
4-Nitroaniline	<10	µg/L	10	EPA 8270
4-Nitrophenol	<25	µg/L	25	EPA 8270
Acenaphthene	<5.0	µg/L	5.0	EPA 8270
Acenaphthylene	<5.0	µg/L	5.0	EPA 8270
Anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)anthracene	<5.0	µg/L	5.0	EPA 8270
Benzo(a)pyrene	<5.0	µg/L	5.0	EPA 8270
Benzo(b)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzo(g,h,i)perylene	<5.0	µg/L	5.0	EPA 8270
Benzo(k)fluoranthene	<5.0	µg/L	5.0	EPA 8270
Benzoic acid	<50	µg/L	50	EPA 8270
Benzyl alcohol	<10	µg/L	10	EPA 8270
Benzyl butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroethoxy) methane	<10	µg/L	10	EPA 8270
Bis(2-chloroethyl) ether	<5.0	µg/L	5.0	EPA 8270
Bis(2-chloroisopropyl) ether	<10	µg/L	10	EPA 8270
Bis(2-ethylhexyl) phthalate	<10	µg/L	10	EPA 8270
Chrysene	<5.0	µg/L	5.0	EPA 8270
Di-n-butyl phthalate	<5.0	µg/L	5.0	EPA 8270
Di-n-octyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dibenzo(a,h)anthracene	<5.0	µg/L	5.0	EPA 8270
Dibenzofuran	<5.0	µg/L	5.0	EPA 8270
Diethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Dimethyl phthalate	<5.0	µg/L	5.0	EPA 8270
Fluoranthene	<5.0	µg/L	5.0	EPA 8270
Fluorene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobenzene	<5.0	µg/L	5.0	EPA 8270
Hexachlorobutadiene	<10	µg/L	10	EPA 8270

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 14:15 **System ID** AE04684 **Sample ID** **LAB000746**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW6-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<10	µg/L	10	EPA 8270
Hexachloroethane	<10	µg/L	10	EPA 8270
Indeno(1,2,3-cd) pyrene	<5.0	µg/L	5.0	EPA 8270
Isophorone	<5.0	µg/L	5.0	EPA 8270
N-Nitroso-di-n-propylamine	<10	µg/L	10	EPA 8270
N-Nitrosodiphenylamine	<5.0	µg/L	5.0	EPA 8270
Naphthalene	<5.0	µg/L	5.0	EPA 8270
Nitrobenzene	<5.0	µg/L	5.0	EPA 8270
Pentachlorophenol	<10	µg/L	10	EPA 8270
Phenanthrene	<5.0	µg/L	5.0	EPA 8270
Phenol	<5.0	µg/L	5.0	EPA 8270
Pyrene	<5.0	µg/L	5.0	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

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Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 14:15 **System ID** AE04684 **Sample ID** **LAB000746**

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Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW6-05180 PROJECT 6064

Date Received: 5/19/00
Sample Status: REPORT QUEUE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	<10.0	µg/L	10.0	EPA 8260B
Benzene	<1.00	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	<1.00	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	<1.00	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	<2.00	µg/L	2.00	EPA 8260B
Isopropylbenzene	<1.00	µg/L	1.00	EPA 8260B
m,p-Xylene	<2.00	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
n-Propylbenzene	<1.00	µg/L	1.00	EPA 8260B

6543 N. Burlington Ave. / Portland OR 97203 (503) 823-5600 fax (503) 823-5656

Report Date: 6/8/00

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 5/18/00 14:15 **System ID** AE04684 **Sample ID** **LAB000746**

Proj./Company Name: LARSON PROPERTY
Address/Location: 10505 N NORTH PORTLAND RD
MW6-05180 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.007

Page: 5
Date Received: 5/19/00
Sample Status: REPORT QUEUE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: KLEINFELDER

Comments: LAB: THE METHOD-SPECIFIED HOLDING TIME WAS EXCEEDED BY ONE DAY FOR VOLATILE ORGANICS ANALYSIS.

Test Parameter	Result	Units	MRL	Method
Naphthalene	<1.00	µg/L	1.00	EPA 8260B
o-Xylene	<1.00	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	<1.00	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	<1.00	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000746

Report Date: 6/8/00

KLEINFELDER

sheet 1 of 2

PROJECT NO.	PROJECT NAME
60-539 5-01	10505 N Portland Road

L.P. NO. (P.O. NO.):

SAMPLERS: (Signature/Number) David Lamadrid

RECEIVING LAB: City of Portland

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS: VOCs (8260)	Semi-VOCs (8270)	Total RCRA 8 Metals	Dissolved RCRA 8 Metals	INSTRUCTIONS/REMARKS
1	5/17/00	0845	TP-1-7'	Soil	4	4	X	X	X		LAB 000697
2		0900	TP-1-19'		4	4	X	X	X		LAB 000698
3		0925	TP-2-5'		4	4	X	X	X		LAB 000699
4		0940	TP-2-19'		4	4	X	X	X		LAB 000700
5		1010	TP-3-10'		1	4	X	X	X		LAB 000701
6		1025	TP-3-21'			4	X	X	X		LAB 000702
7		1045	TP-4-11'			4	X	X	X		LAB 000703
8		1050	TP-4-21'			4	X	X	X		LAB 000704
9		1115	TP-5-11'			4	X	X	X		LAB 000705
10		1145	TP-5-21'		1 jar	4	X	X	X		LAB 000706
11		1200	TP-6-5'		1 jar	4	X	X	X		LAB 000707
12		1215	TP-6-13'		2 oz jar	4	X	X	X		LAB 000708
13		1250	TP-7-5'		2 oz jar	4	X	X	X		LAB 000709
14		1300	TP-7-17'		2	4	X	X	X		LAB 000710
15		1355	TP-8-5'			4	X	X	X		LAB 000711
16		1405	TP-8-19'			4	X	X	X		LAB 000712
17		1430	TP-9-5'			4	X	X	X		LAB 000713
18		1435	TP-9-11'			4	X	X	X		LAB 000714
19		1500	TP-10-10'			4	X	X	X		LAB 000715
20		1505	TP-10-16'			4	X	X	X		LAB 000716

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
	5/17/00 0750	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Day

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

№ 0832

KLEINFELDER

Skamania 5070.000 5/17/00

sheet 2 of 2

PROJECT NO.	PROJECT NAME
60-5395-01	10505 N Portland Road

L.P. NO. (P.O. NO.)	SAMPLERS: (Signature/Number)
	David Lamadrid

RECEIVING LAB: City of Portland

	DATE MM/DD/YY	SAMPLE I.D. TIME HH-MM-SS	SAMPLE I.D.	MATRIX	NO. OF CONTAINERS	TYPE OF CONTAINERS	ANALYSIS: VOCs (8260)	Semi-VOCs (8270)	Total RCRA 8 metals	Dissolved RCRA 8 metals	INSTRUCTIONS/REMARKS
1	5/17/00	1530	TP-11-5'	Soil		4					LAB 000717
2	"	1535	TP-11-11'	Soil		4	X	X	X		LAB 000718
3		1550	TP-11-21'	Soil		4	X	X	X		LAB 000719
4											
5	↓	1220	TP-6	WATER		5	X	X		X	LAB 000720
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
David Lamadrid	5/19/00 0750	J. Cooke
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)

Instructions/Remarks:

Send Results To:

KLEINFELDER
15050 S.W. KOLL PARKWAY
SUITE L
BEAVERTON, OR 97006
(503) 644-9447

Attn: John Day

M-60 White – Sampler Canary – Return Copy To Shipper Pink – Lab Copy

CHAIN OF CUSTODY

No 0833

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 05/17/2000 12:20 **System ID** AE04631 **Sample ID** **LAB000720**

Page: 1

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6 PROJECT 6064

Date Received: 05/19/2000
Sample Status: INACTIVE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
METALS				
ARSENIC, DISSOLVED	0.058	mg/L	0.01	EPA 200.8
BARIUM, DISSOLVED	0.019	mg/L	0.01	EPA 200.7
CADMIUM, DISSOLVED	<0.030	mg/L	0.03	EPA 200.7
CHROMIUM, DISSOLVED	<0.030	mg/L	0.03	EPA 200.7
LEAD, DISSOLVED	<0.100	mg/L	0.01	EPA 200.7
MERCURY, DISSOLVED	<0.0002	mg/L	0.0002	EPA 245.1
SELENIUM, DISSOLVED	<0.01	mg/L	0.01	EPA 200.8
SILVER, DISSOLVED	<0.010	mg/L	0.01	EPA 200.7
SEMI-VOLATILE ORGANICS				
1,2,4-Trichlorobenzene	<10	µg/L	10	EPA 8270
1,2-Dichlorobenzene	<10	µg/L	10	EPA 8270
1,3-Dichlorobenzene	<10	µg/L	10	EPA 8270
1,4-Dichlorobenzene	<10	µg/L	10	EPA 8270
2,4,5-Trichlorophenol	<10	µg/L	10	EPA 8270
2,4,6-Trichlorophenol	<10	µg/L	10	EPA 8270
2,4-Dichlorophenol	<10	µg/L	10	EPA 8270
2,4-Dimethylphenol	<10	µg/L	20	EPA 8270
2,4-Dinitrophenol	<50	µg/L	50	EPA 8270
2,4-Dinitrotoluene	<10	µg/L	10	EPA 8270
2,6-Dinitrotoluene	<10	µg/L	10	EPA 8270
2-Chloronaphthalene	<10	µg/L	10	EPA 8270
2-Chlorophenol	<10	µg/L	10	EPA 8270
2-Methylnaphthalene	14.7	µg/L	10	EPA 8270
2-Methylphenol	<20	µg/L	20	EPA 8270
2-Nitroaniline	<10	µg/L	10	EPA 8270
2-Nitrophenol	<10	µg/L	10	EPA 8270
3,3'-Dichlorobenzidine	<10	µg/L	10	EPA 8270
3-,4-Methylphenol	10.1	µg/L	10	EPA 8270
3-Nitroanlline	<20	µg/L	20	EPA 8270
4,6-Dinitro-2-methylphenol	<20	µg/L	20	EPA 8270

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 05/17/2000 12:20 **System ID** AE04631 **Sample ID** **LAB000720**

Page: 2

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6 PROJECT 6064

Date Received: 05/19/2000
Sample Status: INACTIVE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
4-Bromophenylphenyl ether	<10	µg/L	10	EPA 8270
4-Chloro-3-methylphenol	<10	µg/L	10	EPA 8270
4-Chloroaniline	<40	µg/L	40	EPA 8270
4-chlorophenylphenyl ether	<10	µg/L	10	EPA 8270
4-Nitroaniline	<20	µg/L	20	EPA 8270
4-Nitrophenol	<50	µg/L	50	EPA 8270
Acenaphthene	10.5	µg/L	10	EPA 8270
Acenaphthylene	<10	µg/L	10	EPA 8270
Anthracene	11.3	µg/L	10	EPA 8270
Benzo(a)anthracene	<10	µg/L	10	EPA 8270
Benzo(a)pyrene	<10	µg/L	10	EPA 8270
Benzo(b)fluoranthene	<10	µg/L	10	EPA 8270
Benzo(g,h,i)perylene	<10	µg/L	10	EPA 8270
Benzo(k)fluoranthene	<10	µg/L	10	EPA 8270
Benzoic acid	<10	µg/L	10	EPA 8270
Benzyl alcohol	<20	µg/L	20	EPA 8270
Benzyl butyl phthalate	<10	µg/L	10	EPA 8270
Bis(2-chloroethoxy) methane	<20	µg/L	20	EPA 8270
Bis(2-chloroethyl) ether	<10	µg/L	10	EPA 8270
Bis(2-chloroisopropyl) ether	<20	µg/L	20	EPA 8270
Bis(2-ethylhexyl) phthalate	63.7	µg/L	40	EPA 8270
Chrysene	<10	µg/L	10	EPA 8270
Di-n-butyl phthalate	<10	µg/L	10	EPA 8270
Di-n-octyl phthalate	<10	µg/L	10	EPA 8270
Dibenzo(a,h)anthracene	<10	µg/L	10	EPA 8270
Dibenzofuran	<10	µg/L	10	EPA 8270
Diethyl phthalate	<10	µg/L	10	EPA 8270
Dimethyl phthalate	<10	µg/L	10	EPA 8270
Fluoranthene	16.6	µg/L	10	EPA 8270
Fluorene	<10	µg/L	10	EPA 8270
Hexachlorobenzene	<10	µg/L	10	EPA 8270
Hexachlorobutadiene	<20	µg/L	20	EPA 8270

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 05/17/2000 12:20 **System ID** AE04631 **Sample ID** **LAB000720**

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Comments:

Date Received: 05/19/2000
Sample Status: INACTIVE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: DL

Test Parameter	Result	Units	MRL	Method
Hexachlorocyclopentadiene	<20	µg/L	20	EPA 8270
Hexachloroethane	<20	µg/L	20	EPA 8270
Indeno(1,2,3-cd) pyrene	<10	µg/L	10	EPA 8270
Isophorone	<10	µg/L	10	EPA 8270
N-Nitroso-di-n-propylamine	<20	µg/L	20	EPA 8270
N-Nitrosodiphenylamine	<10	µg/L	10	EPA 8270
Naphthalene	23.3	µg/L	10	EPA 8270
Nitrobenzene	<10	µg/L	10	EPA 8270
Pentachlorophenol	<20	µg/L	20	EPA 8270
Phenanthrene	34.0	µg/L	10	EPA 8270
Phenol	67.1	µg/L	10	EPA 8270
Pyrene	15.3	µg/L	10	EPA 8270
VOLATILE ORGANIC COMPOUNDS				
1,1,1,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,1-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2,2-Tetrachloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1,2-Trichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
1,1-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,3-Trichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,2,4-Trimethylbenzene	10.4	µg/L	1.00	EPA 8260B
1,2-Dibromo-3-chloropropane	<2.00	µg/L	2.00	EPA 8260B
1,2-Dibromoethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichlorobenzene	6.71	µg/L	1.00	EPA 8260B
1,2-Dichloroethane	<1.00	µg/L	1.00	EPA 8260B
1,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
1,3,5-Trimethylbenzene	1.92	µg/L	1.00	EPA 8260B
1,3-Dichlorobenzene	<1.00	µg/L	1.00	EPA 8260B
1,3-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 05/17/2000 12:20 **System ID** AE04631 **Sample ID** **LAB000720**

Page: 4

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6 PROJECT 6064

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Comments:

Date Received: 05/19/2000
Sample Status: INACTIVE

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: DL

Test Parameter	Result	Units	MRL	Method
1,4-Dichlorobenzene	5.88	µg/L	1.00	EPA 8260B
2,2-Dichloropropane	<1.00	µg/L	1.00	EPA 8260B
2-Butanone	<10.0	µg/L	10.0	EPA 8260B
2-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
2-Hexanone	<10.0	µg/L	10.0	EPA 8260B
4-Chlorotoluene	<1.00	µg/L	1.00	EPA 8260B
4-Methyl-2-pentanone (MIBK)	<5.00	µg/L	5.00	EPA 8260B
Acetone	43.0	µg/L	10.0	EPA 8260B
Benzene	8.59	µg/L	1.00	EPA 8260B
Bromobenzene	<1.00	µg/L	1.00	EPA 8260B
Bromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromodichloromethane	<1.00	µg/L	1.00	EPA 8260B
Bromoform	<1.00	µg/L	1.00	EPA 8260B
Bromomethane	<5.00	µg/L	5.00	EPA 8260B
Carbon disulfide	<10.0	µg/L	10.0	EPA 8260B
Carbon tetrachloride	<1.00	µg/L	1.00	EPA 8260B
Chlorobenzene	129	µg/L	1.00	EPA 8260B
Chloroethane	<1.00	µg/L	1.00	EPA 8260B
Chloroform	<1.00	µg/L	1.00	EPA 8260B
Chloromethane	<5.00	µg/L	5.00	EPA 8260B
cis-1,2-Dichloroethene	2.43	µg/L	1.00	EPA 8260B
cis-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Dibromochloromethane	<1.00	µg/L	1.00	EPA 8260B
Dibromomethane	<1.00	µg/L	1.00	EPA 8260B
Dichlorodifluoromethane	<5.00	µg/L	5.00	EPA 8260B
Ethylbenzene	58.9	µg/L	1.00	EPA 8260B
Hexachlorobutadiene	<2.00	µg/L	2.00	EPA 8260B
Isopropylbenzene	1.93	µg/L	1.00	EPA 8260B
m,p-Xylene	57.7	µg/L	2.00	EPA 8260B
Methylene chloride	<5.00	µg/L	5.00	EPA 8260B
n-Butylbenzene	1.04	µg/L	1.00	EPA 8260B
n-Propylbenzene	2.08	µg/L	1.00	EPA 8260B

City of Portland
Water Pollution Control Laboratory
Laboratory Analysis Report

Sample Date/Time 05/17/2000 12:20 **System ID** AE04631 **Sample ID** **LAB000720**

Page: 5

Proj./Company Name: SPECIAL WASTE MISC SAMP
Address/Location: 10505 N NORTH PORTLAND RD
TP-6 PROJECT 6064

Date Received: 05/19/2000
Sample Status: INACTIVE

Proj Subcategory: SPECIAL WASTE
Sample Point Code: 0
IMS File/Invoice #: 3030.000

Sample Type: GRAB
Sample Matrix: GRNDWTR
Collected By: DL

Comments:

Test Parameter	Result	Units	MRL	Method
Naphthalene	17.1	µg/L	1.00	EPA 8260B
o-Xylene	28.3	µg/L	1.00	EPA 8260B
p-Isopropyltoluene	1.92	µg/L	1.00	EPA 8260B
sec-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Styrene	<1.00	µg/L	1.00	EPA 8260B
tert-Butylbenzene	<1.00	µg/L	1.00	EPA 8260B
Tetrachloroethene	<1.00	µg/L	1.00	EPA 8260B
Toluene	<1.00	µg/L	1.00	EPA 8260B
trans-1,2-Dichloroethene	<1.00	µg/L	1.00	EPA 8260B
trans-1,3-Dichloropropene	<1.00	µg/L	1.00	EPA 8260B
Trichloroethene	<1.00	µg/L	1.00	EPA 8260B
Trichlorofluoromethane	<1.00	µg/L	1.00	EPA 8260B
Vinyl chloride	1.71	µg/L	1.00	EPA 8260B

End of Report for Sample ID: LAB000720

HALEY & ALDRICH, INC.
6420 S Macadam Avenue
Suite 100
Portland, OR 97239
503.620.7284

3 June 2024
File No. 0209772-004

City of Portland, Bureau of Environmental Services
1120 SW 5th Avenue, Room 1000
Portland, Oregon 97204

Attention: Taryn Meyer

Subject: Soil Vapor Investigation
West Property - TASS 2 Site
10505 North Portland Road
Portland, Oregon
ECSI No. 0186

Dear Taryn Meyer:

Haley & Aldrich, Inc. (Haley & Aldrich) is pleased to submit this report summarizing the results of a soil vapor investigation (SVI) of the West Property - Temporary Alternative Shelter Site (TASS) 2 site located at 10505 North Portland Road in Portland, Oregon (site). The site is an approximately 6-acre portion of the West Property, located at 10505 North Portland Road (tax lot 1000 of Multnomah County tax map 1N1E05B). The City of Portland (City) intends to construct its second TASS facility at the site (TASS 2). Environmental services, in preparation for construction of the TASS 2 site, are being funded using U.S. Environmental Protection Agency (EPA) Brownfield Grant funding. Preliminary plans indicate that TASS 2 will consist of recreational vehicle storage areas; car parking areas; mobile manufactured housing pods; tents for common areas including kitchen areas, trash areas, picnic areas, and gathering areas; and sewage and stormwater infrastructure. Except for stormwater swales and a small, forested area along the east boundary of the site, the entirety of the site will be paved following the completion of construction activities. The average duration of occupancy for TASS 2 residents is anticipated to be 90 days, with a maximum duration of occupancy for TASS 2 residents of six months.

Background

A detailed site history, summaries of previous investigations, and a Conceptual Site Model have been presented in previous reports and are not discussed herein. Briefly, the West Property use has been industrial since at least the 1940s, including use as a shingle mill, a boat manufacture and repair facility, a tank-truck washing facility, and for materials storage, welding, and diesel engine repair and rebuilding. The Columbia Slough adjoins the north boundary of the West Property. The West Property, also referred to as the North Larsen Property, was listed on the DEQ Environmental Cleanup Site Information (ECSI)

database (ECSI No. 0186) because of the presence or suspected presence of phenols, phthalates, heavy metals, polychlorinated biphenyls, pesticides, petroleum hydrocarbons and associated constituents, and cyanide in soil and/or groundwater. The historical sources of the contamination at the West Property included discharge of wastewater to on-site ponds, product spillage, leaking underground storage tanks, contaminated stormwater runoff, and contaminants released to an on-site drywell. Except for the wastewater ponds, these features were primarily located on TASS 2.

Haley & Aldrich prepared a draft Remedial Action Plan, a draft Risk Assessment (RA), and a Contaminated Media Management Plan for the site dated 27 March, 19 April, and 3 May 2024, respectively. DEQ provided preliminary comments to the draft RA that identified data gaps associated with potential vapor intrusion at the site and requested the City conduct a SVI of the site to evaluate potential vapor intrusion risk to future site occupants and workers.

Haley & Aldrich prepared a draft SVI Work Plan for this investigation dated 5 April 2024. DEQ approved the draft work plan in email correspondence dated 16 April 2024, with some minor requested revisions to the draft SVI work plan. Haley & Aldrich incorporated DEQ's requested edits into the SVI Work Plan and issued the final SVI Work Plan on 23 April 2024.

Scope of Services

The purpose of the SVI was to evaluate potential volatilization risk to future site occupants and workers. The specific scope of services for the SVI, which was conducted in general accordance with the final SVI Work plan and DEQ's March 2024 draft *Guidance for Assessing and Remediating Vapor Intrusion into Buildings*, was as follows:

- Prepared a health and safety plan that addressed utility locating and field activities in general accordance with the Occupational Safety and Health Act and Oregon Administrative Rules;
- Coordinated with the Oregon Utility Notification Center to have public utilities located at the site;
- Subcontracted with a private utility locator to clear planned soil vapor probe locations of potential utility conflicts;
- Coordinated with an analytical laboratory licensed in Oregon to provide sampling media and analytical services;
- Subcontracted with Cascade Environmental of Clackamas, Oregon to install 10 soil vapor probes (SV-1 through SV-10) at the subject property, as follows;
  - Installed the 10 soil vapor probes (SV-1 through SV-10) in the open boreholes at depths of between 3.5 and 5.5 feet bgs. Each soil vapor probe consisted of Teflon tubing fitted to an approximately 6-inch stainless-steel screen at the bottom of each probe. Each probe was placed at the target depth and the exterior rod retracted to expose the approximately 6-inch stainless-steel screen. Each borehole was then filled with a sand filter pack and bentonite plug. A two-way valve was fitted to the top of the tubing and was kept closed prior to purging and sampling.

  - Prior to sample collection, performed a summa cannister vacuum hold test, helium leak test, and a sample train shut-in test at nine of the 10 sample locations (i.e., all except for soil vapor probe SV-3) as quality control/quality assurance activities. Rags saturated with 2-propanol were placed over sample train fittings as a leak-check system.
  - Purged a minimum of two probe volumes before sampling. Except for SV-3, purging was completed during the helium leak test using an external pump. During purging, volatile organic compound (VOC) concentrations were measured and recorded using a calibrated photoionization detector with a 10.6-electron volt lamp.
  - Collected soil vapor samples from 9 of the 10 probes using a 1-liter, laboratory-provided summa canister with a flow controller set to a flow rate of 200 milliliters per minute or less, as well as a sorbent-packed thermal desorption tube.
  - Collected a field duplicate sample consisting of an additional sorbent-packed thermal desorption tube from one of the 10 soil vapor probes.
  - Following sample collection, removed the vapor probes were removed and abandoned the boreholes in accordance with Oregon Water Resources Department regulations.
- Transported the soil vapor samples under chain of custody to Eurofins USA for chemical analysis of gasoline-range organics and VOCs by EPA Method TO-15 and diesel-range organics and VOCs by EPA Method TO-17; and
- Presented the results of the SVI in this report.

Field Activities

Field activities were conducted between 22 and 25 April 2024 and included installing 10 soil vapor probes (SV-1 through SV-10) at the approximate locations shown on Figure 1,and collecting soil vapor samples from nine of the completed probes in general accordance with DEQ's March 2024 draft *Guidance for Assessing and Remediating Vapor Intrusion into Buildings* and the May 2024 SVI Work Plan. Sampling could not be conduced at SVI location SV-7, as explained in the last paragraph of this section

On 22 April 2024, the drilling subcontractor attempted to install the soil vapor probes with hand auger borings to satisfy drilling subcontractor utility avoidance policies. The soil vapor probe borings encountered refusal, so the soil vapor probes were installed with a direct-push drill rig. Except for soil vapor probe SV-3, each soil vapor probe was set at a depth of 5.5 feet bgs and the outer rod retracted to 5 feet bgs to expose the 6-inch stainless-steel screen. Apparent perched groundwater was encountered at the base of soil vapor probe SV-3. Therefore, soil vapor probe SV-3 was retracted and set at a depth of 3.5 feet bgs before the outer rod was retracted to 3 feet bgs to expose the stainless-steel screen. Prior to installing the sampling assemblies at each soil vapor probe, a multi-gas meter was used to measure concentrations of methane, carbon dioxide, and oxygen in each soil vapor probe. Methane concentrations ranging from 4 to 48 percent were measured in soil vapor probes SV-1 through SV-6, SV-8, and SV-9.

Soil vapor samples could not be collected at the time of soil vapor probe installation (22 April 204) because the sample containers and helium did not arrive until the day after probe installation (23 April 2024). Haley & Aldrich personnel returned to the site on 24 April 2024 to begin collecting soil vapor

samples. Except for soil vapor probe SV-3, Haley & Aldrich installed a leak-check system consisting of a shroud placed over each sampling assembly and charged with helium. To conduct a field leak check, after purging approximately one volume a sample was collected from each assembly into a 1-liter Tedlar bag, and a helium detector was used to measure potential concentrations of helium in the Tedlar bag sample. Elevated concentrations of helium were detected in the initial Tedlar bag sample collected from soil vapor probe SV-1; however, a similar concentration of helium was measured directly from soil vapor probe SV-1 after connecting the helium detector to the probe, indicating that the elevated concentration of helium in the initial Tedlar bag sample at SV-1 was likely associated with the elevated concentration of methane in the subsurface. Because of the methane interference with the helium detector, we were unable to accurately check sample assemblies at all soil vapor probe locations for potential leakage at the time of sample collection. Therefore, the soil vapor samples collected during this investigation, except for SV-3, were analyzed for helium to evaluate the integrities of the sample assemblies. Because soil vapor sample SV-3 was installed at 3.0 feet bgs, the upper portion of the soil vapor probe protruded too far above ground to affix the shroud. Therefore, for soil vapor probe SV-3, Haley & Aldrich personnel installed a leak-check system consisting of rags soaked with 2-propanol at each sampling assembly connection.

One of the laboratory-provided TO-15 sample containers did not contain adequate vacuum for sampling and therefore could not be used during the sampling event. Additionally, the connection between the sampling manifold and a second TO-15 sample container failed while collecting soil vapor sample SV-2, which allowed ambient air to enter the sample container. Another TO-15 sample container was used to collect the soil vapor sample from soil vapor probe SV-2. Because two of the laboratory-provided sample containers could not be used, sufficient sample containers were not available to collect a field duplicate sample for TO-15 analysis. One field duplicate sample for TO-17 analysis was collected from soil vapor probe SV-10.

During sampling of soil vapor probe SV-7 on 25 April 2024, Haley & Aldrich field staff observed that the end of the Teflon tubing in the soil vapor probe was not connected to the base of the soil vapor probe, which would allow ambient air to be drawn into the sample. Haley & Aldrich field staff attempted to connect the tubing to the base of the soil vapor probe for approximately one hour but were unsuccessful. Because the drilling contractor was no longer onsite, a replacement probe could not be installed at SV-7 and a soil vapor sample could not be collect at this location.

Risk Screening Levels

DEQ has not established generic risk-based concentrations (RBCs) for soil vapor volatilization to outdoor air. Therefore, for select VOCs, DEQ developed site-specific RBCs for soil vapor to outdoor air. The VOC and total petroleum hydrocarbon, gasoline range (TPH-G) analytical results were compared to DEQ's site-specific RBCs for soil vapor to outdoor air. Methane is a non-toxic compound that does not have established human health-based screening levels.

Chemical Analytical Results

The soil vapor samples were transported under standard chain-of-custody protocols to Eurofins Air Toxics, LLC of Folsom, California. During transport to the laboratory, United Parcel Service lost the cooler

containing the TO-17 sample containers. Therefore, the laboratory was unable to analyze the TO-17 samples collected during this investigation.

Soil vapor samples SV-1-TO-15 through SV-6-TO-15 and SV-8-TO-15 through SV-10-TO-15 were analyzed for helium and/or methane by modified ASTM International Method D-1946, and for VOCs and TPH-G by EPA Method TO-15. Methane was detected in each of the soil vapor samples analyzed except for soil vapor sample TO-10-TO-15. The detected concentrations of methane ranged from 3.7 to 49 percent. Helium was detected in soil vapor samples SV-6-TO-15 and SV-10-TO-15 at concentrations of 0.19 and 13 percent, respectively. Less than a 5 percent contribution from ambient air indicates that the sampling assembly is sufficiently airtight. Therefore, analytical results from soil vapor sample SV-10-TO-15 may be biased slightly low. The helium and methane analytical results are presented on Table 1. VOC and TPH-G analytical results are presented on Table 2.

Up to 14 VOCs were detected in each of the nine soil vapor samples analyzed. The detected concentrations of these VOCs were between three and five orders of magnitude less than the corresponding DEQ-established site-specific RBCs. TPH-G was detected in each of the nine soil vapor samples analyzed. The detected concentrations of TPH-G were between three and five orders of magnitude less than the DEQ established site-specific RBCs.

Conclusions

Haley & Aldrich conducted a soil vapor investigation at the TASS 2 site in general accordance EQ's March 2024 draft *Guidance for Assessing and Remediating Vapor Intrusion into Buildings* and the May 2024 SVI Work Plan. The purpose of the soil vapor investigation was to evaluate potential risks to future workers and/or occupants of the planned TASS 2 facility. The results of this investigation did not indicate the presence of a volatilization risk to future workers or occupants of the TASS 2 site. It is our opinion that no further inquiries regarding soil vapor are warranted.

Please contact the undersigned if you have questions or require additional information on this project.

Sincerely yours,
HALEY & ALDRICH, INC.

Colby R. Hunt, C.H.M.M.
Client Leader/Senior Associate

Jennifer A. Casler, R.G., P.G.
Client Leader/Senior Associate

Attachments:
Table 1 - Soil Gas Sample Analytical Results
Table 2 - Soil Gas Chemical Analytical Results
Figure 1 - Site Plan
Attachment - Analytical Laboratory Reports

c: Oregon Department of Environmental Quality; Attn.: Sarah Greenfield, P.E.

TABLES

TABLE 1
SOIL GAS SAMPLE ANALYTICAL RESULTS
WEST PROPERTY - TASS 2
PORTLAND, OREGON

Sample Name Sample Date Sample Depth (bgs)	SV-1-TO-15 4/24/2024 5 ft	SV-2-TO-15 4/24/2024 5 ft	SV-3-TO-15 4/25/2024 3 ft	SV-4-TO-15 4/24/2024 5 ft	SV-5-TO-15 4/24/2024 5 ft	SV-6-TO-15 4/25/2024 5 ft	SV-8-TO-15 4/25/2024 5 ft	SV-9-TO-15 4/25/2024 5 ft	SV-10-TO-15 4/25/2024 5 ft
Methane and Helium (percent)									
Methane	**49**	**40**	**18**	**48**	**30**	**25**	**31**	**3.7**	<0.00021
Helium	<0.11	<0.099	--	<0.10	<0.10	**0.19**	<0.097	<0.099	**13**

Notes:

Bolding denotes detected concentration.

-: Not Analyzed

<: Not detected, value is the laboratory reporting limit

bgs: below ground surface

ft: feet

NR: Not Reported

TABLE 2
SOIL GAS CHEMICAL ANALYTICAL RESULTS
WEST PROPERTY - TASS 2
PORTLAND, OREGON

Sample Name Sample Date Sample Depth (bgs)	SV-1-TO-15 4/24/2024 5 ft	SV-2-TO-15 4/24/2024 5 ft	SV-3-TO-15 4/25/2024 3 ft	SV-4-TO-15 4/24/2024 5 ft	SV-5-TO-15 4/24/2024 5 ft	SV-6-TO-15 4/25/2024 5 ft	SV-8-TO-15 4/25/2024 5 ft	SV-9-TO-15 4/25/2024 5 ft	SV-10-TO-15 4/25/2024 5 ft	DEQ Site-Specific RBCs
Volatile Organic Compounds (µg/m^3)										
Benzene	**340**	**29**	**2.7**	**54**	<4.4	**46**	**8.1 J**	**6.3**	**5.2**	36,000 (cancer) 3,100,00 (non-cancer)
Chlorobenzene	<10	<5.5	<0.87	<5.7	<5.7	<5.8	<5.4	<0.26	<0.27	6,400,000
1,2-Dichlorobenzene	<17	<9.1	<0.80	<9.5	<9.5	<9.7	<9.0	<0.24	<0.25	33,000,000
1,4-Dichlorobenzene	<22	<11	<0.66	<12	<12	<8.4	<11	<0.19	<0.20	42,000
cis-1,2-Dichloroethene	**180**	**50**	<1.4	**350**	<5.1	<5.2	<4.8	<0.40	<0.42	4,200,000
Ethylbenzene	**23 J**	<5.8	**0.95 J**	<6.1	<6.1	<6.2	<5.7	**2.3**	**3.0**	140,000 (cancer) 130,000,000 (non-cancer)
n-Hexane	**670**	**860**	**87**	**200**	**130**	**610**	**480**	**21**	**3.2 J**	89,000,000
Naphthalene	<8.8	<4.7	<2.1	<4.9	<4.9	<5.0	<4.6	<0.62	<0.65	12,000 (cancer) 450,000 (non-cancer)
2-Propanol	**82 J**	<19	**6.4 J**	**24 J**	<20	<20	<19	**5.0 J**	**2.4 J**	NE
n-Propylbenzene	<12	<6.2	<0.99	<6.5	<6.5	<6.6	<6.1	**0.57 J**	<0.30	150,000,000
Styrene	<8.0	<4.2	<0.78	<4.4	<4.4	<4.5	<4.2	<0.23	**0.32 J**	120,000,000
Tetrachloroethene	<18	<9.9	<1.1	**38 J**	<10	<10	<9.7	<0.32	**3.0**	1,900,000
Toluene	**35 J**	**8.2 J**	**4.1 J**	**53**	**8.8 J**	**26 J**	<5.2	**12**	**28**	590,000,000
1,1,1-Trichloroethane	<14	<7.5	<0.71	<7.8	<7.8	<8.0	<7.4	<0.21	<0.22	710,000,000
1,1,2-Trichloroethane	<19	<10	<1.1	<11	<11	<11	<10	<0.34	<0.35	24,000
Trichloroethene	**36 J**	**11 J**	<0.42	**69**	<9.5	<9.6	<8.9	<0.12	<0.13	62,000
1,2,4-Trimethylbenzene	<14	<7.5	**1.6 J**	<7.8	<7.8	<8.0	<7.4	**1.3**	**0.65 J**	9,200,000
1,3,5-Trimethylbenzene	<14	<7.4	<0.81	<7.8	<7.8	<7.9	<7.3	**0.44 J**	**0.28 J**	9,300,000
m,p-Xylene	**31 J**	**11 J**	**1.4 J**	**19 J**	<3.7	**4.0 J**	**4.2 J**	**5.8**	**9.0**	13,000,000
o-Xylene	**23 J**	**6.9 J**	<0.90	<6.1	<6.1	<6.2	<5.8	**2.5**	**3.2**	13,000,000
Total Petroleum Hydrocarbons as Gasoline	**94,000**	**70,000**	**30,000**	**49,000**	**49,000**	**57,000**	**45,000**	**9,800**	**310**	24,000,000

Notes:

-: Not Analyzed

<: Not detected, value is the laboratory reporting limit

bgs: below ground surface

ft: feet

µg/m^3: micrograms per cubic meter

NR: Not Reported

Bolding denotes detected concentration.

FIGURE

LEGEND

- SOIL VAPOR SAMPLE LOCATION
- SITE BOUNDARY
- PARCEL BOUNDARY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. UST = UNDERGROUND STORAGE TANK
3. ASSESSOR PARCEL DATA SOURCE: REGIONAL LAND INFORMATION SYSTEM (RLIS)
4. AERIAL IMAGERY SOURCE: NEARMAP, 14 AUGUST 2023

N

0 150 300

SCALE IN FEET

HALEY ALDRICH

SOIL VAPOR INVESTIGATION WORK PLAN
WEST PROPERTY - TASS 2
10505 N PORTLAND ROAD
PORTLAND, OREGON 97203

SITE PLAN

MAY 2024

FIGURE 2

GIS FILE PATH: \\haleyaldrich.com\share\CF\Projects\0209772\GIS\209772_COP_WEST_PARCEL.aprx - USER: aysbu - LAST SAVED: 4/5/2024 10:47 AM

ATTACHMENT
Analytical Laboratory Reports

eurofins | Air Toxics

5/18/2024
Mr. Andy Klopfenstein
Haley & Aldrich, Inc.
6420 SW MacAdam Ave
Ste 100
Portland OR 97239

Project Name: COP TASS 2
Project #:
Workorder #: 2405186A

Dear Mr. Andy Klopfenstein

The following report includes the data for the above referenced project for sample(s) received on 5/6/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2405186A

Work Order Summary

CLIENT:	Mr. Andy Klopfenstein Haley & Aldrich, Inc. 6420 SW MacAdam Ave Ste 100 Portland, OR 97239	**BILL TO:**	Accounts Payable Haley & Aldrich 70 Blanchard Road Suite 430 Burlington, MA 02129-1400
PHONE:	503-620-7284	**P.O. #**	0209772-004
FAX:	503-620-6918	**PROJECT #**	COP TASS 2
DATE RECEIVED:	05/06/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	05/18/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SV-1-TO-15	Modified TO-15	6.3 "Hg	10 psi
02A	SV-2-TO-15	Modified TO-15	4.5 "Hg	10 psi
03A	SV-3-TO-15	Modified TO-15	4.9 "Hg	10.1 psi
04A	SV-4-TO-15	Modified TO-15	5.7 "Hg	9.9 psi
05A	SV-5-TO-15	Modified TO-15	5.5 "Hg	10 psi
06A	SV-6-TO-15	Modified TO-15	6.1 "Hg	9.8 psi
07A	SV-8-TO-15	Modified TO-15	4.3 "Hg	9.8 psi
08A	SV-9-TO-15	Modified TO-15	4.5 "Hg	10 psi
09A	SV-10-TO-15	Modified TO-15	5.7 "Hg	10 psi
10A	Lab Blank	Modified TO-15	NA	NA
10B	Lab Blank	Modified TO-15	NA	NA
11A	CCV	Modified TO-15	NA	NA
11B	CCV	Modified TO-15	NA	NA
12A	LCS	Modified TO-15	NA	NA
12AA	LCSD	Modified TO-15	NA	NA
12B	LCS	Modified TO-15	NA	NA
12BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 05/18/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

LABORATORY NARRATIVE
Modified TO-15
Haley & Aldrich, Inc.
Workorder# 2405186A

Nine 1 Liter Summa Canister (100% Certified) samples were received on May 06, 2024. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***TO-15***	***ATL Modifications***
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Dilution was performed on samples SV-1-TO-15, SV-2-TO-15, SV-3-TO-15, SV-4-TO-15, SV-5-TO-15, SV-6-TO-15 and SV-8-TO-15 due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-1-TO-15		
Lab ID:	2405186A-01A	**Date/Time Analyzed:**	5/17/24 08:22 PM
Date/Time Collected:	4/24/24 12:40 PM	**Dilution Factor:**	21.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051717

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	14	52	58	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	25	66	73	Not Detected
1,1,2-Trichloroethane	79-00-5	19	52	58	Not Detected
1,1-Dichloroethane	75-34-3	9.4	39	43	22 J
1,1-Dichloroethene	75-35-4	22	38	42	Not Detected
1,2,4-Trichlorobenzene	120-82-1	58	240	320	Not Detected
1,2,4-Trimethylbenzene	95-63-6	14	47	52	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	27	74	82	Not Detected
1,2-Dichlorobenzene	95-50-1	17	58	64	Not Detected
1,2-Dichloroethane	107-06-2	15	39	43	Not Detected
1,2-Dichloropropane	78-87-5	13	44	49	Not Detected
1,3,5-Trimethylbenzene	108-67-8	14	47	52	Not Detected
1,3-Butadiene	106-99-0	14	21	24	Not Detected
1,3-Dichlorobenzene	541-73-1	15	58	64	Not Detected
1,4-Dichlorobenzene	106-46-7	22	58	64	Not Detected
1,4-Dioxane	123-91-1	35	120	150	Not Detected
2,2,4-Trimethylpentane	540-84-1	20	45	50	620
2-Butanone (Methyl Ethyl Ketone)	78-93-3	21	94	120	120 J
2-Hexanone	591-78-6	49	130	170	Not Detected
2-Propanol	67-63-0	36	78	100	82 J
3-Chloropropene	107-05-1	34	100	130	Not Detected
4-Ethyltoluene	622-96-8	12	47	52	Not Detected
4-Methyl-2-pentanone	108-10-1	17	39	44	Not Detected
Acetone	67-64-1	70	200	250	610

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-1-TO-15		
Lab ID:	2405186A-01A	**Date/Time Analyzed:**	5/17/24 08:22 PM
Date/Time Collected:	4/24/24 12:40 PM	**Dilution Factor:**	21.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051717

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	18	50	55	Not Detected
Benzene	71-43-2	8.0	31	34	340
Bromodichloromethane	75-27-4	22	64	71	Not Detected
Bromoform	75-25-2	43	99	110	Not Detected
Bromomethane	74-83-9	74	120	410	Not Detected
Carbon Disulfide	75-15-0	25	99	130	Not Detected
Carbon Tetrachloride	56-23-5	21	60	67	Not Detected
Chlorobenzene	108-90-7	10	44	49	Not Detected
Chloroethane	75-00-3	39	84	110	Not Detected
Chloroform	67-66-3	12	47	52	Not Detected
Chloromethane	74-87-3	37	66	220	Not Detected
cis-1,2-Dichloroethene	156-59-2	9.2	38	42	180
cis-1,3-Dichloropropene	10061-01-5	12	44	48	Not Detected
Cumene	98-82-8	11	47	52	Not Detected
Cyclohexane	110-82-7	13	33	37	590
Dibromochloromethane	124-48-1	27	82	91	Not Detected
Ethanol	64-17-5	99	160	200	Not Detected
Ethyl Benzene	100-41-4	11	42	46	23 J
Freon 11	75-69-4	19	54	60	Not Detected
Freon 113	76-13-1	18	73	82	Not Detected
Freon 114	76-14-2	21	67	74	61 J
Freon 12	75-71-8	25	47	53	Not Detected
Heptane	142-82-5	15	39	44	290
Hexachlorobutadiene	87-68-3	130	340	450	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-1-TO-15		
Lab ID:	2405186A-01A	**Date/Time Analyzed:**	5/17/24 08:22 PM
Date/Time Collected:	4/24/24 12:40 PM	**Dilution Factor:**	21.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051717

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	12	34	38	670
m,p-Xylene	108-38-3	6.6	42	92	31 J
Methyl tert-butyl ether	1634-04-4	28	120	150	Not Detected
Methylene Chloride	75-09-2	31	110	370	Not Detected
Naphthalene	91-20-3	8.8	22	110	Not Detected
o-Xylene	95-47-6	11	42	46	23 J
Propylbenzene	103-65-1	12	47	52	Not Detected
Styrene	100-42-5	8.0	41	45	Not Detected
Tetrachloroethene	127-18-4	18	65	72	Not Detected
Tetrahydrofuran	109-99-9	20	28	31	Not Detected
Toluene	108-88-3	10	36	80	35 J
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	4400	94000
trans-1,2-Dichloroethene	156-60-5	19	38	42	Not Detected
trans-1,3-Dichloropropene	10061-02-6	7.4	44	48	Not Detected
Trichloroethene	79-01-6	17	52	57	36 J
Vinyl Chloride	75-01-4	23	24	27	85

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	102

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-2-TO-15		
Lab ID:	2405186A-02A	**Date/Time Analyzed:**	5/17/24 05:33 PM
Date/Time Collected:	4/24/24 02:46 PM	**Dilution Factor:**	11.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	7.5	28	31	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	13	35	39	Not Detected
1,1,2-Trichloroethane	79-00-5	10	28	31	Not Detected
1,1-Dichloroethane	75-34-3	5.0	20	23	33
1,1-Dichloroethene	75-35-4	12	20	22	Not Detected
1,2,4-Trichlorobenzene	120-82-1	31	120	170	Not Detected
1,2,4-Trimethylbenzene	95-63-6	7.5	25	28	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	14	39	43	Not Detected
1,2-Dichlorobenzene	95-50-1	9.1	30	34	Not Detected
1,2-Dichloroethane	107-06-2	7.9	20	23	Not Detected
1,2-Dichloropropane	78-87-5	7.1	23	26	Not Detected
1,3,5-Trimethylbenzene	108-67-8	7.4	25	28	Not Detected
1,3-Butadiene	106-99-0	7.3	11	12	Not Detected
1,3-Dichlorobenzene	541-73-1	7.9	30	34	Not Detected
1,4-Dichlorobenzene	106-46-7	11	30	34	Not Detected
1,4-Dioxane	123-91-1	19	61	81	Not Detected
2,2,4-Trimethylpentane	540-84-1	10	24	26	280
2-Butanone (Methyl Ethyl Ketone)	78-93-3	11	50	67	45 J
2-Hexanone	591-78-6	26	69	92	Not Detected
2-Propanol	67-63-0	19	42	56	Not Detected
3-Chloropropene	107-05-1	18	53	71	Not Detected
4-Ethyltoluene	622-96-8	6.2	25	28	Not Detected
4-Methyl-2-pentanone	108-10-1	8.9	21	23	Not Detected
Acetone	67-64-1	37	110	130	220

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-2-TO-15		
Lab ID:	2405186A-02A	**Date/Time Analyzed:**	5/17/24 05:33 PM
Date/Time Collected:	4/24/24 02:46 PM	**Dilution Factor:**	11.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	9.4	26	29	Not Detected
Benzene	71-43-2	4.3	16	18	29
Bromodichloromethane	75-27-4	12	34	38	Not Detected
Bromoform	75-25-2	23	52	58	Not Detected
Bromomethane	74-83-9	39	66	220	Not Detected
Carbon Disulfide	75-15-0	13	53	70	Not Detected
Carbon Tetrachloride	56-23-5	11	32	36	Not Detected
Chlorobenzene	108-90-7	5.5	23	26	Not Detected
Chloroethane	75-00-3	21	45	60	Not Detected
Chloroform	67-66-3	6.3	25	28	Not Detected
Chloromethane	74-87-3	20	35	120	Not Detected
cis-1,2-Dichloroethene	156-59-2	4.9	20	22	50
cis-1,3-Dichloropropene	10061-01-5	6.3	23	26	Not Detected
Cumene	98-82-8	6.1	25	28	Not Detected
Cyclohexane	110-82-7	7.2	18	19	450
Dibromochloromethane	124-48-1	14	43	48	Not Detected
Ethanol	64-17-5	53	85	110	Not Detected
Ethyl Benzene	100-41-4	5.8	22	24	Not Detected
Freon 11	75-69-4	10	28	32	Not Detected
Freon 113	76-13-1	9.4	39	43	Not Detected
Freon 114	76-14-2	11	36	39	Not Detected
Freon 12	75-71-8	13	25	28	25 J
Heptane	142-82-5	7.9	21	23	150
Hexachlorobutadiene	87-68-3	68	180	240	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-2-TO-15		
Lab ID:	2405186A-02A	**Date/Time Analyzed:**	5/17/24 05:33 PM
Date/Time Collected:	4/24/24 02:46 PM	**Dilution Factor:**	11.3
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	6.2	18	20	860
m,p-Xylene	108-38-3	3.5	22	49	11 J
Methyl tert-butyl ether	1634-04-4	15	61	81	Not Detected
Methylene Chloride	75-09-2	16	59	200	Not Detected
Naphthalene	91-20-3	4.7	12	59	Not Detected
o-Xylene	95-47-6	5.9	22	24	6.9 J
Propylbenzene	103-65-1	6.2	25	28	Not Detected
Styrene	100-42-5	4.2	22	24	Not Detected
Tetrachloroethene	127-18-4	9.9	34	38	Not Detected
Tetrahydrofuran	109-99-9	11	15	17	Not Detected
Toluene	108-88-3	5.3	19	42	8.2 J
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	2300	70000
trans-1,2-Dichloroethene	156-60-5	10	20	22	Not Detected
trans-1,3-Dichloropropene	10061-02-6	3.9	23	26	Not Detected
Trichloroethene	79-01-6	9.1	27	30	11 J
Vinyl Chloride	75-01-4	12	13	14	72

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	83
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-3-TO-15		
Lab ID:	2405186A-03A	**Date/Time Analyzed:**	5/17/24 05:58 PM
Date/Time Collected:	4/25/24 03:02 PM	**Dilution Factor:**	6.72
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.71	2.9	3.7	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	1.2	3.7	4.6	Not Detected
1,1,2-Trichloroethane	79-00-5	1.1	2.9	3.7	Not Detected
1,1-Dichloroethane	75-34-3	0.58	2.2	2.7	Not Detected
1,1-Dichloroethene	75-35-4	0.66	2.1	2.7	Not Detected
1,2,4-Trichlorobenzene	120-82-1	14	24	25	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.89	2.6	3.3	1.6 J
1,2-Dibromoethane (EDB)	106-93-4	1.3	4.1	5.2	Not Detected
1,2-Dichlorobenzene	95-50-1	0.80	3.2	4.0	Not Detected
1,2-Dichloroethane	107-06-2	0.66	2.2	2.7	Not Detected
1,2-Dichloropropane	78-87-5	0.98	2.5	3.1	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.81	2.6	3.3	Not Detected
1,3-Butadiene	106-99-0	0.63	1.2	1.5	Not Detected
1,3-Dichlorobenzene	541-73-1	0.89	3.2	4.0	Not Detected
1,4-Dichlorobenzene	106-46-7	0.66	3.2	4.0	Not Detected
1,4-Dioxane	123-91-1	0.71	1.9	12	Not Detected
2,2,4-Trimethylpentane	540-84-1	4.7	15	16	100
2-Butanone (Methyl Ethyl Ketone)	78-93-3	1.0	9.5	40	11 J
2-Hexanone	591-78-6	3.1	13	14	Not Detected
2-Propanol	67-63-0	2.5	7.9	33	6.4 J
3-Chloropropene	107-05-1	2.9	10	10	Not Detected
4-Ethyltoluene	622-96-8	0.93	2.6	3.3	Not Detected
4-Methyl-2-pentanone	108-10-1	0.54	2.2	2.8	Not Detected
Acetone	67-64-1	7.2	7.7	32	50

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-3-TO-15		
Lab ID:	2405186A-03A	**Date/Time Analyzed:**	5/17/24 05:58 PM
Date/Time Collected:	4/25/24 03:02 PM	**Dilution Factor:**	6.72
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.79	2.8	3.5	Not Detected
Benzene	71-43-2	0.32	1.7	2.1	2.7
Bromodichloromethane	75-27-4	0.96	3.6	4.5	Not Detected
Bromoform	75-25-2	1.3	5.6	6.9	Not Detected
Bromomethane	74-83-9	7.5	12	130	Not Detected
Carbon Disulfide	75-15-0	9.9	10	100	18 J
Carbon Tetrachloride	56-23-5	0.88	3.4	4.2	Not Detected
Chlorobenzene	108-90-7	0.87	2.5	3.1	Not Detected
Chloroethane	75-00-3	2.4	8.5	8.9	Not Detected
Chloroform	67-66-3	0.71	2.6	3.3	7.3
Chloromethane	74-87-3	2.2	6.7	6.9	Not Detected
cis-1,2-Dichloroethene	156-59-2	1.4	2.1	2.7	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.54	2.4	3.0	Not Detected
Cumene	98-82-8	1.2	2.6	3.3	Not Detected
Cyclohexane	110-82-7	2.2	11	12	50
Dibromochloromethane	124-48-1	0.92	4.6	5.7	Not Detected
Ethanol	64-17-5	2.7	6.1	25	13 J
Ethyl Benzene	100-41-4	0.67	2.3	2.9	0.95 J
Freon 11	75-69-4	0.59	3.0	3.8	Not Detected
Freon 113	76-13-1	0.98	4.1	5.2	Not Detected
Freon 114	76-14-2	1.1	3.8	4.7	5.3
Freon 12	75-71-8	2.3	16	17	Not Detected
Heptane	142-82-5	2.1	13	14	Not Detected
Hexachlorobutadiene	87-68-3	8.3	34	36	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-3-TO-15		
Lab ID:	2405186A-03A	**Date/Time Analyzed:**	5/17/24 05:58 PM
Date/Time Collected:	4/25/24 03:02 PM	**Dilution Factor:**	6.72
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	2.8	11	12	87
m,p-Xylene	108-38-3	1.2	2.3	2.9	1.4 J
Methyl tert-butyl ether	1634-04-4	0.73	1.9	2.4	Not Detected
Methylene Chloride	75-09-2	1.0	1.9	12	5.6 J
Naphthalene	91-20-3	2.1	4.2	7.0	Not Detected
o-Xylene	95-47-6	0.90	2.3	2.9	Not Detected
Propylbenzene	103-65-1	0.99	2.6	3.3	Not Detected
Styrene	100-42-5	0.78	2.3	2.9	Not Detected
Tetrachloroethene	127-18-4	1.1	3.6	4.6	Not Detected
Tetrahydrofuran	109-99-9	9.4	9.5	9.9	Not Detected
Toluene	108-88-3	0.44	2.0	25	4.1 J
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	270	30000
trans-1,2-Dichloroethene	156-60-5	0.99	2.1	2.7	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.90	2.4	3.0	Not Detected
Trichloroethene	79-01-6	0.42	2.9	3.6	Not Detected
Vinyl Chloride	75-01-4	0.41	1.4	1.7	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	100

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-4-TO-15		
Lab ID:	2405186A-04A	**Date/Time Analyzed:**	5/17/24 06:07 PM
Date/Time Collected:	4/24/24 03:59 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051713

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	7.8	29	32	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	14	36	40	Not Detected
1,1,2-Trichloroethane	79-00-5	11	29	32	Not Detected
1,1-Dichloroethane	75-34-3	5.2	21	24	6.2 J
1,1-Dichloroethene	75-35-4	12	21	23	Not Detected
1,2,4-Trichlorobenzene	120-82-1	32	130	180	Not Detected
1,2,4-Trimethylbenzene	95-63-6	7.8	26	29	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	15	41	45	Not Detected
1,2-Dichlorobenzene	95-50-1	9.5	32	35	Not Detected
1,2-Dichloroethane	107-06-2	8.2	21	24	Not Detected
1,2-Dichloropropane	78-87-5	7.4	24	27	Not Detected
1,3,5-Trimethylbenzene	108-67-8	7.8	26	29	Not Detected
1,3-Butadiene	106-99-0	7.7	12	13	Not Detected
1,3-Dichlorobenzene	541-73-1	8.3	32	35	Not Detected
1,4-Dichlorobenzene	106-46-7	12	32	35	Not Detected
1,4-Dioxane	123-91-1	20	64	85	Not Detected
2,2,4-Trimethylpentane	540-84-1	11	25	28	160
2-Butanone (Methyl Ethyl Ketone)	78-93-3	12	52	70	39 J
2-Hexanone	591-78-6	27	72	97	Not Detected
2-Propanol	67-63-0	20	44	58	24 J
3-Chloropropene	107-05-1	19	55	74	Not Detected
4-Ethyltoluene	622-96-8	6.4	26	29	Not Detected
4-Methyl-2-pentanone	108-10-1	9.3	22	24	Not Detected
Acetone	67-64-1	39	110	140	170

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-4-TO-15		
Lab ID:	2405186A-04A	**Date/Time Analyzed:**	5/17/24 06:07 PM
Date/Time Collected:	4/24/24 03:59 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051713

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	9.8	27	30	Not Detected
Benzene	71-43-2	4.4	17	19	54
Bromodichloromethane	75-27-4	12	36	40	Not Detected
Bromoform	75-25-2	24	55	61	Not Detected
Bromomethane	74-83-9	41	69	230	Not Detected
Carbon Disulfide	75-15-0	14	55	73	Not Detected
Carbon Tetrachloride	56-23-5	12	33	37	Not Detected
Chlorobenzene	108-90-7	5.7	24	27	Not Detected
Chloroethane	75-00-3	22	47	62	Not Detected
Chloroform	67-66-3	6.6	26	29	Not Detected
Chloromethane	74-87-3	21	36	120	Not Detected
cis-1,2-Dichloroethene	156-59-2	5.1	21	23	350
cis-1,3-Dichloropropene	10061-01-5	6.5	24	27	Not Detected
Cumene	98-82-8	6.3	26	29	Not Detected
Cyclohexane	110-82-7	7.5	18	20	130
Dibromochloromethane	124-48-1	15	45	50	Not Detected
Ethanol	64-17-5	55	89	110	170
Ethyl Benzene	100-41-4	6.1	23	26	Not Detected
Freon 11	75-69-4	11	30	33	Not Detected
Freon 113	76-13-1	9.8	41	45	Not Detected
Freon 114	76-14-2	11	37	41	Not Detected
Freon 12	75-71-8	14	26	29	26 J
Heptane	142-82-5	8.2	22	24	50
Hexachlorobutadiene	87-68-3	72	190	250	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-4-TO-15		
Lab ID:	2405186A-04A	**Date/Time Analyzed:**	5/17/24 06:07 PM
Date/Time Collected:	4/24/24 03:59 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051713

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	6.5	19	21	200
m,p-Xylene	108-38-3	3.7	23	51	19 J
Methyl tert-butyl ether	1634-04-4	16	64	85	Not Detected
Methylene Chloride	75-09-2	17	61	200	Not Detected
Naphthalene	91-20-3	4.9	12	62	Not Detected
o-Xylene	95-47-6	6.1	23	26	Not Detected
Propylbenzene	103-65-1	6.5	26	29	Not Detected
Styrene	100-42-5	4.4	23	25	Not Detected
Tetrachloroethene	127-18-4	10	36	40	38 J
Tetrahydrofuran	109-99-9	11	16	17	Not Detected
Toluene	108-88-3	5.6	20	44	53
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	2400	49000
trans-1,2-Dichloroethene	156-60-5	11	21	23	85
trans-1,3-Dichloropropene	10061-02-6	4.1	24	27	Not Detected
Trichloroethene	79-01-6	9.5	28	32	69
Vinyl Chloride	75-01-4	13	14	15	780

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	101

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	SV-5-TO-15		
Lab ID:	2405186A-05A	**Date/Time Analyzed:**	5/17/24 06:41 PM
Date/Time Collected:	4/24/24 05:03 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051714

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	7.8	29	32	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	14	36	40	Not Detected
1,1,2-Trichloroethane	79-00-5	11	29	32	Not Detected
1,1-Dichloroethane	75-34-3	5.2	21	24	Not Detected
1,1-Dichloroethene	75-35-4	12	21	23	Not Detected
1,2,4-Trichlorobenzene	120-82-1	32	130	180	Not Detected
1,2,4-Trimethylbenzene	95-63-6	7.8	26	29	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	15	41	45	Not Detected
1,2-Dichlorobenzene	95-50-1	9.5	32	35	Not Detected
1,2-Dichloroethane	107-06-2	8.2	21	24	Not Detected
1,2-Dichloropropane	78-87-5	7.4	24	27	Not Detected
1,3,5-Trimethylbenzene	108-67-8	7.8	26	29	Not Detected
1,3-Butadiene	106-99-0	7.7	12	13	Not Detected
1,3-Dichlorobenzene	541-73-1	8.3	32	35	Not Detected
1,4-Dichlorobenzene	106-46-7	12	32	35	Not Detected
1,4-Dioxane	123-91-1	20	64	85	Not Detected
2,2,4-Trimethylpentane	540-84-1	11	25	28	24 J
2-Butanone (Methyl Ethyl Ketone)	78-93-3	12	52	70	22 J
2-Hexanone	591-78-6	27	72	97	Not Detected
2-Propanol	67-63-0	20	44	58	Not Detected
3-Chloropropene	107-05-1	19	55	74	Not Detected
4-Ethyltoluene	622-96-8	6.4	26	29	Not Detected
4-Methyl-2-pentanone	108-10-1	9.3	22	24	Not Detected
Acetone	67-64-1	39	110	140	110 J

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-5-TO-15		
Lab ID:	2405186A-05A	**Date/Time Analyzed:**	5/17/24 06:41 PM
Date/Time Collected:	4/24/24 05:03 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051714

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	9.8	27	30	Not Detected
Benzene	71-43-2	4.4	17	19	Not Detected
Bromodichloromethane	75-27-4	12	36	40	Not Detected
Bromoform	75-25-2	24	55	61	Not Detected
Bromomethane	74-83-9	41	69	230	Not Detected
Carbon Disulfide	75-15-0	14	55	73	Not Detected
Carbon Tetrachloride	56-23-5	12	33	37	Not Detected
Chlorobenzene	108-90-7	5.7	24	27	Not Detected
Chloroethane	75-00-3	22	47	62	Not Detected
Chloroform	67-66-3	6.6	26	29	Not Detected
Chloromethane	74-87-3	21	36	120	Not Detected
cis-1,2-Dichloroethene	156-59-2	5.1	21	23	Not Detected
cis-1,3-Dichloropropene	10061-01-5	6.5	24	27	Not Detected
Cumene	98-82-8	6.3	26	29	Not Detected
Cyclohexane	110-82-7	7.5	18	20	41
Dibromochloromethane	124-48-1	15	45	50	Not Detected
Ethanol	64-17-5	55	89	110	Not Detected
Ethyl Benzene	100-41-4	6.1	23	26	Not Detected
Freon 11	75-69-4	11	30	33	Not Detected
Freon 113	76-13-1	9.8	41	45	Not Detected
Freon 114	76-14-2	11	37	41	Not Detected
Freon 12	75-71-8	14	26	29	Not Detected
Heptane	142-82-5	8.2	22	24	14 J
Hexachlorobutadiene	87-68-3	72	190	250	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-5-TO-15		
Lab ID:	2405186A-05A	**Date/Time Analyzed:**	5/17/24 06:41 PM
Date/Time Collected:	4/24/24 05:03 PM	**Dilution Factor:**	11.8
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051714

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	6.5	19	21	130
m,p-Xylene	108-38-3	3.7	23	51	Not Detected
Methyl tert-butyl ether	1634-04-4	16	64	85	Not Detected
Methylene Chloride	75-09-2	17	61	200	Not Detected
Naphthalene	91-20-3	4.9	12	62	Not Detected
o-Xylene	95-47-6	6.1	23	26	Not Detected
Propylbenzene	103-65-1	6.5	26	29	Not Detected
Styrene	100-42-5	4.4	23	25	Not Detected
Tetrachloroethene	127-18-4	10	36	40	Not Detected
Tetrahydrofuran	109-99-9	11	16	17	Not Detected
Toluene	108-88-3	5.6	20	44	8.8 J
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	2400	49000
trans-1,2-Dichloroethene	156-60-5	11	21	23	Not Detected
trans-1,3-Dichloropropene	10061-02-6	4.1	24	27	Not Detected
Trichloroethene	79-01-6	9.5	28	32	Not Detected
Vinyl Chloride	75-01-4	13	14	15	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	78
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	104

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-6-TO-15		
Lab ID:	2405186A-06A	**Date/Time Analyzed:**	5/17/24 07:15 PM
Date/Time Collected:	4/25/24 09:07 AM	**Dilution Factor:**	12.0
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051715

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	8.0	29	33	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	14	37	41	Not Detected
1,1,2-Trichloroethane	79-00-5	11	29	33	Not Detected
1,1-Dichloroethane	75-34-3	5.3	22	24	Not Detected
1,1-Dichloroethene	75-35-4	12	21	24	Not Detected
1,2,4-Trichlorobenzene	120-82-1	33	130	180	Not Detected
1,2,4-Trimethylbenzene	95-63-6	8.0	26	29	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	15	41	46	Not Detected
1,2-Dichlorobenzene	95-50-1	9.7	32	36	Not Detected
1,2-Dichloroethane	107-06-2	8.4	22	24	Not Detected
1,2-Dichloropropane	78-87-5	7.6	25	28	Not Detected
1,3,5-Trimethylbenzene	108-67-8	7.9	26	29	Not Detected
1,3-Butadiene	106-99-0	7.8	12	13	Not Detected
1,3-Dichlorobenzene	541-73-1	8.4	32	36	Not Detected
1,4-Dichlorobenzene	106-46-7	12	32	36	Not Detected
1,4-Dioxane	123-91-1	20	65	86	Not Detected
2,2,4-Trimethylpentane	540-84-1	11	25	28	93
2-Butanone (Methyl Ethyl Ketone)	78-93-3	12	53	71	14 J
2-Hexanone	591-78-6	28	74	98	Not Detected
2-Propanol	67-63-0	20	44	59	Not Detected
3-Chloropropene	107-05-1	19	56	75	Not Detected
4-Ethyltoluene	622-96-8	6.5	26	29	Not Detected
4-Methyl-2-pentanone	108-10-1	9.5	22	24	Not Detected
Acetone	67-64-1	40	110	140	160

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-6-TO-15		
Lab ID:	2405186A-06A	**Date/Time Analyzed:**	5/17/24 07:15 PM
Date/Time Collected:	4/25/24 09:07 AM	**Dilution Factor:**	12.0
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051715

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	10	28	31	Not Detected
Benzene	71-43-2	4.5	17	19	46
Bromodichloromethane	75-27-4	12	36	40	Not Detected
Bromoform	75-25-2	24	56	62	Not Detected
Bromomethane	74-83-9	41	70	230	Not Detected
Carbon Disulfide	75-15-0	14	56	75	36 J
Carbon Tetrachloride	56-23-5	12	34	38	Not Detected
Chlorobenzene	108-90-7	5.8	25	28	Not Detected
Chloroethane	75-00-3	22	47	63	Not Detected
Chloroform	67-66-3	6.7	26	29	Not Detected
Chloromethane	74-87-3	21	37	120	Not Detected
cis-1,2-Dichloroethene	156-59-2	5.2	21	24	Not Detected
cis-1,3-Dichloropropene	10061-01-5	6.6	24	27	Not Detected
Cumene	98-82-8	6.4	26	29	Not Detected
Cyclohexane	110-82-7	7.6	18	21	69
Dibromochloromethane	124-48-1	15	46	51	Not Detected
Ethanol	64-17-5	56	90	110	Not Detected
Ethyl Benzene	100-41-4	6.2	23	26	Not Detected
Freon 11	75-69-4	11	30	34	Not Detected
Freon 113	76-13-1	10	41	46	Not Detected
Freon 114	76-14-2	12	38	42	Not Detected
Freon 12	75-71-8	14	27	30	Not Detected
Heptane	142-82-5	8.4	22	24	160
Hexachlorobutadiene	87-68-3	73	190	260	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-6-TO-15		
Lab ID:	2405186A-06A	**Date/Time Analyzed:**	5/17/24 07:15 PM
Date/Time Collected:	4/25/24 09:07 AM	**Dilution Factor:**	12.0
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051715

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	6.6	19	21	610
m,p-Xylene	108-38-3	3.7	23	52	4.0 J
Methyl tert-butyl ether	1634-04-4	16	65	86	Not Detected
Methylene Chloride	75-09-2	17	62	210	Not Detected
Naphthalene	91-20-3	5.0	12	63	Not Detected
o-Xylene	95-47-6	6.2	23	26	Not Detected
Propylbenzene	103-65-1	6.6	26	29	Not Detected
Styrene	100-42-5	4.5	23	26	Not Detected
Tetrachloroethene	127-18-4	10	37	41	Not Detected
Tetrahydrofuran	109-99-9	11	16	18	Not Detected
Toluene	108-88-3	5.6	20	45	26 J
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	2400	57000
trans-1,2-Dichloroethene	156-60-5	11	21	24	Not Detected
trans-1,3-Dichloropropene	10061-02-6	4.2	24	27	Not Detected
Trichloroethene	79-01-6	9.6	29	32	Not Detected
Vinyl Chloride	75-01-4	13	14	15	360

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	80
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	102

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-8-TO-15		
Lab ID:	2405186A-07A	**Date/Time Analyzed:**	5/17/24 07:48 PM
Date/Time Collected:	4/25/24 01:56 PM	**Dilution Factor:**	11.1
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051716

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	7.4	27	30	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	13	34	38	Not Detected
1,1,2-Trichloroethane	79-00-5	10	27	30	Not Detected
1,1-Dichloroethane	75-34-3	4.9	20	22	Not Detected
1,1-Dichloroethene	75-35-4	11	20	22	Not Detected
1,2,4-Trichlorobenzene	120-82-1	30	120	160	Not Detected
1,2,4-Trimethylbenzene	95-63-6	7.4	24	27	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	14	38	43	Not Detected
1,2-Dichlorobenzene	95-50-1	9.0	30	33	Not Detected
1,2-Dichloroethane	107-06-2	7.7	20	22	Not Detected
1,2-Dichloropropane	78-87-5	7.0	23	26	Not Detected
1,3,5-Trimethylbenzene	108-67-8	7.3	24	27	Not Detected
1,3-Butadiene	106-99-0	7.2	11	12	Not Detected
1,3-Dichlorobenzene	541-73-1	7.8	30	33	Not Detected
1,4-Dichlorobenzene	106-46-7	11	30	33	Not Detected
1,4-Dioxane	123-91-1	18	60	80	Not Detected
2,2,4-Trimethylpentane	540-84-1	10	23	26	190
2-Butanone (Methyl Ethyl Ketone)	78-93-3	11	49	65	61 J
2-Hexanone	591-78-6	26	68	91	Not Detected
2-Propanol	67-63-0	19	41	54	Not Detected
3-Chloropropene	107-05-1	18	52	69	Not Detected
4-Ethyltoluene	622-96-8	6.0	24	27	Not Detected
4-Methyl-2-pentanone	108-10-1	8.8	20	23	Not Detected
Acetone	67-64-1	37	100	130	360

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-8-TO-15		
Lab ID:	2405186A-07A	**Date/Time Analyzed:**	5/17/24 07:48 PM
Date/Time Collected:	4/25/24 01:56 PM	**Dilution Factor:**	11.1
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051716

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	9.2	26	29	Not Detected
Benzene	71-43-2	4.2	16	18	8.1 J
Bromodichloromethane	75-27-4	12	33	37	Not Detected
Bromoform	75-25-2	23	52	57	Not Detected
Bromomethane	74-83-9	38	65	220	Not Detected
Carbon Disulfide	75-15-0	13	52	69	50 J
Carbon Tetrachloride	56-23-5	11	31	35	Not Detected
Chlorobenzene	108-90-7	5.4	23	26	Not Detected
Chloroethane	75-00-3	20	44	58	Not Detected
Chloroform	67-66-3	6.2	24	27	Not Detected
Chloromethane	74-87-3	20	34	110	Not Detected
cis-1,2-Dichloroethene	156-59-2	4.8	20	22	Not Detected
cis-1,3-Dichloropropene	10061-01-5	6.2	23	25	Not Detected
Cumene	98-82-8	6.0	24	27	Not Detected
Cyclohexane	110-82-7	7.0	17	19	440
Dibromochloromethane	124-48-1	14	42	47	Not Detected
Ethanol	64-17-5	52	84	100	Not Detected
Ethyl Benzene	100-41-4	5.7	22	24	Not Detected
Freon 11	75-69-4	10	28	31	Not Detected
Freon 113	76-13-1	9.2	38	42	Not Detected
Freon 114	76-14-2	11	35	39	Not Detected
Freon 12	75-71-8	13	25	27	Not Detected
Heptane	142-82-5	7.7	20	23	140
Hexachlorobutadiene	87-68-3	67	180	240	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-8-TO-15		
Lab ID:	2405186A-07A	**Date/Time Analyzed:**	5/17/24 07:48 PM
Date/Time Collected:	4/25/24 01:56 PM	**Dilution Factor:**	11.1
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a051716

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	6.1	18	20	480
m,p-Xylene	108-38-3	3.4	22	48	4.2 J
Methyl tert-butyl ether	1634-04-4	15	60	80	Not Detected
Methylene Chloride	75-09-2	16	58	190	Not Detected
Naphthalene	91-20-3	4.6	12	58	Not Detected
o-Xylene	95-47-6	5.8	22	24	Not Detected
Propylbenzene	103-65-1	6.1	24	27	Not Detected
Styrene	100-42-5	4.2	21	24	Not Detected
Tetrachloroethene	127-18-4	9.7	34	38	Not Detected
Tetrahydrofuran	109-99-9	10	15	16	Not Detected
Toluene	108-88-3	5.2	19	42	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	2300	45000
trans-1,2-Dichloroethene	156-60-5	10	20	22	Not Detected
trans-1,3-Dichloropropene	10061-02-6	3.9	23	25	Not Detected
Trichloroethene	79-01-6	8.9	27	30	Not Detected
Vinyl Chloride	75-01-4	12	13	14	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	93
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-9-TO-15		
Lab ID:	2405186A-08A	**Date/Time Analyzed:**	5/17/24 04:26 PM
Date/Time Collected:	4/25/24 12:43 PM	**Dilution Factor:**	1.98
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051710

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.21	0.86	1.1	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.35	1.1	1.4	Not Detected
1,1,2-Trichloroethane	79-00-5	0.34	0.86	1.1	Not Detected
1,1-Dichloroethane	75-34-3	0.17	0.64	0.80	Not Detected
1,1-Dichloroethene	75-35-4	0.19	0.63	0.78	Not Detected
1,2,4-Trichlorobenzene	120-82-1	4.0	7.0	7.3	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.26	0.78	0.97	1.3
1,2-Dibromoethane (EDB)	106-93-4	0.37	1.2	1.5	Not Detected
1,2-Dichlorobenzene	95-50-1	0.24	0.95	1.2	Not Detected
1,2-Dichloroethane	107-06-2	0.19	0.64	0.80	Not Detected
1,2-Dichloropropane	78-87-5	0.29	0.73	0.92	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.24	0.78	0.97	0.44 J
1,3-Butadiene	106-99-0	0.18	0.35	0.44	Not Detected
1,3-Dichlorobenzene	541-73-1	0.26	0.95	1.2	Not Detected
1,4-Dichlorobenzene	106-46-7	0.19	0.95	1.2	Not Detected
1,4-Dioxane	123-91-1	0.21	0.57	3.6	Not Detected
2,2,4-Trimethylpentane	540-84-1	1.4	4.4	4.6	63
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.29	2.8	12	37
2-Hexanone	591-78-6	0.91	3.9	4.0	Not Detected
2-Propanol	67-63-0	0.74	2.3	9.7	5.0 J
3-Chloropropene	107-05-1	0.85	3.0	3.1	Not Detected
4-Ethyltoluene	622-96-8	0.27	0.78	0.97	0.54 J
4-Methyl-2-pentanone	108-10-1	0.16	0.65	0.81	Not Detected
Acetone	67-64-1	2.1	2.2	9.4	120

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-9-TO-15		
Lab ID:	2405186A-08A	**Date/Time Analyzed:**	5/17/24 04:26 PM
Date/Time Collected:	4/25/24 12:43 PM	**Dilution Factor:**	1.98
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051710

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.23	0.82	1.0	Not Detected
Benzene	71-43-2	0.093	0.51	0.63	6.3
Bromodichloromethane	75-27-4	0.28	1.1	1.3	Not Detected
Bromoform	75-25-2	0.37	1.6	2.0	Not Detected
Bromomethane	74-83-9	2.2	3.7	38	Not Detected
Carbon Disulfide	75-15-0	2.9	3.0	31	Not Detected
Carbon Tetrachloride	56-23-5	0.26	1.0	1.2	Not Detected
Chlorobenzene	108-90-7	0.26	0.73	0.91	Not Detected
Chloroethane	75-00-3	0.72	2.5	2.6	Not Detected
Chloroform	67-66-3	0.21	0.77	0.97	Not Detected
Chloromethane	74-87-3	0.64	2.0	2.0	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.40	0.63	0.78	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.16	0.72	0.90	Not Detected
Cumene	98-82-8	0.36	0.78	0.97	1.8
Cyclohexane	110-82-7	0.66	3.3	3.4	9.1
Dibromochloromethane	124-48-1	0.27	1.3	1.7	Not Detected
Ethanol	64-17-5	0.79	1.8	7.5	18
Ethyl Benzene	100-41-4	0.20	0.69	0.86	2.3
Freon 11	75-69-4	0.17	0.89	1.1	Not Detected
Freon 113	76-13-1	0.29	1.2	1.5	Not Detected
Freon 114	76-14-2	0.32	1.1	1.4	Not Detected
Freon 12	75-71-8	0.68	4.7	4.9	2.7 J
Heptane	142-82-5	0.62	3.9	4.0	Not Detected
Hexachlorobutadiene	87-68-3	2.4	10	10	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-9-TO-15		
Lab ID:	2405186A-08A	**Date/Time Analyzed:**	5/17/24 04:26 PM
Date/Time Collected:	4/25/24 12:43 PM	**Dilution Factor:**	1.98
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051710

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.84	3.3	3.5	21
m,p-Xylene	108-38-3	0.37	0.69	0.86	5.8
Methyl tert-butyl ether	1634-04-4	0.22	0.57	0.71	Not Detected
Methylene Chloride	75-09-2	0.31	0.55	3.4	Not Detected
Naphthalene	91-20-3	0.62	1.2	2.1	Not Detected
o-Xylene	95-47-6	0.26	0.69	0.86	2.5
Propylbenzene	103-65-1	0.29	0.78	0.97	0.57 J
Styrene	100-42-5	0.23	0.67	0.84	Not Detected
Tetrachloroethene	127-18-4	0.32	1.1	1.3	Not Detected
Tetrahydrofuran	109-99-9	2.8	2.8	2.9	Not Detected
Toluene	108-88-3	0.13	0.60	7.5	12
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	81	9800
trans-1,2-Dichloroethene	156-60-5	0.29	0.63	0.78	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.26	0.72	0.90	Not Detected
Trichloroethene	79-01-6	0.12	0.85	1.1	Not Detected
Vinyl Chloride	75-01-4	0.12	0.40	0.51	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	82
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-10-TO-15		
Lab ID:	2405186A-09A	**Date/Time Analyzed:**	5/17/24 10:39 PM
Date/Time Collected:	4/25/24 11:38 AM	**Dilution Factor:**	2.07
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051719

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.22	0.90	1.1	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.37	1.1	1.4	Not Detected
1,1,2-Trichloroethane	79-00-5	0.35	0.90	1.1	Not Detected
1,1-Dichloroethane	75-34-3	0.18	0.67	0.84	Not Detected
1,1-Dichloroethene	75-35-4	0.20	0.66	0.82	Not Detected
1,2,4-Trichlorobenzene	120-82-1	4.2	7.4	7.7	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.27	0.81	1.0	0.65 J
1,2-Dibromoethane (EDB)	106-93-4	0.39	1.3	1.6	Not Detected
1,2-Dichlorobenzene	95-50-1	0.25	1.0	1.2	Not Detected
1,2-Dichloroethane	107-06-2	0.20	0.67	0.84	Not Detected
1,2-Dichloropropane	78-87-5	0.30	0.76	0.96	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.25	0.81	1.0	0.28 J
1,3-Butadiene	106-99-0	0.19	0.37	0.46	0.25 J
1,3-Dichlorobenzene	541-73-1	0.27	1.0	1.2	Not Detected
1,4-Dichlorobenzene	106-46-7	0.20	1.0	1.2	Not Detected
1,4-Dioxane	123-91-1	0.22	0.60	3.7	Not Detected
2,2,4-Trimethylpentane	540-84-1	1.4	4.6	4.8	3.1 J
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.31	2.9	12	8.8 J
2-Hexanone	591-78-6	0.95	4.1	4.2	Not Detected
2-Propanol	67-63-0	0.78	2.4	10	2.4 J
3-Chloropropene	107-05-1	0.89	3.1	3.2	Not Detected
4-Ethyltoluene	622-96-8	0.29	0.81	1.0	0.90 J
4-Methyl-2-pentanone	108-10-1	0.17	0.68	0.85	1.2
Acetone	67-64-1	2.2	2.4	9.8	52

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	SV-10-TO-15		
Lab ID:	2405186A-09A	**Date/Time Analyzed:**	5/17/24 10:39 PM
Date/Time Collected:	4/25/24 11:38 AM	**Dilution Factor:**	2.07
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051719

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.24	0.86	1.1	Not Detected
Benzene	71-43-2	0.097	0.53	0.66	5.2
Bromodichloromethane	75-27-4	0.29	1.1	1.4	Not Detected
Bromoform	75-25-2	0.39	1.7	2.1	Not Detected
Bromomethane	74-83-9	2.3	3.8	40	Not Detected
Carbon Disulfide	75-15-0	3.0	3.1	32	Not Detected
Carbon Tetrachloride	56-23-5	0.27	1.0	1.3	Not Detected
Chlorobenzene	108-90-7	0.27	0.76	0.95	Not Detected
Chloroethane	75-00-3	0.75	2.6	2.7	Not Detected
Chloroform	67-66-3	0.22	0.81	1.0	0.44 J
Chloromethane	74-87-3	0.67	2.0	2.1	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.42	0.66	0.82	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.17	0.75	0.94	Not Detected
Cumene	98-82-8	0.37	0.81	1.0	0.43 J
Cyclohexane	110-82-7	0.69	3.4	3.6	Not Detected
Dibromochloromethane	124-48-1	0.28	1.4	1.8	Not Detected
Ethanol	64-17-5	0.82	1.9	7.8	15
Ethyl Benzene	100-41-4	0.21	0.72	0.90	3.0
Freon 11	75-69-4	0.18	0.93	1.2	0.77 J
Freon 113	76-13-1	0.30	1.3	1.6	Not Detected
Freon 114	76-14-2	0.33	1.2	1.4	Not Detected
Freon 12	75-71-8	0.71	4.9	5.1	2.9 J
Heptane	142-82-5	0.65	4.1	4.2	8.8
Hexachlorobutadiene	87-68-3	2.6	10	11	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	SV-10-TO-15		
Lab ID:	2405186A-09A	**Date/Time Analyzed:**	5/17/24 10:39 PM
Date/Time Collected:	4/25/24 11:38 AM	**Dilution Factor:**	2.07
Media:	1 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msdv.i / v051719

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.88	3.5	3.6	3.2 J
m,p-Xylene	108-38-3	0.38	0.72	0.90	9.0
Methyl tert-butyl ether	1634-04-4	0.22	0.60	0.75	Not Detected
Methylene Chloride	75-09-2	0.32	0.58	3.6	Not Detected
Naphthalene	91-20-3	0.65	1.3	2.2	Not Detected
o-Xylene	95-47-6	0.28	0.72	0.90	3.2
Propylbenzene	103-65-1	0.30	0.81	1.0	Not Detected
Styrene	100-42-5	0.24	0.70	0.88	0.32 J
Tetrachloroethene	127-18-4	0.34	1.1	1.4	3.0
Tetrahydrofuran	109-99-9	2.9	2.9	3.0	Not Detected
Toluene	108-88-3	0.14	0.62	7.8	28
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	85	310
trans-1,2-Dichloroethene	156-60-5	0.30	0.66	0.82	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.28	0.75	0.94	Not Detected
Trichloroethene	79-01-6	0.13	0.89	1.1	Not Detected
Vinyl Chloride	75-01-4	0.12	0.42	0.53	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	108
4-Bromofluorobenzene	460-00-4	70-130	114
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	Lab Blank		
Lab ID:	2405186A-10A	**Date/Time Analyzed:**	5/17/24 01:18 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051706a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.11	0.44	0.54	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	0.18	0.55	0.69	Not Detected
1,1,2-Trichloroethane	79-00-5	0.17	0.44	0.54	Not Detected
1,1-Dichloroethane	75-34-3	0.086	0.32	0.40	Not Detected
1,1-Dichloroethene	75-35-4	0.098	0.32	0.40	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.0	3.6	3.7	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.13	0.39	0.49	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	0.19	0.61	0.77	Not Detected
1,2-Dichlorobenzene	95-50-1	0.12	0.48	0.60	Not Detected
1,2-Dichloroethane	107-06-2	0.098	0.32	0.40	Not Detected
1,2-Dichloropropane	78-87-5	0.15	0.37	0.46	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.12	0.39	0.49	Not Detected
1,3-Butadiene	106-99-0	0.093	0.18	0.22	Not Detected
1,3-Dichlorobenzene	541-73-1	0.13	0.48	0.60	Not Detected
1,4-Dichlorobenzene	106-46-7	0.098	0.48	0.60	Not Detected
1,4-Dioxane	123-91-1	0.10	0.29	1.8	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.69	2.2	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.15	1.4	5.9	Not Detected
2-Hexanone	591-78-6	0.46	2.0	2.0	Not Detected
2-Propanol	67-63-0	0.38	1.2	4.9	Not Detected
3-Chloropropene	107-05-1	0.43	1.5	1.6	Not Detected
4-Ethyltoluene	622-96-8	0.14	0.39	0.49	Not Detected
4-Methyl-2-pentanone	108-10-1	0.081	0.33	0.41	Not Detected
Acetone	67-64-1	1.1	1.1	4.8	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	Lab Blank		
Lab ID:	2405186A-10A	**Date/Time Analyzed:**	5/17/24 01:18 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051706a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.12	0.41	0.52	0.19 J
Benzene	71-43-2	0.047	0.26	0.32	Not Detected
Bromodichloromethane	75-27-4	0.14	0.54	0.67	Not Detected
Bromoform	75-25-2	0.19	0.83	1.0	Not Detected
Bromomethane	74-83-9	1.1	1.9	19	Not Detected
Carbon Disulfide	75-15-0	1.5	1.5	16	Not Detected
Carbon Tetrachloride	56-23-5	0.13	0.50	0.63	Not Detected
Chlorobenzene	108-90-7	0.13	0.37	0.46	Not Detected
Chloroethane	75-00-3	0.36	1.3	1.3	Not Detected
Chloroform	67-66-3	0.10	0.39	0.49	Not Detected
Chloromethane	74-87-3	0.32	0.99	1.0	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.20	0.32	0.40	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.081	0.36	0.45	Not Detected
Cumene	98-82-8	0.18	0.39	0.49	Not Detected
Cyclohexane	110-82-7	0.34	1.6	1.7	Not Detected
Dibromochloromethane	124-48-1	0.14	0.68	0.85	Not Detected
Ethanol	64-17-5	0.40	0.90	3.8	Not Detected
Ethyl Benzene	100-41-4	0.10	0.35	0.43	Not Detected
Freon 11	75-69-4	0.088	0.45	0.56	Not Detected
Freon 113	76-13-1	0.15	0.61	0.77	Not Detected
Freon 114	76-14-2	0.16	0.56	0.70	Not Detected
Freon 12	75-71-8	0.34	2.4	2.5	Not Detected
Heptane	142-82-5	0.31	2.0	2.0	Not Detected
Hexachlorobutadiene	87-68-3	1.2	5.1	5.3	Not Detected

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	Lab Blank		
Lab ID:	2405186A-10A	**Date/Time Analyzed:**	5/17/24 01:18 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051706a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.42	1.7	1.8	Not Detected
m,p-Xylene	108-38-3	0.18	0.35	0.43	Not Detected
Methyl tert-butyl ether	1634-04-4	0.11	0.29	0.36	Not Detected
Methylene Chloride	75-09-2	0.15	0.28	1.7	Not Detected
Naphthalene	91-20-3	0.31	0.63	1.0	Not Detected
o-Xylene	95-47-6	0.13	0.35	0.43	Not Detected
Propylbenzene	103-65-1	0.15	0.39	0.49	Not Detected
Styrene	100-42-5	0.12	0.34	0.42	Not Detected
Tetrachloroethene	127-18-4	0.16	0.54	0.68	Not Detected
Tetrahydrofuran	109-99-9	1.4	1.4	1.5	Not Detected
Toluene	108-88-3	0.066	0.30	3.8	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	41	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.15	0.32	0.40	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.13	0.36	0.45	Not Detected
Trichloroethene	79-01-6	0.063	0.43	0.54	Not Detected
Vinyl Chloride	75-01-4	0.060	0.20	0.26	Not Detected

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	112
Toluene-d8	2037-26-5	70-130	100

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	Lab Blank		
Lab ID:	2405186A-10B	**Date/Time Analyzed:**	5/17/24 01:42 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051707e

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	71-55-6	0.66	2.4	2.7	Not Detected
1,1,2,2-Tetrachloroethane	79-34-5	1.2	3.1	3.4	Not Detected
1,1,2-Trichloroethane	79-00-5	0.90	2.4	2.7	Not Detected
1,1-Dichloroethane	75-34-3	0.44	1.8	2.0	Not Detected
1,1-Dichloroethene	75-35-4	1.0	1.8	2.0	Not Detected
1,2,4-Trichlorobenzene	120-82-1	2.7	11	15	Not Detected
1,2,4-Trimethylbenzene	95-63-6	0.66	2.2	2.4	Not Detected
1,2-Dibromoethane (EDB)	106-93-4	1.2	3.4	3.8	Not Detected
1,2-Dichlorobenzene	95-50-1	0.81	2.7	3.0	Not Detected
1,2-Dichloroethane	107-06-2	0.70	1.8	2.0	Not Detected
1,2-Dichloropropane	78-87-5	0.63	2.1	2.3	Not Detected
1,3,5-Trimethylbenzene	108-67-8	0.66	2.2	2.4	Not Detected
1,3-Butadiene	106-99-0	0.65	1.0	1.1	Not Detected
1,3-Dichlorobenzene	541-73-1	0.70	2.7	3.0	Not Detected
1,4-Dichlorobenzene	106-46-7	1.0	2.7	3.0	Not Detected
1,4-Dioxane	123-91-1	1.6	5.4	7.2	Not Detected
2,2,4-Trimethylpentane	540-84-1	0.92	2.1	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	78-93-3	0.99	4.4	5.9	Not Detected
2-Hexanone	591-78-6	2.3	6.1	8.2	Not Detected
2-Propanol	67-63-0	1.7	3.7	4.9	Not Detected
3-Chloropropene	107-05-1	1.6	4.7	6.3	Not Detected
4-Ethyltoluene	622-96-8	0.54	2.2	2.4	Not Detected
4-Methyl-2-pentanone	108-10-1	0.79	1.8	2.0	Not Detected
Acetone	67-64-1	3.3	9.5	12	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	Lab Blank		
Lab ID:	2405186A-10B	**Date/Time Analyzed:**	5/17/24 01:42 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051707e

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
alpha-Chlorotoluene	100-44-7	0.83	2.3	2.6	Not Detected
Benzene	71-43-2	0.38	1.4	1.6	Not Detected
Bromodichloromethane	75-27-4	1.0	3.0	3.4	Not Detected
Bromoform	75-25-2	2.0	4.6	5.2	Not Detected
Bromomethane	74-83-9	3.4	5.8	19	Not Detected
Carbon Disulfide	75-15-0	1.2	4.7	6.2	Not Detected
Carbon Tetrachloride	56-23-5	1.0	2.8	3.1	Not Detected
Chlorobenzene	108-90-7	0.48	2.1	2.3	Not Detected
Chloroethane	75-00-3	1.8	4.0	5.3	Not Detected
Chloroform	67-66-3	0.56	2.2	2.4	Not Detected
Chloromethane	74-87-3	1.8	3.1	10	Not Detected
cis-1,2-Dichloroethene	156-59-2	0.43	1.8	2.0	Not Detected
cis-1,3-Dichloropropene	10061-01-5	0.55	2.0	2.3	Not Detected
Cumene	98-82-8	0.54	2.2	2.4	Not Detected
Cyclohexane	110-82-7	0.63	1.5	1.7	Not Detected
Dibromochloromethane	124-48-1	1.3	3.8	4.2	Not Detected
Ethanol	64-17-5	4.7	7.5	9.4	Not Detected
Ethyl Benzene	100-41-4	0.52	2.0	2.2	Not Detected
Freon 11	75-69-4	0.91	2.5	2.8	Not Detected
Freon 113	76-13-1	0.83	3.4	3.8	Not Detected
Freon 114	76-14-2	0.97	3.1	3.5	Not Detected
Freon 12	75-71-8	1.2	2.2	2.5	Not Detected
Heptane	142-82-5	0.70	1.8	2.0	Not Detected
Hexachlorobutadiene	87-68-3	6.1	16	21	Not Detected

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	Lab Blank		
Lab ID:	2405186A-10B	**Date/Time Analyzed:**	5/17/24 01:42 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051707e

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Hexane	110-54-3	0.55	1.6	1.8	Not Detected
m,p-Xylene	108-38-3	0.31	2.0	4.3	Not Detected
Methyl tert-butyl ether	1634-04-4	1.3	5.4	7.2	Not Detected
Methylene Chloride	75-09-2	1.4	5.2	17	Not Detected
Naphthalene	91-20-3	0.41	1.0	5.2	Not Detected
o-Xylene	95-47-6	0.52	2.0	2.2	Not Detected
Propylbenzene	103-65-1	0.55	2.2	2.4	Not Detected
Styrene	100-42-5	0.38	1.9	2.1	Not Detected
Tetrachloroethene	127-18-4	0.87	3.0	3.4	Not Detected
Tetrahydrofuran	109-99-9	0.94	1.3	1.5	Not Detected
Toluene	108-88-3	0.47	1.7	3.8	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	200	Not Detected
trans-1,2-Dichloroethene	156-60-5	0.91	1.8	2.0	Not Detected
trans-1,3-Dichloropropene	10061-02-6	0.35	2.0	2.3	Not Detected
Trichloroethene	79-01-6	0.80	2.4	2.7	Not Detected
Vinyl Chloride	75-01-4	1.1	1.2	1.3	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	79
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	103

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	CCV		
Lab ID:	2405186A-11A	**Date/Time Analyzed:**	5/17/24 09:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051702

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	105
1,1,2,2-Tetrachloroethane	79-34-5	98
1,1,2-Trichloroethane	79-00-5	104
1,1-Dichloroethane	75-34-3	107
1,1-Dichloroethene	75-35-4	105
1,2,4-Trichlorobenzene	120-82-1	93
1,2,4-Trimethylbenzene	95-63-6	103
1,2-Dibromoethane (EDB)	106-93-4	104
1,2-Dichlorobenzene	95-50-1	104
1,2-Dichloroethane	107-06-2	103
1,2-Dichloropropane	78-87-5	105
1,3,5-Trimethylbenzene	108-67-8	99
1,3-Butadiene	106-99-0	105
1,3-Dichlorobenzene	541-73-1	102
1,4-Dichlorobenzene	106-46-7	104
1,4-Dioxane	123-91-1	102
2,2,4-Trimethylpentane	540-84-1	114
2-Butanone (Methyl Ethyl Ketone)	78-93-3	107
2-Hexanone	591-78-6	100
2-Propanol	67-63-0	100
3-Chloropropene	107-05-1	105
4-Ethyltoluene	622-96-8	103
4-Methyl-2-pentanone	108-10-1	106
Acetone	67-64-1	98

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	CCV		
Lab ID:	2405186A-11A	**Date/Time Analyzed:**	5/17/24 09:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051702

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	105
Benzene	71-43-2	103
Bromodichloromethane	75-27-4	104
Bromoform	75-25-2	103
Bromomethane	74-83-9	105
Carbon Disulfide	75-15-0	110
Carbon Tetrachloride	56-23-5	110
Chlorobenzene	108-90-7	102
Chloroethane	75-00-3	105
Chloroform	67-66-3	105
Chloromethane	74-87-3	100
cis-1,2-Dichloroethene	156-59-2	105
cis-1,3-Dichloropropene	10061-01-5	106
Cumene	98-82-8	103
Cyclohexane	110-82-7	105
Dibromochloromethane	124-48-1	106
Ethanol	64-17-5	109
Ethyl Benzene	100-41-4	100
Freon 11	75-69-4	110
Freon 113	76-13-1	104
Freon 114	76-14-2	105
Freon 12	75-71-8	110
Heptane	142-82-5	102
Hexachlorobutadiene	87-68-3	103

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	CCV		
Lab ID:	2405186A-11A	**Date/Time Analyzed:**	5/17/24 09:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051702

Compound	CAS#	%Recovery
Hexane	110-54-3	107
m,p-Xylene	108-38-3	104
Methyl tert-butyl ether	1634-04-4	107
Methylene Chloride	75-09-2	104
Naphthalene	91-20-3	69
o-Xylene	95-47-6	108
Propylbenzene	103-65-1	104
Styrene	100-42-5	105
Tetrachloroethene	127-18-4	101
Tetrahydrofuran	109-99-9	102
Toluene	108-88-3	105
TPH ref. to Gasoline (MW=100)	9999-9999-038	100
trans-1,2-Dichloroethene	156-60-5	106
trans-1,3-Dichloropropene	10061-02-6	103
Trichloroethene	79-01-6	102
Vinyl Chloride	75-01-4	110

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	102

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	CCV		
Lab ID:	2405186A-11B	**Date/Time Analyzed:**	5/17/24 10:44 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051703

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	87
1,1,2,2-Tetrachloroethane	79-34-5	100
1,1,2-Trichloroethane	79-00-5	103
1,1-Dichloroethane	75-34-3	96
1,1-Dichloroethene	75-35-4	102
1,2,4-Trichlorobenzene	120-82-1	87
1,2,4-Trimethylbenzene	95-63-6	98
1,2-Dibromoethane (EDB)	106-93-4	103
1,2-Dichlorobenzene	95-50-1	96
1,2-Dichloroethane	107-06-2	86
1,2-Dichloropropane	78-87-5	105
1,3,5-Trimethylbenzene	108-67-8	100
1,3-Butadiene	106-99-0	105
1,3-Dichlorobenzene	541-73-1	98
1,4-Dichlorobenzene	106-46-7	97
1,4-Dioxane	123-91-1	100
2,2,4-Trimethylpentane	540-84-1	99
2-Butanone (Methyl Ethyl Ketone)	78-93-3	95
2-Hexanone	591-78-6	105
2-Propanol	67-63-0	87
3-Chloropropene	107-05-1	97
4-Ethyltoluene	622-96-8	97
4-Methyl-2-pentanone	108-10-1	102
Acetone	67-64-1	104

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	CCV		
Lab ID:	2405186A-11B	**Date/Time Analyzed:**	5/17/24 10:44 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051703

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	100
Benzene	71-43-2	101
Bromodichloromethane	75-27-4	96
Bromoform	75-25-2	102
Bromomethane	74-83-9	108
Carbon Disulfide	75-15-0	101
Carbon Tetrachloride	56-23-5	86
Chlorobenzene	108-90-7	98
Chloroethane	75-00-3	89
Chloroform	67-66-3	88
Chloromethane	74-87-3	85
cis-1,2-Dichloroethene	156-59-2	98
cis-1,3-Dichloropropene	10061-01-5	98
Cumene	98-82-8	97
Cyclohexane	110-82-7	93
Dibromochloromethane	124-48-1	102
Ethanol	64-17-5	102
Ethyl Benzene	100-41-4	100
Freon 11	75-69-4	85
Freon 113	76-13-1	93
Freon 114	76-14-2	95
Freon 12	75-71-8	89
Heptane	142-82-5	101
Hexachlorobutadiene	87-68-3	92

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	CCV		
Lab ID:	2405186A-11B	**Date/Time Analyzed:**	5/17/24 10:44 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051703

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	100
Methyl tert-butyl ether	1634-04-4	85
Methylene Chloride	75-09-2	96
Naphthalene	91-20-3	81
o-Xylene	95-47-6	97
Propylbenzene	103-65-1	99
Styrene	100-42-5	103
Tetrachloroethene	127-18-4	98
Tetrahydrofuran	109-99-9	91
Toluene	108-88-3	100
TPH ref. to Gasoline (MW=100)	9999-9999-038	100
trans-1,2-Dichloroethene	156-60-5	101
trans-1,3-Dichloropropene	10061-02-6	94
Trichloroethene	79-01-6	99
Vinyl Chloride	75-01-4	104

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	82
4-Bromofluorobenzene	460-00-4	70-130	100
Toluene-d8	2037-26-5	70-130	104

Client ID:	LCS		
Lab ID:	2405186A-12A	**Date/Time Analyzed:**	5/17/24 09:57 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051703

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	100
1,1,2,2-Tetrachloroethane	79-34-5	108
1,1,2-Trichloroethane	79-00-5	108
1,1-Dichloroethane	75-34-3	101
1,1-Dichloroethene	75-35-4	95
1,2,4-Trichlorobenzene	120-82-1	95
1,2,4-Trimethylbenzene	95-63-6	110
1,2-Dibromoethane (EDB)	106-93-4	108
1,2-Dichlorobenzene	95-50-1	106
1,2-Dichloroethane	107-06-2	107
1,2-Dichloropropane	78-87-5	104
1,3,5-Trimethylbenzene	108-67-8	108
1,3-Butadiene	106-99-0	100
1,3-Dichlorobenzene	541-73-1	105
1,4-Dichlorobenzene	106-46-7	105
1,4-Dioxane	123-91-1	105
2,2,4-Trimethylpentane	540-84-1	103
2-Butanone (Methyl Ethyl Ketone)	78-93-3	101
2-Hexanone	591-78-6	107
2-Propanol	67-63-0	107
3-Chloropropene	107-05-1	102
4-Ethyltoluene	622-96-8	108
4-Methyl-2-pentanone	108-10-1	112
Acetone	67-64-1	95

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	LCS		
Lab ID:	2405186A-12A	**Date/Time Analyzed:**	5/17/24 09:57 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051703

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	100
Benzene	71-43-2	105
Bromodichloromethane	75-27-4	110
Bromoform	75-25-2	107
Bromomethane	74-83-9	94
Carbon Disulfide	75-15-0	107
Carbon Tetrachloride	56-23-5	103
Chlorobenzene	108-90-7	104
Chloroethane	75-00-3	97
Chloroform	67-66-3	98
Chloromethane	74-87-3	93
cis-1,2-Dichloroethene	156-59-2	99
cis-1,3-Dichloropropene	10061-01-5	109
Cumene	98-82-8	103
Cyclohexane	110-82-7	102
Dibromochloromethane	124-48-1	109
Ethanol	64-17-5	122
Ethyl Benzene	100-41-4	98
Freon 11	75-69-4	104
Freon 113	76-13-1	97
Freon 114	76-14-2	100
Freon 12	75-71-8	102
Heptane	142-82-5	100
Hexachlorobutadiene	87-68-3	105

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	LCS		
Lab ID:	2405186A-12A	**Date/Time Analyzed:**	5/17/24 09:57 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051703

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	100
Methyl tert-butyl ether	1634-04-4	100
Methylene Chloride	75-09-2	96
Naphthalene	91-20-3	85
o-Xylene	95-47-6	106
Propylbenzene	103-65-1	108
Styrene	100-42-5	103
Tetrachloroethene	127-18-4	104
Tetrahydrofuran	109-99-9	104
Toluene	108-88-3	101
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	100
trans-1,3-Dichloropropene	10061-02-6	109
Trichloroethene	79-01-6	104
Vinyl Chloride	75-01-4	103

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	96
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	101

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	LCSD		
Lab ID:	2405186A-12AA	**Date/Time Analyzed:**	5/17/24 11:02 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051704

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	100
1,1,2,2-Tetrachloroethane	79-34-5	101
1,1,2-Trichloroethane	79-00-5	108
1,1-Dichloroethane	75-34-3	101
1,1-Dichloroethene	75-35-4	96
1,2,4-Trichlorobenzene	120-82-1	96
1,2,4-Trimethylbenzene	95-63-6	105
1,2-Dibromoethane (EDB)	106-93-4	106
1,2-Dichlorobenzene	95-50-1	104
1,2-Dichloroethane	107-06-2	106
1,2-Dichloropropane	78-87-5	104
1,3,5-Trimethylbenzene	108-67-8	104
1,3-Butadiene	106-99-0	100
1,3-Dichlorobenzene	541-73-1	102
1,4-Dichlorobenzene	106-46-7	104
1,4-Dioxane	123-91-1	105
2,2,4-Trimethylpentane	540-84-1	103
2-Butanone (Methyl Ethyl Ketone)	78-93-3	103
2-Hexanone	591-78-6	104
2-Propanol	67-63-0	105
3-Chloropropene	107-05-1	102
4-Ethyltoluene	622-96-8	103
4-Methyl-2-pentanone	108-10-1	111
Acetone	67-64-1	95

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	LCSD		
Lab ID:	2405186A-12AA	**Date/Time Analyzed:**	5/17/24 11:02 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051704

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	103
Benzene	71-43-2	104
Bromodichloromethane	75-27-4	108
Bromoform	75-25-2	104
Bromomethane	74-83-9	96
Carbon Disulfide	75-15-0	107
Carbon Tetrachloride	56-23-5	104
Chlorobenzene	108-90-7	103
Chloroethane	75-00-3	100
Chloroform	67-66-3	97
Chloromethane	74-87-3	104
cis-1,2-Dichloroethene	156-59-2	99
cis-1,3-Dichloropropene	10061-01-5	108
Cumene	98-82-8	102
Cyclohexane	110-82-7	100
Dibromochloromethane	124-48-1	108
Ethanol	64-17-5	123
Ethyl Benzene	100-41-4	101
Freon 11	75-69-4	105
Freon 113	76-13-1	97
Freon 114	76-14-2	101
Freon 12	75-71-8	102
Heptane	142-82-5	101
Hexachlorobutadiene	87-68-3	105

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	LCSD		
Lab ID:	2405186A-12AA	**Date/Time Analyzed:**	5/17/24 11:02 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v051704

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	102
Methyl tert-butyl ether	1634-04-4	99
Methylene Chloride	75-09-2	99
Naphthalene	91-20-3	87
o-Xylene	95-47-6	107
Propylbenzene	103-65-1	104
Styrene	100-42-5	105
Tetrachloroethene	127-18-4	103
Tetrahydrofuran	109-99-9	105
Toluene	108-88-3	100
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	99
trans-1,3-Dichloropropene	10061-02-6	107
Trichloroethene	79-01-6	103
Vinyl Chloride	75-01-4	101

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	97
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	100

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	LCS		
Lab ID:	2405186A-12B	**Date/Time Analyzed:**	5/17/24 11:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051704

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	86
1,1,2,2-Tetrachloroethane	79-34-5	100
1,1,2-Trichloroethane	79-00-5	104
1,1-Dichloroethane	75-34-3	95
1,1-Dichloroethene	75-35-4	97
1,2,4-Trichlorobenzene	120-82-1	86
1,2,4-Trimethylbenzene	95-63-6	99
1,2-Dibromoethane (EDB)	106-93-4	102
1,2-Dichlorobenzene	95-50-1	95
1,2-Dichloroethane	107-06-2	86
1,2-Dichloropropane	78-87-5	102
1,3,5-Trimethylbenzene	108-67-8	100
1,3-Butadiene	106-99-0	103
1,3-Dichlorobenzene	541-73-1	96
1,4-Dichlorobenzene	106-46-7	96
1,4-Dioxane	123-91-1	102
2,2,4-Trimethylpentane	540-84-1	99
2-Butanone (Methyl Ethyl Ketone)	78-93-3	94
2-Hexanone	591-78-6	107
2-Propanol	67-63-0	90
3-Chloropropene	107-05-1	97
4-Ethyltoluene	622-96-8	96
4-Methyl-2-pentanone	108-10-1	104
Acetone	67-64-1	104

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	2405186A-12B	**Date/Time Analyzed:**	5/17/24 11:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051704

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	100
Benzene	71-43-2	100
Bromodichloromethane	75-27-4	93
Bromoform	75-25-2	100
Bromomethane	74-83-9	105
Carbon Disulfide	75-15-0	102
Carbon Tetrachloride	56-23-5	86
Chlorobenzene	108-90-7	99
Chloroethane	75-00-3	89
Chloroform	67-66-3	87
Chloromethane	74-87-3	85
cis-1,2-Dichloroethene	156-59-2	96
cis-1,3-Dichloropropene	10061-01-5	98
Cumene	98-82-8	97
Cyclohexane	110-82-7	95
Dibromochloromethane	124-48-1	99
Ethanol	64-17-5	122
Ethyl Benzene	100-41-4	102
Freon 11	75-69-4	83
Freon 113	76-13-1	90
Freon 114	76-14-2	94
Freon 12	75-71-8	88
Heptane	142-82-5	102
Hexachlorobutadiene	87-68-3	91

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	2405186A-12B	**Date/Time Analyzed:**	5/17/24 11:17 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051704

Compound	CAS#	%Recovery
Hexane	110-54-3	99
m,p-Xylene	108-38-3	100
Methyl tert-butyl ether	1634-04-4	86
Methylene Chloride	75-09-2	92
Naphthalene	91-20-3	91
o-Xylene	95-47-6	98
Propylbenzene	103-65-1	97
Styrene	100-42-5	104
Tetrachloroethene	127-18-4	98
Tetrahydrofuran	109-99-9	97
Toluene	108-88-3	99
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	98
trans-1,3-Dichloropropene	10061-02-6	93
Trichloroethene	79-01-6	98
Vinyl Chloride	75-01-4	103

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	81
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	103

* % Recovery is calculated using unrounded analytical results.

Client ID:	LCSD		
Lab ID:	2405186A-12BB	**Date/Time Analyzed:**	5/17/24 11:51 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051705

Compound	CAS#	%Recovery
1,1,1-Trichloroethane	71-55-6	85
1,1,2,2-Tetrachloroethane	79-34-5	99
1,1,2-Trichloroethane	79-00-5	102
1,1-Dichloroethane	75-34-3	94
1,1-Dichloroethene	75-35-4	97
1,2,4-Trichlorobenzene	120-82-1	88
1,2,4-Trimethylbenzene	95-63-6	99
1,2-Dibromoethane (EDB)	106-93-4	101
1,2-Dichlorobenzene	95-50-1	94
1,2-Dichloroethane	107-06-2	84
1,2-Dichloropropane	78-87-5	102
1,3,5-Trimethylbenzene	108-67-8	98
1,3-Butadiene	106-99-0	102
1,3-Dichlorobenzene	541-73-1	95
1,4-Dichlorobenzene	106-46-7	96
1,4-Dioxane	123-91-1	100
2,2,4-Trimethylpentane	540-84-1	98
2-Butanone (Methyl Ethyl Ketone)	78-93-3	93
2-Hexanone	591-78-6	105
2-Propanol	67-63-0	90
3-Chloropropene	107-05-1	97
4-Ethyltoluene	622-96-8	94
4-Methyl-2-pentanone	108-10-1	102
Acetone	67-64-1	104

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

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Client ID:	LCSD		
Lab ID:	2405186A-12BB	**Date/Time Analyzed:**	5/17/24 11:51 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051705

Compound	CAS#	%Recovery
alpha-Chlorotoluene	100-44-7	100
Benzene	71-43-2	99
Bromodichloromethane	75-27-4	93
Bromoform	75-25-2	99
Bromomethane	74-83-9	103
Carbon Disulfide	75-15-0	102
Carbon Tetrachloride	56-23-5	86
Chlorobenzene	108-90-7	98
Chloroethane	75-00-3	88
Chloroform	67-66-3	86
Chloromethane	74-87-3	84
cis-1,2-Dichloroethene	156-59-2	96
cis-1,3-Dichloropropene	10061-01-5	97
Cumene	98-82-8	97
Cyclohexane	110-82-7	94
Dibromochloromethane	124-48-1	98
Ethanol	64-17-5	121
Ethyl Benzene	100-41-4	102
Freon 11	75-69-4	83
Freon 113	76-13-1	90
Freon 114	76-14-2	94
Freon 12	75-71-8	87
Heptane	142-82-5	102
Hexachlorobutadiene	87-68-3	93

* % Recovery is calculated using unrounded analytical results.

EPA METHOD TO-15 GC/MS FULL SCAN
COP TASS 2

Client ID:	LCSD		
Lab ID:	2405186A-12BB	**Date/Time Analyzed:**	5/17/24 11:51 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a051705

Compound	CAS#	%Recovery
Hexane	110-54-3	97
m,p-Xylene	108-38-3	99
Methyl tert-butyl ether	1634-04-4	86
Methylene Chloride	75-09-2	91
Naphthalene	91-20-3	94
o-Xylene	95-47-6	99
Propylbenzene	103-65-1	97
Styrene	100-42-5	102
Tetrachloroethene	127-18-4	98
Tetrahydrofuran	109-99-9	96
Toluene	108-88-3	98
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked
trans-1,2-Dichloroethene	156-60-5	97
trans-1,3-Dichloropropene	10061-02-6	94
Trichloroethene	79-01-6	97
Vinyl Chloride	75-01-4	102

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	79
4-Bromofluorobenzene	460-00-4	70-130	98
Toluene-d8	2037-26-5	70-130	103

* % Recovery is calculated using unrounded analytical results.

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5/17/2024
Mr. Andy Klopfenstein
Haley & Aldrich, Inc.
6420 SW MacAdam Ave
Ste 100
Portland OR 97239

Project Name: COP TASS 2
Project #:
Workorder #: 2405186B

Dear Mr. Andy Klopfenstein

The following report includes the data for the above referenced project for sample(s) received on 5/6/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2405186B

Work Order Summary

CLIENT:	Mr. Andy Klopfenstein Haley & Aldrich, Inc. 6420 SW MacAdam Ave Ste 100 Portland, OR 97239	**BILL TO:**	Accounts Payable Haley & Aldrich 70 Blanchard Road Suite 430 Burlington, MA 02129-1400
PHONE:	503-620-7284	**P.O. #**	0209772-004
FAX:	503-620-6918	**PROJECT #**	COP TASS 2
DATE RECEIVED:	05/06/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	05/17/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	SV-1-TO-15	Modified ASTM D-1946	6.3 "Hg	10 psi
02A	SV-2-TO-15	Modified ASTM D-1946	4.5 "Hg	10 psi
03A	SV-3-TO-15	Modified ASTM D-1946	4.9 "Hg	10.1 psi
04A	SV-4-TO-15	Modified ASTM D-1946	5.7 "Hg	9.9 psi
05A	SV-5-TO-15	Modified ASTM D-1946	5.5 "Hg	10 psi
06A	SV-6-TO-15	Modified ASTM D-1946	6.1 "Hg	9.8 psi
07A	SV-8-TO-15	Modified ASTM D-1946	4.3 "Hg	9.8 psi
08A	SV-9-TO-15	Modified ASTM D-1946	4.5 "Hg	10 psi
09A	SV-10-TO-15	Modified ASTM D-1946	5.7 "Hg	10 psi
10A	Lab Blank	Modified ASTM D-1946	NA	NA
10B	Lab Blank	Modified ASTM D-1946	NA	NA
11A	CCV	Modified ASTM D-1946	NA	NA
12A	LCS	Modified ASTM D-1946	NA	NA
12AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 05/17/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

LABORATORY NARRATIVE
Modified ASTM D-1946
Haley & Aldrich, Inc.
Workorder# 2405186B

Nine 1 Liter Summa Canister (100% Certified) samples were received on May 06, 2024. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and Helium in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

Requirement	***ASTM D-1946***	***ATL Modifications***
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a >/= 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.
File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SV-1-TO-15

Lab ID#: 2405186B-01A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	49

Client Sample ID: SV-2-TO-15

Lab ID#: 2405186B-02A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	40

Client Sample ID: SV-3-TO-15

Lab ID#: 2405186B-03A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	18

Client Sample ID: SV-4-TO-15

Lab ID#: 2405186B-04A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	48

Client Sample ID: SV-5-TO-15

Lab ID#: 2405186B-05A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	30

Client Sample ID: SV-6-TO-15

Lab ID#: 2405186B-06A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	25
Helium	0.10	0.19

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Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SV-8-TO-15

Lab ID#: 2405186B-07A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00019	31

Client Sample ID: SV-9-TO-15

Lab ID#: 2405186B-08A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	3.7

Client Sample ID: SV-10-TO-15

Lab ID#: 2405186B-09A

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.10	13

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Client Sample ID: SV-1-TO-15

Lab ID#: 2405186B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051516**	**Date of Collection: 4/24/24 12:40:00 PM**	
Dil. Factor:	**2.13**	**Date of Analysis: 5/15/24 09:14 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	49
Helium	0.11	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-2-TO-15

Lab ID#: 2405186B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051517**	**Date of Collection: 4/24/24 2:46:00 PM**	
Dil. Factor:	**1.98**	**Date of Analysis: 5/15/24 09:43 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	40
Helium	0.099	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-3-TO-15

Lab ID#: 2405186B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051518**	**Date of Collection: 4/25/24 3:02:00 PM**	
Dil. Factor:	**2.02**	**Date of Analysis: 5/15/24 10:11 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	18

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-4-TO-15

Lab ID#: 2405186B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051519**	**Date of Collection: 4/24/24 3:59:00 PM**	
Dil. Factor:	**2.07**	**Date of Analysis: 5/15/24 10:41 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	48
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-5-TO-15

Lab ID#: 2405186B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051520**	**Date of Collection: 4/24/24 5:03:00 PM**	
Dil. Factor:	**2.06**	**Date of Analysis: 5/16/24 08:01 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	30
Helium	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-6-TO-15

Lab ID#: 2405186B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051521**	**Date of Collection:**	**4/25/24 9:07:00 AM**
Dil. Factor:	**2.09**	**Date of Analysis:**	**5/16/24 08:22 AM**

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	25
Helium	0.10	0.19

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-8-TO-15

Lab ID#: 2405186B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051522**	**Date of Collection: 4/25/24 1:56:00 PM**	
Dil. Factor:	**1.94**	**Date of Analysis: 5/16/24 08:45 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00019	31
Helium	0.097	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-9-TO-15

Lab ID#: 2405186B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051523**	**Date of Collection: 4/25/24 12:43:00 PM**	
Dil. Factor:	**1.98**	**Date of Analysis: 5/16/24 09:06 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00020	3.7
Helium	0.099	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: SV-10-TO-15

Lab ID#: 2405186B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051524**	**Date of Collection: 4/25/24 11:38:00 AM**	
Dil. Factor:	**2.08**	**Date of Analysis: 5/16/24 09:42 AM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00021	Not Detected
Helium	0.10	13

Container Type: 1 Liter Summa Canister (100% Certified)

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Client Sample ID: Lab Blank

Lab ID#: 2405186B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/24 02:09 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: Lab Blank

Lab ID#: 2405186B-10B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051504c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/24 03:15 PM**	

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 2405186B-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051501**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/24 01:18 PM**

Compound	%Recovery
Methane	97
Helium	98

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 2405186B-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/24 01:43 PM**	

Compound	%Recovery	Method Limits
Methane	94	85-115
Helium	98	85-115

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 2405186B-12AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	**10051526**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/16/24 10:42 AM**	

Compound	%Recovery	Method Limits
Methane	93	85-115
Helium	99	85-115

Container Type: NA - Not Applicable

APPENDIX F

Methane in Soil HASP

Methane in Soil
Health and Safety Plan

West Property – TASS 2 Site
10505 North Portland Road
Portland, Oregon

Prepared for:
City of Portland, Bureau of Environmental Services
1120 SW 5th Avenue, Room 1000
Portland, Oregon 97204

June 2024
PBS Project 27066.030

PBS
4412 S CORBETT AVENUE
PORTLAND, OR 97239
503.248.1939 MAIN
866.727.0140 FAX
PBSUSA.COM

Emergency Contacts/Emergency Routes

This section provides contact information in case emergency conditions should occur on site during project activities. An Emergency Response Plan is presented in section 14 of this report.

EMERGENCY TELEPHONE NUMBERS

Poison Control Center:	800.222.1222
National Response Center:	800.424.8802
EPA Environmental Response Team:	206.553.1200
Utility Notification Center (Oregon):	800.332.2344
Oregon OSHA Center (Salem):	503.378.3272
Oregon Emergency Response System:	800.452.0311
Northwest Natural Gas - Emergency:	800.882.3377

PROJECT-SPECIFIC CONTACT INFORMATION

Provided in section 3.

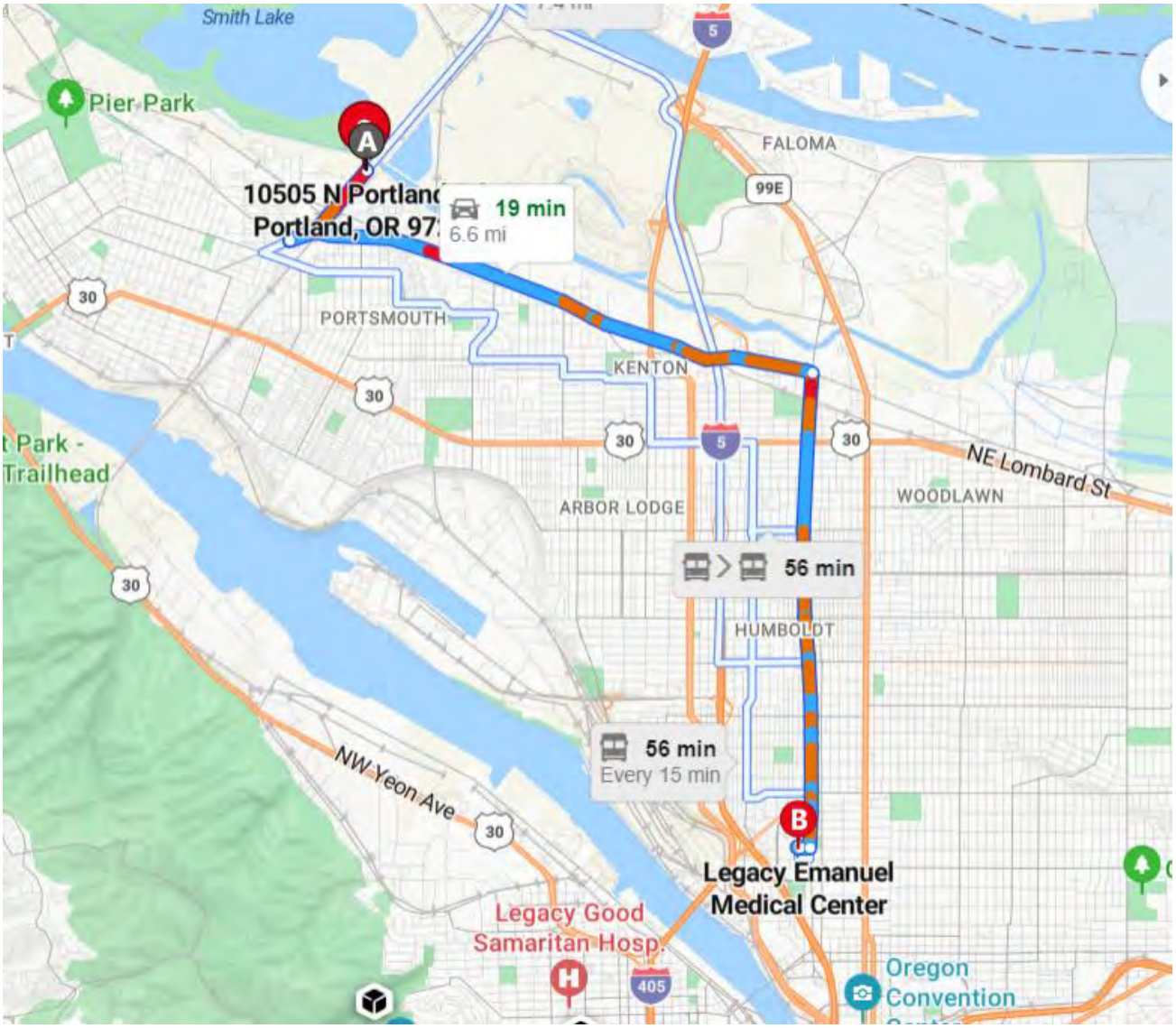
EMERGENCY ROUTE TO NEAREST HOSPITAL/EMERGENCY MEDICAL CENTER

Name:	Legacy Emanuel Medical Center
Address:	501 N Graham Street Portland, Oregon
Phone:	(503) 413-2200

Emergency Route to Hospital from Project Area:

1. Head southwest on N Portland Rd toward N Columbia Way for 0.5 miles.
2. Make a U-Turn to stay on N Columbia Way for 0.2 miles.
3. Bear right onto N Columbia Blvd and continue driving for 3 miles.
4. Turn right onto N Vancouver Ave and continue driving for 2.7 miles.
5. Turn right onto N Stanton St and continue driving for 300 ft.
6. Turn left and you will arrive at Legacy Emanuel Medical Center on the right.

See next page for the route map from the site to the hospital.



Route map from site to the Hospital

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1 PROJECT LOCATION AND DESCRIPTION

1.1 Project Location

Site/Project Name:	West Property – TASS 2 Site
Site Address:	10505 North Portland Road
Site City/State/Zip Code:	Portland, Oregon 97203

The project is located along North Portland Road in Portland, Oregon and is located within Township 01 North, Range 01 East Section 5.

1.2 Project Description

The City of Portland is in the process of converting an abandoned lot located at 10505 North Portland Avenue in Portland, Oregon into an RV Shelter Park. To date, the development of this facility has included grading and installing utilities. The installation of utilities has required trenching for plumbing and electrical and the excavation of two large pits for wastewater holding tanks. Elevated methane concentrations in the soil were discovered during a recent investigation and construction operations have been suspended.

Methane is common in soils with organic waste content. Bacterial decomposition of these organic wastes generates methane. In landfills, this methane is often extracted and vented or is used to generate power. Working around these soil conditions can be done safely as long as certain precautions are exercised.

1.3 Dates of Work

The work on this project, which may encounter soil gas and contaminated soil or groundwater, is anticipated to occur in 2024.

2 PURPOSE AND DESCRIPTION OF THE HAZARDOUS SUBSTANCE HEALTH AND SAFETY PLAN

2.1 Why is a Site-Specific Health and Safety Plan (HASP) Required on this Project?

Wood waste is likely buried under some portions of the project area. Decomposition of this wood waste is resulting in elevated methane gas in the soils on the project. Isolated minor pockets of chemical contaminated soil have also been encountered in the vicinity of the project but is not expected to adversely affect construction work on the stie. The presence of methane gas in the soil may pose a risk to human health with respect to fire hazard and asphyxiation (oxygen displacement).

Because of this potential hazard, a health and safety plan (HASP) that meets Occupational Safety and Health Administration (OSHA) requirements (29 Code of Federal Regulation [CFR] 1910.120) and Oregon Administrative Rules (OAR) is required to address potential human health risk related to the contamination. The owner has retained PBS Engineering and Environmental Inc. (PBS) to develop this HASP to be utilized during site activities in which contaminated materials are encountered or when working in areas where these materials are present. Workers engaging in construction activities must familiarize themselves with the contents of this HASP, and sign that they have been informed as to the contents. An employee signature page is included in Appendix A.

2.2 What Is the Purpose of this HASP?

This HASP describes the specific responsibilities, training requirements, protective equipment, and operating procedures required or considered necessary for safe working conditions during construction activities. The plan primarily addresses potential worker exposure to the known soil gases and potentially contaminated soil or groundwater during planned site activities, but also is protective of the public and the environment. The HASP will also serve if unanticipated contaminated soil or groundwater is encountered during construction

activities. The staffing and monitoring requirements in this HASP are not intended for general construction activities performed in uncontaminated media.

2.3 How Is this HASP Different from the Contractor's General Safety Program?

The HASP is intended to supplement the Contractor's General Safety Program; job activities not related to work performed around or within contaminated media are not discussed in this HASP. A copy of the first page of the Contractor's General Safety Program is included in Appendix B. Site workers must comply with their employer's General Safety Program in addition to the requirements of this HASP. If workers believe the contents of the HASP and their employer's General Safety Program are in conflict, they should work with their supervisor and the contractor construction manager to resolve the conflict.

2.4 How Has this HASP Been Prepared?

During development of this HASP, consideration was given to current safety standards as defined by the Environmental Protection Agency (EPA), OSHA, Oregon OSHA (OR-OSHA) and National Institute for Occupational Safety and Health (NIOSH). Specifically, PBS uses the following reference sources in the preparation of site-specific health and safety plans:

- 29 CFR 1926.65 (Construction Standard) and 1910.120 (General Industry Standard) and 40 CFR 311
- Oregon Occupational Safety and Health Code: OAR 437, Division 2, General Occupational Safety and Health Rules
- NIOSH Pocket Guide to Chemical Hazards, DHHS (NIOSH) Publication No. 2005-149, September 2007

Work and environmental conditions at this site may change over the course of the project; as such, this HASP is dynamic and may be modified to encompass changes in work conditions or other unanticipated events and hazards.

3 KEY PERSONNEL AND RESPONSIBILITIES

The following table lists key personnel assigned to this project and their responsibilities.

Table 1. Key Personnel

Company	Name and Title	Contact Information
City of Portland Bureau of Environmental Services	Taryn Meyer Hydrogeologist	503 823 8155
General Contractor		
PBS Engineering and Environmental Inc.	Douglas Hancock CIH CSP - Environmental Consultant	Office: 503.417.7597 Cell: 503.209.1484

3.1 Contractor Construction Manager

The contractor Construction Manager is responsible for enforcing safe work practices and adherence to this HASP and the Contractor's General Safety Program for the duration of the project. The Construction Manager is responsible for enforcing and conducting the emergency response plan and conducting accident and near-miss investigations. The Construction Manager shall have training to identify field indicators for contaminated media.

The Construction Manager has the authority to suspend field activities if the health and safety of any person is endangered and can suspend subcontractors or individuals from field activities due to infractions of the HASP.

3.2 Site Safety Coordinator

The Site Safety Coordinator is the primary field contact for health and safety during activities involving potentially contaminated soil or groundwater. The Site Safety Coordinator will have the following responsibilities:

- Ensure that all on-site personnel have the appropriate HASP awareness training regarding the contents of the HASP and other safety requirements to be observed during construction.
- Be on site and present during work in hazardous materials zones, in areas where contaminated soil or groundwater is encountered, to provide field screening.
- Implement and monitor the HASP requirements, and work with the Environmental Consultant to modify requirements when appropriate.
- Perform air monitoring as required by the HASP, if properly trained and holding appropriate qualifications.

This Site Safety Coordinator may be employed by the contractor, or this role may be filled by the Environmental Consultant (discussed below). The Safety Coordinator should hold the following qualifications:

- Demonstrated experience providing oversight of contaminated media during excavation or dewatering activities
- Training with the Environmental Consultant on site-specific issues related to contaminated media and worker safety

3.3 Environmental Consultant

The Environmental Consultant has the following responsibilities:

- Prepare this HASP and oversee all additions and/or modifications
- Assist the contractor in identifying and evaluating potential hazards and developing appropriate procedures for addressing known or suspected conditions or activities that may pose routine occupational hazards or immediate danger to life or health
- Serve as the Site Safety Coordinator if the contractor does not have qualified personnel to fill this role

The Environmental Consultant will hold these qualifications:

- Forty-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training with current refresher certification
- Eight-hour Hazardous Waste Supervisor training or equivalency
- Two or more years of experience in hazardous substance or hazardous waste site remediation or related work
- Current first aid and AED/CPR training
- Certified Industrial Hygienist
- Certified Safety Professional

3.4 Site Workers

Site Workers completing tasks in areas associated with potentially contaminated soil or groundwater shall be responsible for the following:

- Performing work as described by the Construction Manager or designee
- Receiving the appropriate initial and ongoing training
- Reading, agreeing to, signing, and following the HASP (signature sheet in Appendix A)
- Conducting work in a safe manner
- Reporting all hazards to the Construction Manager or designee for corrective action
- Reporting faulty equipment to the Construction Manager or designee

All workers who may encounter contaminated media, or work in the vicinity of contaminated media, shall have completed HASP awareness training as outlined in section 9. This will include awareness-level training of the chemicals of concern in the contaminated media and methods for field identification of contaminated media. This training is to be provided as part of each employer's hazard communication program. This training does not satisfy requirements established in 29 CFR 1926.65 or 29 CFR 1910.120 for 24- or 40-hour HAZWOPER training.

4 KNOWN ENVIRONMENTAL CONDITIONS

4.1 Site Investigations

In generating this HASP, information from the following site documents were used:

- Soil Vapor Investigation West Property – TASS 2 Site; Haley Aldrich, 3 June 2024

The following environmental issue poses a potential risk to occupation worker, construction, and excavation workers:

- The presence of buried organic materials has resulted in the generation of methane gas. This gas is present in soils throughout the property at varying concentrations.
- Isolated concentrations of other contaminants may be present at low concentrations.

4.2 Contaminants of Concern

Contaminants of concern that may pose a risk to construction and excavation workers include methane gas primarily and other chemicals. Methane is flammable and can present fire and explosion hazards if allowed to accumulate in a pit, trench or buried enclosure.

4.3 Identified Human Health Risk

The levels of contaminants observed in the project soils pose a potential risk to contractors on this project. The potential human receptors for the site include:

- Current and future on-site workers involved in non-invasive activities
- Current and future on-site workers involved in intrusive activities include but are not limited to the following: trenching, pit excavation, utility installation, confined space entry operations, utility vault entry and inspections, etc.

5 HAZARD ANALYSIS

The evaluation of hazards is based on the conditions, previous investigations, and anticipated risks posed by specific operations. Hazards, hazardous conditions, or materials may be present or encountered within the project boundaries that are not anticipated based on available background information. This HASP is to be considered dynamic and shall be changed or updated as necessary.

This hazard analysis focuses on work tasks that may pose a hazard due to contaminated soil and groundwater. It is assumed that hazards related to regular construction activities have been assessed and formally communicated to employees in each employer's general safety program.

5.1 Work Task Descriptions

Work activities where personnel are expected to encounter methane and H2S gas include the following:

- Excavation, trenching and utility installation
- Soil excavation and grading
- Below-grade installation of structures and enclosures (confined spaces)
- Removal, relocation, stockpiling, and disposal of contaminated soils from various excavations
- Other work operations that may require workers entering confined spaces on the project where these gases may accumulate

5.2 Chemical Hazards and Controls

Methane is a colorless, odorless, and tasteless flammable gas that can ignite at a concentration of 5 percent by volume (pbv). At room temperature, methane is a gas that is less dense than air. In open and ventilated areas, methane will dissipate quickly; but in confined, non-ventilated spaces, methane can concentrate and create potential asphyxiation (by displacing oxygen) and flammable atmospheres. The action level for methane gas on this project has been set at 10% of the lower explosive limit (LEL) which is a concentration of 0.5 pbv.

It is important to mention that methane gas at sufficient concentrations can also be accompanied by other gases such as carbon dioxide (CO2) and carbon monoxide (CO). All these gases, at high concentrations, can displace oxygen, posing an asphyxiation risk.

Air monitoring action levels for worker breathing zone (which may include confined spaces) are summarized in Table 2.

Table 2. Air Monitoring Action Levels

Parameter	Action Level	Reference
Oxygen	>19.5% to <23.5%	OSHA
Carbon Dioxide (CO2)	5,000 ppm	OSHA PEL
Carbon Monoxide (CO)	50 ppm	OSHA PEL
Photoionization Detector (PID)	10 ppm	OSHA 1910.1028(f)(1)(iii)
Lower Explosivity Limit (LEL)	< 10% LEL / 0.5 pbv	OSHA
Methane	< 1,000 ppm	Oregon OSHA
Hydrogen Sulfide (H2S)	< 2 ppm	10% of PEL

This HASP provides direction for the use of protective measures to eliminate or to significantly minimize exposure to the physical and chemical hazards presented by these gases. Site workers should comply with these requirements to minimize these hazards. If an undocumented contaminant is encountered that is determined to pose a chemical hazard to personnel, work activities shall cease, and the Construction Manager notified of the situation.

5.3 Physical Hazards and Controls

The nature of construction work poses physical hazards to construction workers and visitors or trespassers to the job site. As previously noted, these hazards should be addressed in the contractor's general safety program. Table 3 summarizes typical hazards associated with contaminated media along with recommended preventive actions or controls.

Table 3. Physical Hazards

Hazard	Prevention
Site excavation and trenching	Grubbing, excavation, trenching of surface soils on the project will disturb soils that contain elevated concentrations of methane. This gas will be released into the atmosphere. Workers may notice occasional odors related to other soil gasses and odors. The natural aeration of soils containing methane gas is not likely to generate hazardous atmospheres with respect to flammability and toxicity. When odors are noticed, the safety officer shall screen the work area for both methane hydrogen sulfide volatile organic compounds and carbon monoxide. If methane is detected at concentrations exceeding 10% of LEL or if H2S gas is detected at a concentration of 10% of PEL (2 ppm) work shall stop until concentrations dissipate. If chemical odors are noticed, the safety officer shall screen the work area for petroleum using a PID. If concentrations greater than 10 ppm are sustained for more than a few minutes, work shall stop until concentrations dissipate.
Hot work and other sources of ignition	Where a combustible contaminated media, such as methane and H2S, is present, no "hot work" (use of explosives, torches, appliances, tools, or equipment producing spark, flame, or ignition) should be started until measures are taken to detect and eliminate the chance for an explosion or fire. Monitoring of the LEL is required where hot work will be performed in areas of contaminated media containing flammable gases. This monitoring should occur prior to and during the performance of hot work. Field personnel shall not work in locations where heavy equipment (e.g., backhoe) operators cannot ensure that the swing radius of their equipment shall be no closer than 20 feet to the nearest overhead line (unless lines have been booted or shut off). All electrical equipment used on the site shall be supplied with a ground fault breaker. This protection shall be tested prior to the use of the equipment. The equipment shall not be used if the ground fault breaker fails to operate properly. Workers are prohibited from smoking or having open fires in the vicinity of contaminated media. Workers are prohibited from covering excavations or other soil cavities in a way the prevents the natural ventilation of those spaces.

Hazard	Prevention
Asphyxiation and flammable atmospheres during work in excavations, pits, confined spaces, and enclosures	All unsecured or accessed confined spaces such as utility vaults, manholes, storm drains, trenches, and other buried or semi-buried enclosures on the project shall be tested daily for methane and H2S, but also normal atmospheric levels of oxygen, CO2, and CO. All sample data shall be kept in a permanent logbook. If a temporarily covered excavation or soil cavity is encountered on the project, workers shall test the cavity for H2S and methane gases prior to removing that cover. If flammable gases are found to be present in excess of 10% LEL or 10% of the PEL, the cavity shall be ventilated until these elevated concentrations have dissipated and normal atmospheric conditions are present. All workers are prohibited from entering any excavations, pits, building crawlspaces, utility vaults, confined spaces or other enclosures without prior testing to determine the concentrations of methane H2S. If flammable gases are found to be present in excess of 10% LEL or 10% of the PEL, the cavity shall be ventilated until these elevated concentrations have dissipated to normal atmospheric conditions. Continuous monitoring of methane and H2S shall be performed during all work in these spaces. If petroleum vapors are encountered, screening with a PID to confirm vapors are less than 10 ppm will occur prior to entry. If petroleum vapors are found to be present in excess of 10 ppm, the space shall be ventilated until the elevated concentrations have dissipated.

5.4 Radiological Hazards and Controls

No radiological hazards are expected to be found on this site. If a hazardous material is encountered that is determined to pose a radiological hazard to personnel, work activities shall cease, and the Construction Manager shall be notified.

5.5 Biological Hazards and Controls

No known biological hazards are expected to be encountered on the site. Should a biological hazard be identified during site activities, work shall cease, and the Construction Manager shall be notified.

6 MEDICAL SURVEILLANCE REQUIREMENTS

Except for isolated concentrations of oil-range TPH on the south side of the property, known site contaminant concentrations in affected media are not above state-established screening levels protective of construction and excavation workers. Medical surveillance is currently not warranted under 29 CFR 1926.65. The awareness training is intended to provide sufficient knowledge to site workers to help avoid unacceptable contaminant exposure.

7 ENVIRONMENTAL AIR MONITORING

Environmental air monitoring of the ambient air in the worker breathing zones shall be conducted during excavation, and removal of soil or groundwater. Air monitoring would be conducted as described in Appendix D.

Site workers may be exposed to toxic, explosive, or oxygen-deficient atmospheres. If work is done that could create these hazards (such as working in trenches and confined spaces where gases can accumulate), monitoring for these atmospheric hazards shall be performed as a prudent precautionary measure. Work shall be monitored with a suitable instrument that detects explosive vapors such as a flame ionization detector (FID) or LEL meter. A PID should be used to monitor for petroleum compounds. Should a potentially explosive condition be noted, all ignition sources shall be extinguished, and procedures enacted according to Emergency Response Procedures in section 14.

Site workers will not be allowed entry into any excavations or confined spaces unless normal atmospheric conditions below action levels are observed. If atmospheric conditions are not adequate for entry, engineering controls such as ventilation or modified PPE may be required.

8 SITE CONTROL MEASURES AND OPERATIONAL ZONES

The following section defines measures and procedures for maintaining site control, which is an essential component in the implementation of the HASP. Site control is necessary when work is being conducted in contaminated media and access to the work area needs to be controlled for the safety of the workers and the general public.

8.1 Area Boundaries and Barriers

If a task requires that the work area be controlled, area boundaries shall be established by the Construction Manager or designee. Area boundaries shall be marked in a manner that informs personnel or visitors that access to that area is limited. This may be accomplished by using signage, barricades, cones, and/or warning tape. Alternately, a worker may be stationed to direct traffic away from the restricted area. If the affected area is located where unauthorized personnel are likely to pass, temporary security fencing should be used to prevent contact with the affected area.

Area boundaries established for this project: To protect non-essential personnel and/or pedestrians, area boundaries should be established while conducting subsurface intrusive activities within the project area.

8.2 Operational Zones

The potential health hazards of the contaminated media are not expected to require the delineation of specific operational work zones; however, if field conditions indicate that these zones are required or if media with unidentified contamination is discovered during site activities, specific work zones may be established to prevent accidents and/or unauthorized entry into the affected area(s).

If it is determined that work zones are needed during the proposed scope of work, procedures for establishing and using work zone are provided in Appendix E. The work zones will include the Exclusion (Hot) Zone, Contamination Reduction (Warm) Zone, and Support (Cold) Zone. If operational zones are required as a standard protocol for the project, this HASP should be revised to reflect this change.

8.3 Buddy System

Given the current understanding of the on-site contamination, separate operational work zones are not necessary. If site conditions require identification of a Hot Zone, a buddy system protocol must be established.

In cases of confined space entry, proper confined space entry protocols with the requisite staff will be followed.

8.4 Communications

On-site communications during activities that preclude normal volume communications should follow the contractor's standard safety policies for alternative communications (i.e., hand signals, two-way portable radios, or cellular telephones).

8.5 Engineering Controls and Work Practices

To the extent feasible, engineering controls and work practices will be implemented to reduce and maintain employee exposure below the permissible exposure limit for airborne dust and other potential airborne site related hazards. Site workers will be informed at safety briefings if engineering controls and work practices are instituted.

Engineering control options that can be implemented to reduce potential employee exposure in the event of elevated dusts or vapors above permissible exposure limits include, but are not limited to, the following:

- Removal of personnel from the affected area to an upwind location
- Use of industrial ventilation fans to provide fresh air circulation in the employee work zones
- Progressive excavation and grading techniques, which may include:
    - Potholing to identify potential impacted areas in advance of excavation activities
    - Graduated excavation in impacted areas (i.e., excavating to depth in lifts and allow soil to rest to minimize potential breathing zone hazards)
    - Till or scrape soil to disturb impacted soils and allow soil to rest to let vapors dissipate below permissible exposure limits prior to resuming work in these areas

Any reasonable combination of engineering controls, work practices, and PPE shall be used to reduce and maintain employee exposures below the permissible exposure limits. The amount of personnel and equipment in contaminated areas shall be minimized yet allow for effective site operations.

9 SAFETY TRAINING

9.1 Initial HASP Awareness Training

The Construction Manager or Environmental Consultant shall conduct an initial safety briefing with site workers who will participate in work activities involving contaminated soil or groundwater. This briefing will include the following:

- How contamination at the site was identified
- What the regulatory agency or property owner requires to manage contamination and ensure worker safety
- Review of the HASP, including the following topics:
    - Site characterization
    - Site controls
    - Hazard recognition/analysis
    - Air monitoring if warranted

  - PPE, including respirator use if warranted
  - Decontamination protocols
- How to identify contaminated soil and/or groundwater (i.e., staining, odor, sheen, buried solid waste) and protocol for reporting the discovery

9.2 Ongoing Safety Briefings

The Construction Manager will conduct or coordinate ongoing safety briefings to ensure that new site workers are familiar with the contents and requirements of the HASP. It is the responsibility of the Construction Manager to determine when workers require the initial HASP awareness safety training and alert the Environmental Consultant that additional training is needed.

10 PERSONAL PROTECTIVE EQUIPMENT (PPE)

The readily available information about site contamination indicates a low risk of exposure to hazards associated with contaminated media; therefore, Modified Level D Protection, as defined below, is the minimum level of protection when working with the known contaminated media.

10.1 Initial Exposure Assessment

Contamination at the site is well studied and its effects and properties well understood relative to human health risk; therefore, an initial site-specific exposure assessment is not warranted.

If unexpected conditions occur, such as encountering unanticipated or unknown contamination, an exposure assessment will be conducted to determine the appropriate level of PPE required. In this instance, work in the area shall stop temporarily until the assessment is complete. The protocol for this assessment will be determined based on the nature of the unexpected condition. Once the results of the assessment are available, the Construction Manager, Site Safety Coordinator, and Environmental Consultant shall determine if work activities suggest modification through engineering controls or use of additional PPE.

As an example, if an unexpected odor is observed in an area of known contamination, monitoring ambient air in the work zone using a PID, as outlined in section 7, may be appropriate. If the result is below the action level of 10 ppm above the ambient air measurement, this will be considered a negative exposure assessment, and Modified Level D PPE (summarized below) will be adequate for that work task.

10.2 PPE Protection Levels

Based on the known or suspected contamination present at the site, the use of Modified Level D PPE is appropriate for all site workers. No exchange of PPE shall be allowed except in emergency situations involving a threat to health and safety.

10.2.1 Modified Level D Personal Protection Equipment

Modified Level D PPE includes the following:

- Dedicated work clothes
- Safety boots/shoes
- Hard hat
- Gloves: nitrile or other material with appropriate protectiveness for known site contaminants (when handling or encountering contaminated media)
- Safety glasses/shield (splash protection for groundwater-related activities)

This PPE is primarily geared toward worker protection from solids (i.e., soil). If significant activities are conducted with contaminated groundwater, the required PPE should be reassessed for appropriateness.

10.2.2 Other Levels of PPE

If an initial exposure assessment or subsequent assessments determine that site conditions require PPE beyond that provided by Modified Level D, work activities will cease until conditions return to levels amenable for Modified Level D PPE. Field personnel for this project generally do not have the training required to perform activities in Modified Level C PPE, which requires respirator use.

10.3 Reassessment of Protection Program

When a significant change in site or work conditions occurs, potential hazards shall be reassessed by the Safety Supervisor. Some indicators of the need for reassessment are:

- If previously unidentified contaminated soil, groundwater, or vapors are identified
- Commencement of a new work phase and/or new activity in a contaminated area
- Change in job tasks during a work phase
- Change of season or weather
- When temperature extremes or individual medical considerations limit the effectiveness of PPE
- Contaminants other than those previously identified are encountered
- Change in ambient levels of contaminants
- Change in work scope that affects the degree of contact with contaminants

10.4 Respirators

Respirators are not anticipated to be necessary for work around contaminated media on this project. To wear a respirator at a job site, workers must be fully trained in their use, pass a fit test using their own dedicated respirator, and participate in OSHA-compliant medical surveillance. If a change in site conditions warrants the use of respirators, the Construction Manager shall ensure that a respirator program is developed that complies with OAR 437-129-045. This HASP must be revised if respirator use is required.

11 DECONTAMINATION PROCEDURES

11.1 Worker Decontamination

Given the current understanding of the on-site contamination, the decontamination procedure is limited to ensuring that residual contaminated soil is removed from work clothing and boots prior to leaving the work zone, and all personnel exposed to impacted soils thoroughly wash their hands, face, and exposed body parts prior to breaks and at the end of every work shift. If site conditions require identification of a Hot Zone, worker decontamination procedures will be reevaluated for effectiveness.

11.2 Equipment Decontamination

The Construction Manager shall ensure that equipment entering the site is properly decontaminated to prevent cross-contamination from previous sites and to ensure that personnel do not encounter unidentified and unknown hazards. Heavy equipment used by field personnel must be adequately decontaminated prior to moving between specific excavation areas. This shall consist of sweeping away loose soil and removal of significant quantities of adhered soil with hand tools. Trucks will be broom-cleaned before leaving the loading area.

Residual contaminated soil encountered during decontamination of equipment shall be captured and either placed in a truck containing similar material or stored on heavy-duty plastic for later disposal.

11.3 Disposition of Decontamination Wastes

Equipment and supplies used for the decontamination process shall be decontaminated or disposed of properly. Storage and disposal of decontamination wastes are discussed in section 16.

12 SITE STANDARD OPERATING PROCEDURES (SOPS)

Field personnel will comply with SOPs in their employer's general safety program. In addition, because of the potential for contaminated media at the site, workers, site visitors, and subcontractors shall be expected to comply with the following rules and procedures:

- Obey all warning and instructional signs posted at the site.
- Eating, drinking, chewing gum, or smoking near contaminated soil is prohibited as these practices can increase the probability of hand-to mouth transfer and ingestion of contaminated material.
- No lit cigarettes, matches, lighters, and other open flames within work areas of known or anticipated flammable or ignitable contaminated media.
- Serve as a safety backup to your partner(s) during site operations and make all site personnel aware of dangerous situations that may develop.

13 CONFINED SPACE ENTRY

A confined space is any enclosure large enough to enter, has some restricted means of egress, is not designed for continuous occupancy, and may contain one or more of the following:

- The potential to contain an oxygen-deficient or -enriched atmosphere
- A known potential hazardous atmosphere
- A material with the potential to engulf an entrant
- An internal configuration such that the entrant could be trapped or asphyxiated by inwardly converging walls or a floor that slopes downward
- Any other recognized safety or health hazard

This HASP is not intended to address confined space entry. Each employer at the site should develop their own confined space entry program. Site workers should comply with all site-specific rules related to confined space entry. It should be understood that all confined spaces on the property have a potential for the accumulation of flammable gases to the extent that they present a fire and explosion potential.

14 EMERGENCY RESPONSE PLAN

OSHA regulation 29 CFR 1910.120(l(1)) requires that site-specific HASPs include an emergency response plan. This section may be superseded by an emergency response plan that has been developed for the overall construction site.

14.1 Pre-Emergency Planning

During the initial safety briefing, site workers shall be trained in, and refreshed of, the emergency response plan. The plan shall be reviewed and revised, if necessary, on a regular basis by the Construction Manager or designee. This will ensure that the plan is adequate and consistent with prevailing site conditions.

14.2 Personnel and Lines of Authority

Emergency incidents should be anticipated and prevented by maintaining vigilance and conducting safe operations; however, should conditions change, and an emergency response is warranted, the following procedures are to be followed. The procedures below shall be outlined to all personnel as a part of the safety briefing.

- The Construction Manager or designee shall assume command unless and until relieved by police, fire, or other emergency officials. This includes taking appropriate measures to ensure the safety of site personnel. Possible actions may involve evacuation of personnel from the site area.
- All site personnel shall report to the Construction Manager or designee for a head count and for instructions.
- All personnel in an immediately dangerous to life or health (IDLH) area shall move or be removed (if injured) to an area of refuge designated by the Construction Manager or designee.
- First aid and CPR shall be applied as necessary to any injured personnel.
- The Construction Manager/Safety Supervisor shall consider if an upgrade of PPE is necessary based upon changing action levels.
- The Construction Manager or designee shall consider, as necessary, any other emergency measures, including evacuation and notification of the general public in the area, if necessary.
- The accident/incident shall be reported as soon as possible in written form on an Incident/Accident Report form found in Appendix F. Care should be taken to evaluate what may have gone wrong and why, how to prevent it in the future, and possible adjustments in the standard operating procedures.

14.3 Additional Decontamination Procedures

Decontamination procedures beyond those covered in this HASP are not expected to be required at this site. If conditions change and site conditions warrant additional decontamination procedures, this section will be modified to reflect those changes.

14.4 Safe Distances and Places of Refuge

Given that site conditions change regularly throughout construction projects, safe distances and places of refuge will be defined at ongoing safety briefings.

14.5 Emergency Recognition and Prevention

Emergency recognition and accident prevention at this construction project shall be the responsibility of all site workers. This shall be facilitated by the following procedures:

- Field personnel scheduled to work in areas with known contaminated media shall receive a safety briefing as outlined in section 9.
- Periodic health and safety briefings will be held to refresh site personnel on the emergency response plan, changes in site conditions, site controls measures, chemical and physical hazards, action levels, location of emergency equipment and phone numbers, and any other pertinent information.
- Regular safety and health inspections to determine if operations are being conducted in accordance with HASP, EPA, OSHA, and OR-OSHA requirements and regulations, and contract requirements.
- Regular evaluation of site worker personal protection levels and necessary clothing and equipment for the safety of personnel. This information shall be provided to field personnel and visitors, and appropriate compliance by these individuals shall be expected.

- Correction of any work practices or conditions that may result in injury to personnel or exposure to hazardous substances. Subcontractors shall be expected to promptly correct unsafe work practices or conditions not meeting the intent of the HASP. Failure to do so may result in temporary suspension of the field activities until corrective action is completed to the satisfaction of the Construction Manager.
- Verification that appropriate PPE is available and properly utilized by field personnel. All subcontractor personnel and site visitors shall be expected to comply with HASP procedures.
- Evaluation of weather and chemical hazard information to make any necessary modifications to work plans and personnel protection levels to maintain field personnel safety.
- Personnel should be assigned to perform specific functions during an emergency. This assignment shall be done during the safety briefing. Functions suggested are the following:
    - First-aid
    - Notify emergency services
    - Stage safety equipment
    - Regroup and take roll of site personnel
    - Notify Construction Manager

14.6 First Aid and Emergency Equipment

A general first aid kit meeting OR-OSHA guidelines shall always be kept on the site. The Construction Manager or designee shall verify that first aid kits remain fully stocked.

An eye wash station meeting ANSI Z358.1990 for Emergency Eyewash and Shower Equipment and having at least 15 minutes of flowing sterile water for purposes of flushing foreign substances from the eyes shall be located at the site.

Project vehicles shall have at least one multipurpose (Class A, B, and C) type fire extinguisher. The Construction Manager or designee shall verify that all fire extinguishers are maintained and checked regularly according to OAR 437-61: Fire Protection. All site workers shall be briefed on the locations and use of fire extinguishers.

A description of PPE required for this site was previously provided in section 10.

14.7 First Aid Protocols

This information is provided as a guide and is not considered a substitute for certified first aid/CPR training.

Skin	Remove contaminated clothing immediately, wash with soap and water.
Inhalation	Remove to fresh air. Where necessary, call emergency medical help (911) and follow medical emergency help procedures.
Eye Contact	Flush with eyewash or water at least 15 minutes. Follow emergency medical help procedures, if indicated. Contaminants may be absorbed through the eyes.
Ingestion	Obtain medical help.

Injuries	Administer first aid, if necessary. Follow emergency medical procedures in section 14.8. Medical emergencies take precedence over decontamination.

14.8 Emergency Response Protocols

In the event of an emergency, the Construction Manager will communicate that an emergency event has occurred, and that work needs to stop. Section 8.4 details the types of communication to be used at the site.

14.8.1 Emergency Procedures for an Injured Worker

- Site workers should assess the initial condition of the injured party and surrounding area. **Call 911**.
- Remove injured party from contaminated or other unsafe zone, if doing so will not result in additional injuries. If the injured party requires decontamination, rescuers should initially consult with first responders or the dispatcher.
- Apply emergency first aid to ensure breathing and reduce immediate threat to life.
- Communicate nature of emergency to the Construction Manager and document actions taken.

14.8.2 Site Evaluation and Evacuation

The Construction Manager or designee is responsible for determining if site conditions exist that require re-evaluation and/or evacuation by field personnel and should always assume worst-case conditions until proven otherwise. This includes determining if a confined space is present and entry required, and the procedures necessary to access that space. It should be noted that permit-required confined space entry is not covered by this HASP. Specific evacuation procedures, warning signs, and signals shall be covered in the safety briefings prior to beginning work and may differ depending on the site and type of operation being conducted. Visitors and subcontractors shall be expected to follow recommended actions. Three stages of evacuation have been determined for working in an area of concern:

1. Withdrawal from immediate work area on site
2. Evacuate site
3. Evacuate surrounding area

Withdrawal to a safe upwind location shall be required if any of the following occur:

- Sustained concentrations of VOCs, combustible and/or toxic gases are detected above permissible levels in the breathing zone for Modified Level D PPE.
- Occurrence of a minor accident: field operations may resume after first aid and/or decontamination procedures have been administered.
- Equipment, protective clothing, or respirator malfunctions or failure.

The site shall be evacuated in the following cases:

- Explosive levels of combustible gases, toxic gases, or VOCs are detected.
- Potentially toxic levels of organic or inorganic vapors are detected in the breathing zone that exceeds the capacity of Modified Level D PPE.
- An oxygen-deficient environment is detected.
- A major accident, fire, and/or explosion or injury occurs.

The Construction Manager or designee is responsible for determining if circumstances exist for area-wide evacuation and should always assume worst-case conditions until proven otherwise. Fire and police departments must be contacted in this case. If there is a possibility that an area-wide evacuation may be necessary, contingency plans to carry out these evacuations shall be developed in consultation with emergency services prior to the beginning of fieldwork.

14.8.3 Accident/Incident Reporting

OSHA

Accidents and/or incidents shall be reported to OSHA in the event of:

- Death. Report the death of any employee or a catastrophe (when two or more employees are fatally injured, or three or more employees admitted to a hospital or clinic as a result of the same incident) within 8 hours.
- Individual Hospitalization. Report an in-patient hospitalization, loss of an eye, and either an amputation or avulsion that results in bone loss of any employee within 24 hours.

All such accidents/incidents shall be reported to OR-OSHA: 800.922.2689.

Contractor/Ultimate Client

The Incident/Accident Report form in Appendix F must be filled out as per contractor and ultimate client requirements.

14.8.4 Critique and Incident Follow-Up

The Construction Manager or designee shall complete post-incident reports, critiques, evaluations, and medical follow-up, as needed. This may include debrief meetings with first responders and other personnel present during the emergency. The purpose of the critique and follow-up activities is to improve site-specific responses to emergencies. If improvements are needed, this HASP should be amended to reflect them.

15 NON-EMERGENCY ACCIDENTS AND INCIDENTS

15.1 Exposure/Injury/Illness

Any worker at this site who becomes injured, ill, or develops signs or symptoms due to possible overexposure involving hazardous substances, shall be required to seek medical attention within 24 hours and to notify their supervisor and the Construction Manager. A physician's written opinion may be required prior to the worker returning to normal site activities.

The incident shall be reported in written form on an Incident/Accident Report form found in Appendix F; an employer-specific incident/accident report form may be used in lieu of this form. The written report must be submitted to the Construction Manager within 24 hours of the incident.

See Appendix F for reporting requirements for accidents/incidents at a work site.

16 WASTE MANAGEMENT AND UNANTICIPATED CONTAMINATION

All employers and workers at the site must comply with regulatory requirements regarding management of solid and hazardous waste, and spill reporting obligations. In addition, they must comply with site-specific requirements established by the property owner or a regulatory agency.

This HASP is not intended to replace or supersede plans already established to deal with waste or spills, such as Pollution Control Plans or a Contaminated Media Management Plan, if prepared for the site.

16.1 Hazardous Waste

Hazardous waste must be handled according to federal and state regulations. Should any additional hazardous wastes be encountered, the Construction Manager shall be notified immediately.

16.2 Release of Reportable Quantities

Should a release of a hazardous substance occur during site activities that is greater than the reportable quantity (as defined in OAR 340-108-0010), the proper regulatory agency shall immediately be notified. Steps shall be implemented to minimize the spread of the hazardous material, which may include the construction of earthen berms, application of absorbent pads, etc. The affected area shall be cordoned off to prevent unauthorized personnel from contacting the hazardous material. An emergency response team trained in the mitigation of hazardous substance releases shall be contacted and upon their arrival, control of the affected area shall be relinquished to their authorized representative until the immediate threat of the released substance has been controlled. The Construction Manager shall be notified of the release as soon as practical.

16.3 Waste Storage and Disposal

This HASP does not prescribe specific measures for waste storage and disposal; however, a minimum level of care must be applied to all waste handling to ensure a release or other unsafe conditions do not occur.

16.4 Discovery of Unanticipated Contaminated Media

This project involves activities that may encounter unanticipated contaminated media. Should this occur, site workers shall:

- Cease operations immediately.
- Notify the Construction Manager or other appropriate key personnel immediately.
- Evacuate field personnel from the affected area until a hazard/exposure assessment is performed.
- Notify subcontractors, contractors, other site visitors, or other potentially affected personnel of the potential hazard.
- Initiate site control measures to limit access to the affected area.

16.5 Drum Handling Procedures

The use of drums is not recommended for this project. If drums are required to be used, the handling of drums shall be carried out by qualified personnel with proper equipment. Personnel shall ensure the following:

- Drums used meet the appropriate DOT, OSHA, and EPA regulations.
- Drums are inspected for integrity.

17 LIMITATIONS

PBS has prepared this plan for use by Millpond Crossing LLC and Millpond Builders LLC for the Millpond Crossing project in Philomath, Oregon. This report is for the exclusive use of the client and is not to be relied upon by other parties. It is not to be photographed, photocopied, or similarly reproduced in total or in part without the express written consent of the client and PBS. This plan is not intended to serve as the contractor safety plan and does not cover activities beyond excavation, home construction near contaminated media, and management of soil and groundwater. Health and safety procedures for general construction work at the Millpond Crossing project should be covered or referenced in the contractor safety plan and are not included.

18 SIGNATURES

PREPARER OF HEALTH AND SAFETY PLAN

Douglas Hancock CIH CSP Date
PBS Engineering and Environmental Inc.

Bret Waldron RG Date
PBS Engineering and Environmental Inc.

Appendix A

Employee Signature Page

Appendix A: Employee Signature Page

The following personnel have been briefed on the contents of this HASP and understand its provisions:

Name (PRINT)	Signature	Employer	Date

Appendix A: Employee Signature Page

The following personnel have been briefed on the contents of this HASP and understand its provisions:

Name (PRINT)	Signature	Employer	Date

Appendix B

Contractor Safety and Health Policy Cover Page

Appendix C
Chemical Hazard Information

Appendix C: Chemical Hazard Information

Check the box for those chemicals that may be present at the site. If the chemical is not listed in the table, add it to the end of the table and look up the hazardous properties.

Check If Present	Material	Water Solubility[a]	Specific Gravity	Vapor Density (air=1)	Flash Point °F	Vapor Pressure	LEL UEL	PEL-TWA[g]	IDLH Level	Odor Description	Odor Threshold or Warning Concentration (ppm)	Hazard Property [j]	Acute[1] Exposure Symptoms
X	Methane	Insoluble	NA	0.52	-188C	NA	5% 17%	1,000[h] ppm	NH	Odorless	NA	B	P
X	Hydrogen Sulfide	Soluble	NA	1.19	-82C	NA	4.3% 45%	20 ppm	100 ppm	Rotten eggs	0.03 ppm	C	CDFK
X	Diesel Fuel	Insoluble	0.75-0.90	>4.5	100–134	0.4 mm	0.6%–7.5%	1,000 ppm[2]	None specified	Kerosene-like	0.08	BC	IN
X	Benzene	0.07%	0.88	2.7	12	75 mm	1.2%–7.8%	1 ppm	500 ppm	Sweet	61–97	BCG	ABCDFHIKL MNOQR
X	Toluene	0.07% (74°F)	0.87	3.2	40	21 mm	1.1%-7.1%	200 ppm	500 ppm	Sweet, pungent,	1.6	BC	DEFHIKLM NOPQ
X	Ethylbenzene	0.01%	0.87	3.7	55	7 mm	0.8%-6.7%	100 ppm	800 ppm	Aromatic	NA	BCD	ABFHIKLM NPQR
X	Xylene	Insoluble	0.87	3.7	81–90	7–9 mm	0.9%-7%	100 ppm	900 ppm	Aromatic	0.62–40	BCD	ABFHIKLM NPQ
	Benzo(a)pyrene	Insoluble	>1	8.7	NA	5.49×10^{-9} mm	NA	None	None specified	Aromatic	NA	CG	IMN
X	Naphthalene	0.003%	1.15	4.42	174	0.08 mm	0.9%-5.9%	10 ppm	250 ppm	Mothball-like	0.038	--	AEIKLNQ
X	Lead	Insoluble	11.34	NA	NA	0 mm	NA	0.050 mg/m^3	100 mg/m^3	NA	NA	C	GQ
X	PCB (generic)	Insoluble	1.38	NA	NA	0.001 mm	Non-flam	1 mg/m^{3i}	5 mg/m^3	Mild hydrocarbon	NA	CG	CHLPQ
X	Arsenic	Insoluble	5.73	--	--	--	--	10 mg/m^3	None specified	Garlic	--	B(dust)	N
X	Chromium	Insoluble	7.14	NA	NA	0 mm	NA	1 mg/m^3	250 mg/m^3	Odorless	NA	CE	ABMNQ

EXPLANATION AND FOOTNOTES

NA: Not Applicable

a Water solubility expressed as 0.2 g means 0.2 grams per 100 grams water at 20°C.

b Solubility of metals depends on the compound in which they are present.

c Several chlorinated hydrocarbons exhibit no flash point in a conventional sense, but will burn in the presence of high energy ignition source or will form explosive mixtures at temperatures above 200°F.

d Practically non-flammable under standard conditions.

e Expressed as mm mercury (Hg) under standard conditions.

f Explosive concentration of airborne dust can occur in confined areas.

g OSHA time-weighted Average (TWA) Permissible Exposure Limits (PELs) except where noted in h and i.

h Threshold Limit Value – Time-Weighted Average (TLV-TWA) adopted by the American Conference of Governmental Industrial Hygienists (ACGIH), which is lower than the OSHA Permissible Exposure Limit (PEL).

i Recommended Exposure Limit – Time-Weighted Average (REL-TWA) recommended by NIOSH. A TLV or PEL has not been adopted by ACGIH or OSHA.

A - corrosive	E - reactive
B - flammable	F - radioactive
C - toxic	G - carcinogen
D - volatile	H - infections

[1] Acute Exposure Symptoms

A - abdominal pain	G - diarrhea	M - respiratory system irritation
B - central nervous system depression	H - drowsiness	N - skin irritation
C - comatose	I - eye irritation	O - tremors
D - convulsions	J - fever	P - unconsciousness
E - confusion	K - headache	Q - vomiting
F - dizziness	L - nausea	R - weakness

[2] ACGIH-TLV

Appendix D
Air Monitoring

Appendix D: Air Monitoring

Air Monitoring Fundamentals and Instruments

Air monitoring is a means to test the air in real time for potential hazards to site workers. Typically, environmental air monitoring is conducted during excavation and removal of contaminated soil or groundwater. Air monitoring can be conducted with a PID, a meter that is able to detect VOCs in the air. Other field monitoring tools, such as Draeger gas detectors or flammable gas meters, may be used if field conditions dictate their use. Direct-reading instruments such as the PID provide information at the time of monitoring, enabling rapid decision-making. Data obtained from the real-time monitors are used to assure proper selection of personnel protective equipment, engineering controls, and work practices.

Air monitoring with a PID will typically detect VOCs but may not detect semi-volatile compounds. The PID cannot detect non-volatile contaminants such as heavy oils, semi-volatile organic compounds (SVOCs), metals, pesticides, and PCBs. The PID quantifies the concentration of total organic vapors in the air that are readable by that PID unit. It does not identify the specific type of organic vapors being measured. It also does not identify how explosive the organic vapors are being measured.

Air monitoring with an LEL meter can help identify flammable atmospheres. It should be understood that LEL meters only work properly in atmospheres with 20% oxygen. An LEL meter will give erroneous results in any atmosphere with depleted oxygen. Often a confined space monitor will include an oxygen sensor, a carbon monoxide sensor, an LEL meter and a hydrogen sulfide sensor.

The type of contamination along with the level of potential exposure by site workers provides the basis by which the appropriate air monitoring protocol is selected.

Project-Specific Air Monitoring Protocols

The contaminants of concern, methane and H2S, can be effectively monitored using a confined space meter that includes an oxygen sensor, an LEL meter and a hydrogen sulfide sensor. It is critical that the hydrogen sulfide sensor has a detection limit that is below the project specific H2S action level of 0.2 ppm. Petroleum contaminants can effectively be monitored using a PID calibrated to 100 ppm isobutylene.

Air monitoring shall occur when workers enter soil excavations or other enclosed cavities that may contain elevated concentrations of these gases. The following areas will be monitored:

- *Ambient (background):* Measurements will be taken daily to evaluate background concentrations. The sample should be taken at the perimeter of the work zone.
- *Excavation zone (pumping zone)*: Measurements will be taken in the employee breathing zone during excavation or pumping activities in areas of known or suspected contamination. Measurements will be collected inside the excavation only if it is safe for workers to enter. During excavation activities, or whenever contaminated soil or soil containing organics is disturbed, or contaminated groundwater is present, measurements will be collected from the excavation (if workers present), near earth moving equipment, and in the soil stockpile and loading zone. If hot work (e.g., welding, cutting, or grinding) is to be conducted in contaminated excavations, samples will be collected in the immediate work zone prior to and during hot work activities using a confined space meter.
- *Screening existing vaults, enclosures, temporarily covered pits and trenches:* Measurements will be taken remotely prior to removal of any temporary cover or lid associated with a soil cavity where H2S, methane, or petroleum vapors could accumulate. If levels exceed 10% LEL or 10% PEL, the soil cavity or space shall be mechanically ventilated prior to opening.

Air Monitoring Recap

- ✓ Air monitoring readings taken daily with a confined space meter.
  - o Readings above 10% LEL (0.5 pbv) methane shall result in a stop work condition.
  - o Readings above 10% PEL (2 ppm) for H2S shall result in a stop work condition.
- ✓ During hot work, work inside excavations, or other work in other enclosed spaces, readings will be taken prior to initiating work and continuously during work activities.
  - o Readings above 10% LEL (0.5 pbv) methane: Work needs to stop immediately, and workers need to evacuate the area until vapors dissipate.
  - o Readings above 10% PEL (2 ppm) H2S: Work needs to stop immediately, and workers need to evacuate the area until vapors dissipate.
  - o Readings of oxygen less than 19.5% present an asphyxiation risk and concentrations greater than 23.5% oxygen present an oxygen-rich environment more prone to flammable ignition hazards. Readings outside of this range shall result in a stop work condition.

All monitoring equipment shall be calibrated weekly or immediately prior to use following the manufacturer's recommendations.

Appendix E
Operational Zone Procedures

Appendix E: Establishment of or Procedures for Operational Zones

Exclusion (Hot) Zone

The region encompassing an area of excavation, excavated soil piles or other work area presenting a risk, and a minimum of 20 feet beyond (if possible) on all sides shall be designated as the Exclusion (Hot) Zone. This zone shall be identified using caution tape, cones, or other readily identifiable barrier. For sites where public access must be restricted outside of project work hours, the Contractor shall confer with the site owner and applicable municipal/regulatory entities to determine the appropriate barrier for each location.

Only necessary site workers or authorized site visitors shall be allowed in the Hot Zone.

Note: All site workers and authorized visitors must have read the HASP and signed Appendix A prior to entering the Hot Zone. Personnel shall limit their time in the Hot Zone to necessary work and leave immediately upon completion.

All personnel entering the Hot Zone shall be outfitted in the level of protection as outlined in section 10 of this document.

The owner and the Safety Supervisor are jointly responsible for ensuring that personnel gaining access to the Hot Zone meet the above requirements. Any contaminated equipment, materials or media shall remain in the Hot Zone until properly decontaminated or other suitable disposition is arranged. A decontamination station shall be set up in the Contamination Reduction (Warm) Zone. Decontamination procedures shall be according to the Decontamination Plan outlined in section 11.

Contamination Reduction (Warm) Zone

The Contamination Reduction (Warm) Zone is the transition area between the contaminated area and the clean Support (Cold) Zone. The Warm Zone boundary shall be in a manner such that no contaminated materials or equipment shall pass beyond it to the Cold Zone. Initially, the Warm Zone is considered to be a non-contaminated area.

As applicable, workers shall remove outer layers of boot, suit, and glove coverings and proceed to the Decontamination Station (respirators would remain in-place until exiting Decontamination Station).

Support (Cold) Zone

The Support (Cold) Zone shall consist of the area of the site extending from the outer boundary of the Warm Zone to the work zone boundary. Support personnel and equipment (first aid, eyewash, etc.) shall be located in this zone. Support personnel shall be responsible for alerting the proper agency in the event of an emergency. All visitors and site personnel not currently required to be in the Hot or Warm Zones shall remain in the Cold Zone. Normal work clothes are appropriate for this zone.

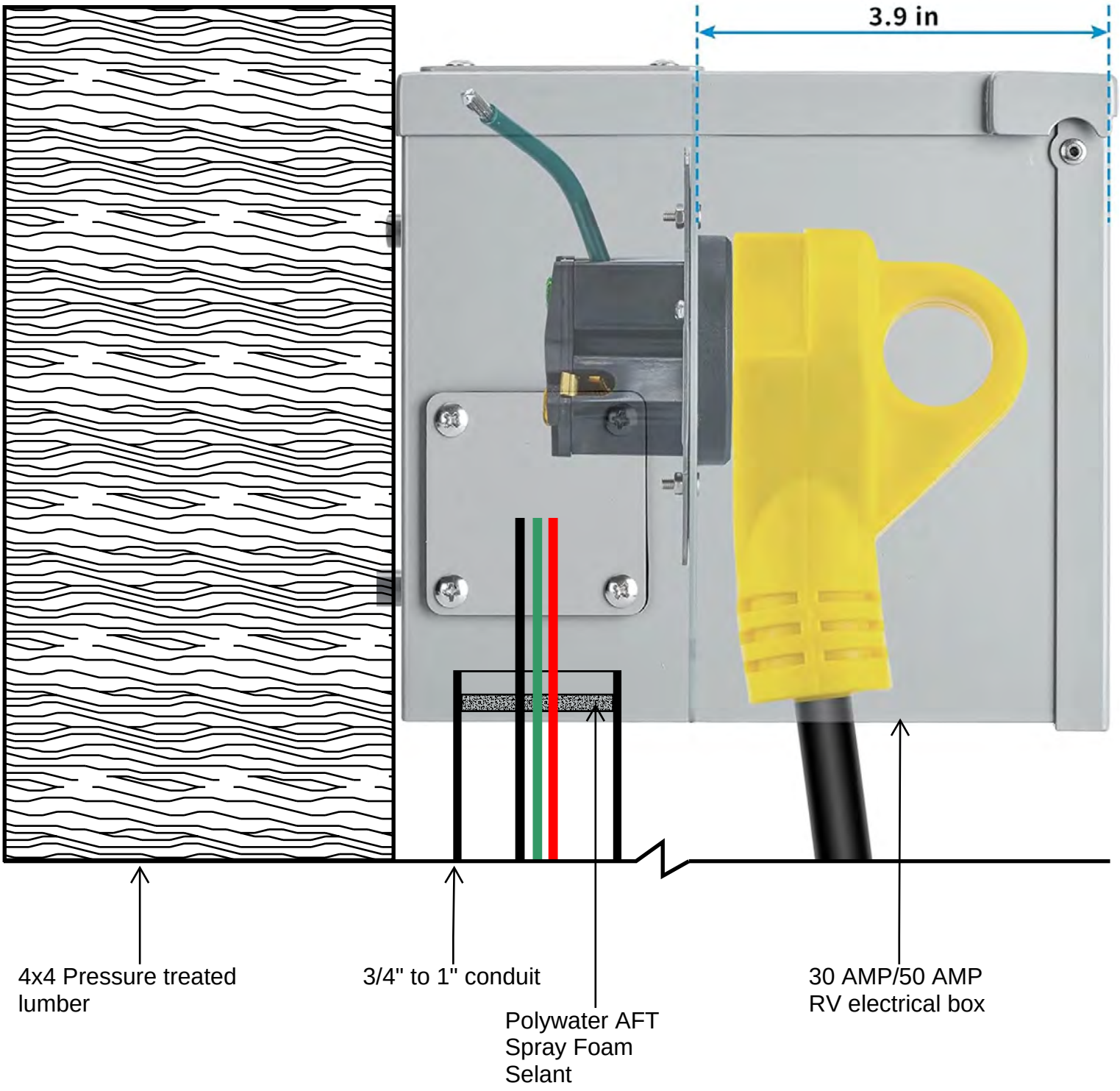
Potentially contaminated personnel clothing, equipment or other materials are not permitted in this zone. Personnel entering this zone are required to remove any protective equipment worn in the Warm Zone.

Appendix F

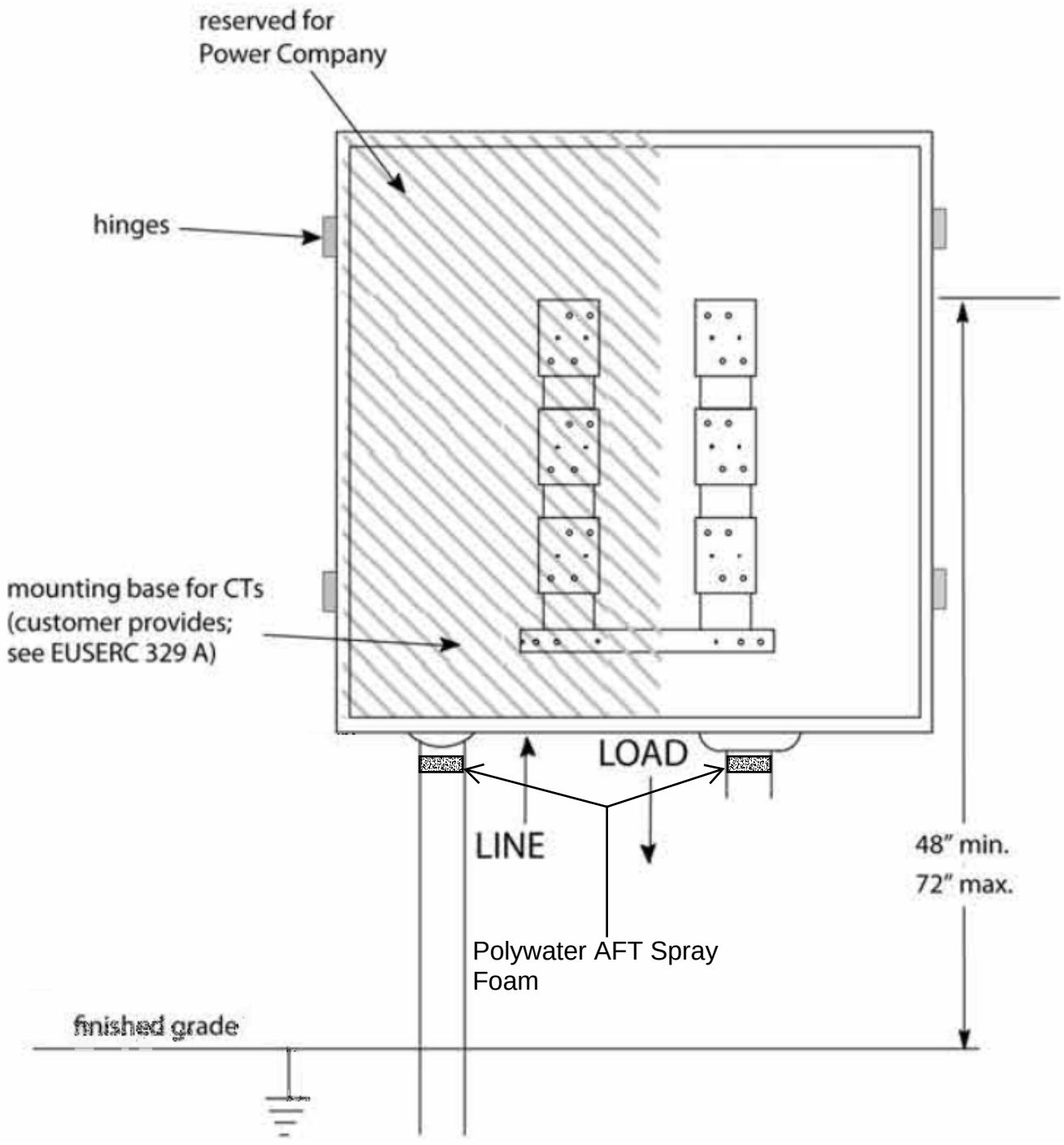
Contractor Incident/Accident Report Form

APPENDIX D
Utility Conduit Plug Diagrams and Product Sheet

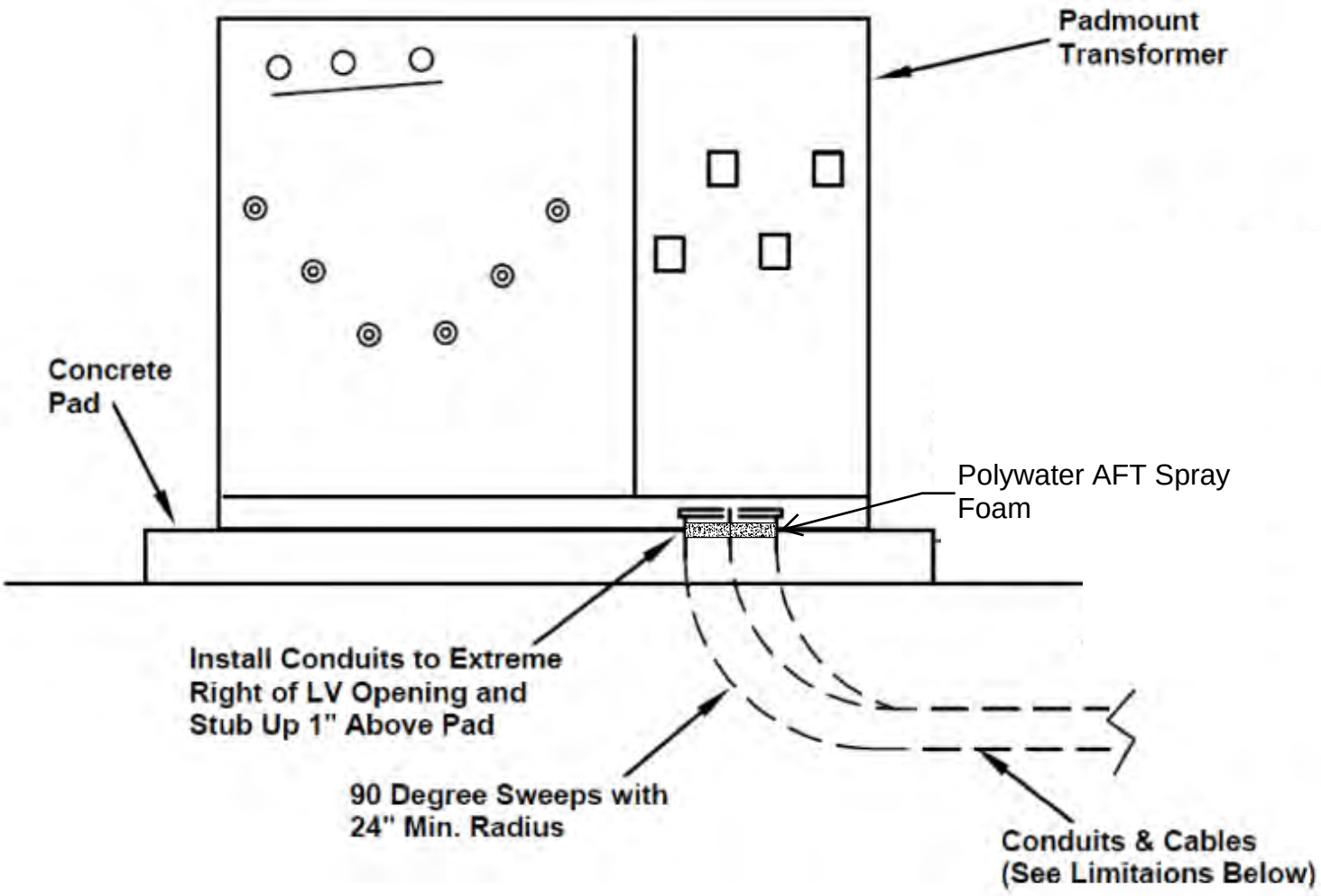
30 AMP/50 AMP Typical Electrical Box



CT Can Detail



Typical Pad Mounted Transformer



Polywater®
Solutions at work.

TECHNICAL DATA SHEET

POLYWATER® AFT™ FOAM SEALANT

polywater.com

DESCRIPTION

Polywater® AFT™ Sealant blocks water and gas in electrical and telecommunication environments. The two-part, closed-cell AFT Sealant is durable and has excellent adhesion to a variety of conduits.

AFT seals conduits with quick, easy installation. The two-part aerosol seals any size void and cures without additional moisture or exposure to air. AFT expands and cures to a rigid, closed-cell structure in minutes, creating an airtight, watertight seal. AFT protects from insects, rodents, moisture, dust, and gases. The package is reusable, and the seal is fire retardant.

SEAL STRENGTH

AFT Sealant is an excellent water block. A hydrostatic test is used to determine water blocking performance. AFT is installed into a conduit according to standard procedure. Water is added to the system and then pressurized to create a “water head” for 24 hours. The seal passes if there is no leakage observed.

CONDUIT	WATER HEAD	RESULT
PVC	11 feet (3.4 m)	Pass
Rigid Steel	6 feet (1.8 m)	Pass

AFT Sealant seals out manhole gases. To test air pressure performance, AFT is installed into a conduit according to standard procedure. Conduit is then pressurized with air using a regulator to monitor pressure. Seal passes if there is no leakage for a test duration of 48 hours.

CONDUIT	AIR PRESSURE	RESULT
PVC	2 psi (0.14 bar)	Pass

Convenient AFT package creates a reliable seal.

PRODUCT FEATURES

- Easy Installation—2 minute or shorter application time.
- Durable—Withstands cold temperature applications.
- Multiple-Use Can—Good for several seals in all types of ducts and openings.
- Removable—Remove if needed to replace cable.
- Reliable—Holds 11 feet (3.4 m) continuous water head pressure.

STANDARDS

- Complies with 2020 NEC Articles 225.27, 230.8, 300.5(G) and 300.7(A) 300.50(F) on Raceway Seals
- Complies with TIA-758-B Standard 5.1.1.2.8, 5.4.2.3 and 7.4.2.8.1

APPROVALS

UL Recognized
Passes UL94
Class HBF fire retardant rating

COMPONENT PHYSICAL PROPERTIES

AFT Sealant is a two-part, urethane foam. The liquid Parts A and B are mixed using a unique actuator and nozzle aerosol design.

PROPERTY	PART A	PART B
Color	Amber/brown	Dark purple
Form	Liquid	Liquid
VOC	0 g/L	0 g/L

CURED RESIN PROPERTIES

AFT Sealant cures to solid, closed-cell foam.

PROPERTY	RESULT
Appearance	Light purple color with small, even cells
Density	2.5 lb/ft^3 (0.1 g/cm^3)
Moisture Absorption (ASTM D2842)	<4%
Compressive Strength (ASTM D1621)	25 psi (0.17 N/mm^2)
Tensile Strength (ASTM D1623)	97 psi (0.67 N/mm^2)
Seal Strength – Water	11 ft (3.4 m)
Seal Strength – Air	2 psi (0.14 bar)

SEAL TIGHTNESS

AFT does not allow the passage of gas. AFT is installed using standard procedure. Conduit type and wire fill as noted. A manometer was used to measure air pressure.

CONDITION	RESULT
4-inch PVC, 10 - 2/0 AL XHHW Wires	Pass Holds 0.007 cfh (0.2 lph)
1-inch PVC, 10 – 14 AWG THHN Wires	Pass Holds 0.007 cfh (0.2 lph)

Seal tightness testing is based on UL 1203 Section 88, Leakage of Sealing Fitting Test.

CABLE PULLOUT TESTING

AFT adheres to cable jacket, creating a strong seal measured by cable pullout strength.

CABLE JACKET	AVERAGE PULLOUT FORCE/CABLE SURFACE
MDPE	320 Lb$_f$/in^2 (2.2 N/mm^2)
XLPE	180 Lb$_f$/in^2 (1.2 N/mm^2)
Nylon (THHN)	150 Lb$_f$/in^2 (1.0 N/mm^2)

A standard application of AFT is used to seal cable into conduit. Force to pull out each cable is measured.

CABLE COMPATIBILITY

AFT Sealant is compatible with common cable jacket materials. The cured foam is an inert solid that does not affect cable components.

ENVIRONMENTAL RESISTANCE

AFT Sealant withstands the rigors of the conduit exposure environment.

In Service Temperature Use Range

-20°F to 200°F (-30°C to 95°C)

AFT Sealant does not lose function in direct sunlight. Reacted foam that is exposed to UV will yellow. This discoloration does not affect performance. The foam seal retains its hardness and continues to act as a duct block.

The foam sealant can be protected with a weather proofing paint. Both urethane and epoxy-based products have been tested with good results and excellent adhesion to the foam.

CHEMICAL RESISTANCE

AFT Sealant is chemically resistant to gasoline, oils, dilute acids and bases, and most unsaturated hydrocarbons.

Cured AFT cubes were soaked in chemical for 14 days. After soaking, cubes were cleaned, rinsed, and dried at 70°F(21°C) for 48 hours. Cube compression strength was measured in triplicate according to ASTM D1621. Compression strength was compared to unaged control as noted.

CHEMICAL EXPOSURE	Δ% STRENGTH	RESULT
Methane Gas	104	Good
Bleach, 6.0%	98	Good
Hydrogen Peroxide	95	Good
Dielectric Fluid	90	Good
Sodium Hydroxide (1N)	98	Good
Sulfuric Acid (1N)	97	Good
Mineral Oil	94	Good
Gasoline	83	Fair

APPLICATION

Quick Installation
To install AFT, insert dam about 6 inches into the conduit. Shake can for 60 seconds to mix. Lift hinge and insert dispensing nozzle so that it lines up with hinge arrow. Invert can and insert nozzle into the seal space. Squeeze hinge to spray sealant between cables.

The hinge must be fully depressed and foam should be a uniform color.

Fill conduit three-fourths full. Place a dam on the outside of conduit to allow the foam to fully expand around all the cables and fully fill the conduit. It takes about 2 to 3 minutes for foam to fully rise.

Application Temperature
Working temperature for Polywater AFT Sealant is 45°F to 95°F (4°C to 35°C).

Water in Duct
AFT Sealant will cure and seal duct with damp surfaces. Water should not be flowing and should be relatively clean. Any excess water will weaken the seal.

For full installation information, please see AFT use instructions. *(www.polywater.com/AFT-INSTRUCTIONS.pdf)*

CURE RATE

The AFT Sealant can be used in temperatures down to 45°F (4°C). At lower temperatures, the reaction slows, but the sealant will completely foam and cure with time. AFT foam expands two times its volume as it is dispensed. Full expansion is complete in under 2 minutes at 70°F (21°C). It will take 3 to 5 minutes to be tack free. During this time, do not move cables or touch foam.

CLEAN-UP

Any unreacted material may be cleaned from surfaces with a solvent wipe such as Polywater's Type HP™ Cleaner/Degreaser. The part A amber resin will react with water if surfaces are washed with a soap and water solution. Once reacted, the foam has strong adhesion, and may be scraped or cut from surface.

REENTERABLITY AND REMOVAL

AFT Sealant can be mechanically removed with some effort. Use a long screwdriver to carve out pieces of the cured seal. Use care around existing cables.

TROUBLE SHOOTING

AFT Sealant should be an even, light purple color. If foam is coming out cream or dark purple, it is not properly mixed. Be sure to hold the can upside down and firmly press the hinge applicator. These are the two most common application issues. If the foam is not properly mixed, remove and reinstall.

STORAGE AND HANDLING

Protect can from sunlight. Do not expose the cartridge to temperatures exceeding 122°F (50°C). Do not spray near an open flame or other ignition source. Do not pierce or burn can, even after use.

Product shelf life is 12 months. Cartridge can be used for one month after the product is opened.

SAFETY

AFT Sealant is a two-part urethane foam containing reactive chemicals. Polyurethanes are common in the construction industry and have been used for many years. Some individuals may become sensitized to components in the unreacted resin. Precautions must be observed during use and handling of these materials.

Once reacted, the foam is solid, closed-cell polyurethane. The finished product is non-toxic. See SDS for more information.

Combustion of Cured Foam

Irritating and toxic smoke and vapors may form during combustion of cured AFT Foam Sealant. If burning the sealant material cannot be avoided, provide appropriate ventilation/respiratory protection against decomposition products during flame cutting operations.

MODEL SPECIFICATION

The statement below may be inserted into a customer specification to help maintain engineering standards and ensure work integrity.

Duct sealant shall be Polywater AFT™ Foam Sealant. Duct sealant shall be a 2-part, closed-cell urethane foam. It shall expand and set in 5-8 minutes at 70°F (21°C). It shall be capable of sealing 3/4" to 10" (20 mm to 250 mm) conduits with multiple cable configurations. Duct sealant shall be reenterable. It shall be capable of withstanding temperatures from -20°F to 200°F (-29°C to 93°C); and be chemically resistant to gasoline, oils, dilute acids, and bases. Duct sealant shall not affect the physical or electrical properties of wire and cable.

Duct sealant shall have good adhesion to duct and cable jacket surfaces with good structural strength. It shall have 25 psi (170 kPa) compressive strength (ASTM D1621). It shall have less than 4% water absorption (ASTM D2842). Duct sealant shall be capable of holding 11 ft. (0.33 bar) waterhead pressure continuous. It shall meet NEC codes for raceway seals, meet UL 94 fire rating HBF, and be UL recognized.

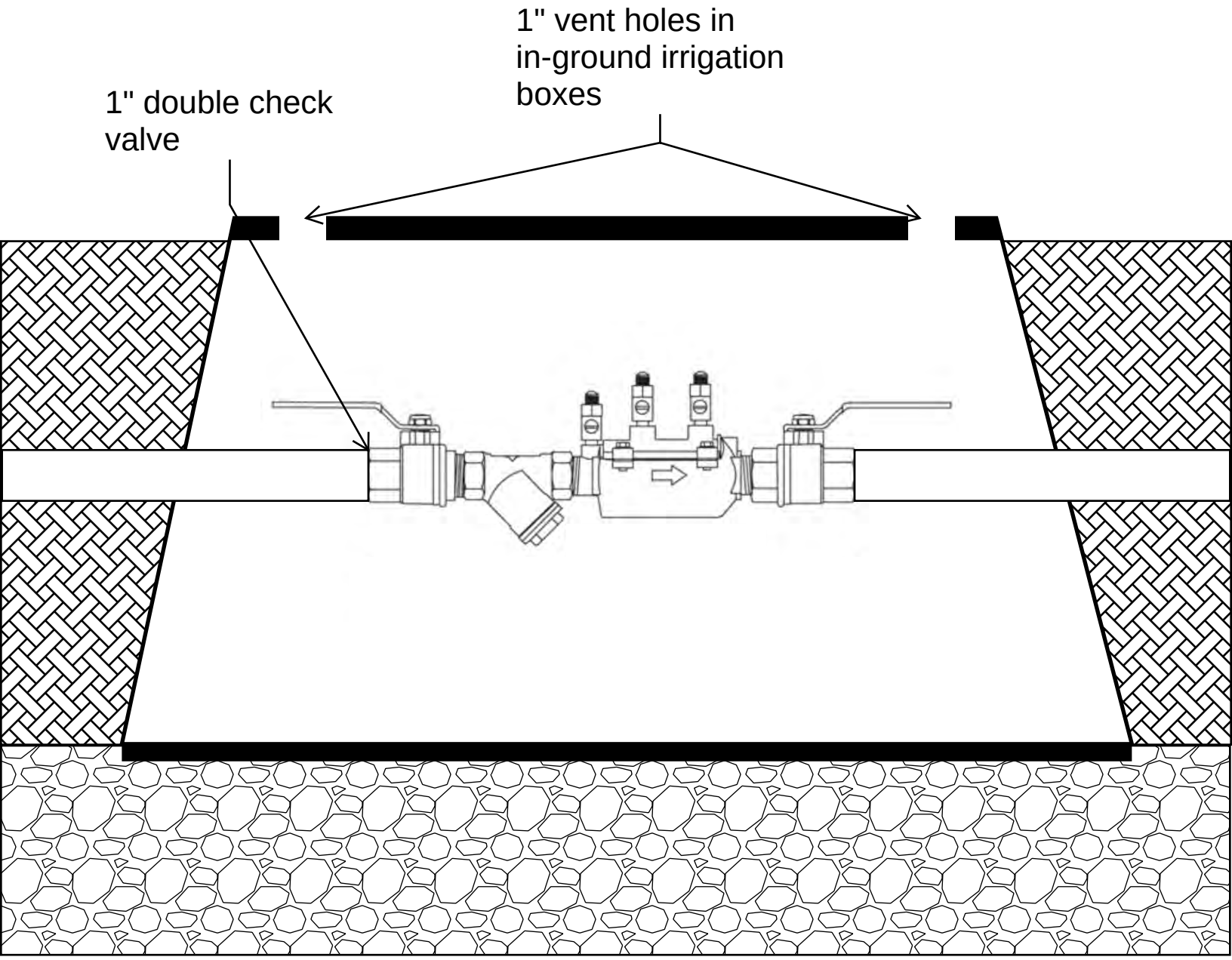
ORDER INFORMATION

CAT #	PACKAGE DESCRIPTION
AFT-16P4	1 – 16 oz. can; 2 – actuators (4 Units/Case)
AFT-16	1 – 16 oz. can; 2 – actuators (15 Units/Case)
AFT-SAE10	10-pack of actuators with standard extension tube (1 Unit/Case)
AFT-FAE10	10-pack of actuators with flexible extension tube (1 Unit/Case)

CONTACT US

+1-651-430-2270 Main | Europe, Middle East, North Africa +31 10 233 0578 | email: support@polywater.com

Venting at Double Check Valve



APPENDIX E
Protective Cap Materials Specifications

GEOTEX® Woven

Product Data

GEOTEX® 200ST

GEOTEX® 200ST is a woven polypropylene geotextile containing heavy woven flat tape yarns and will meet the following Minimum Average Roll Values (MARV) when tested in accordance with the methods listed below. These characteristics make GEOTEX® 200ST ideal for the construction of embankments over soft soils, steepened slopes, and modular block and/or wrapped-face retaining walls. The geotextile is resistant to ultraviolet degradation and to biological and chemical environments normally found in soils.

GEOTEX® 200ST conforms to the property values listed below[1]. Propex performs internal Manufacturing Quality Control (MQC) tests that have been accredited by the Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP). This product is NTPEP tested for AASHTO standards.

		MARV[2]	
PROPERTY	TEST METHOD	ENGLISH	METRIC
MECHANICAL			
Grab Tensile Strength	ASTM D-4632	200 lbs	890 N
Grab Elongation	ASTM D-4632	15%	15%
CBR Puncture	ASTM D-6241	700 lbs	3114 N
Trapezoidal Tear	ASTM D-4533	75 lbs	334 N
ENDURANCE			
UV Resistance at 500 hrs	ASTM D-4355	70%	70%
HYDRAULIC			
Apparent Opening Size (AOS)[3]	ASTM D-4751	40 US Std. Sieve	0.425 mm
Permittivity	ASTM D-4491	0.05 sec^{-1}	0.05 sec^{-1}
Water Flow Rate	ASTM D-4491	4 gpm/ft^2	163 $l/min/m^2$
ROLL SIZES[4]		12.5 ft x 432 ft 15.0 ft x 360 ft 17.5 ft x 309 ft	3.81 m x 131.7 m 4.57 m x 109.7 m 5.33 m x 94.2 m

NOTES:

1. The property values listed above are effective 12/17/2018 and are subject to change without notice.
2. Values shown are in weaker principal direction. Minimum average roll values (MARV) are calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any samples taken from quality assurance testing will exceed the value reported. Values represent testing at time of manufacture.
3. Maximum average roll value.
4. Contact your local Territory Business Manager (TBM) for custom widths and colors. Lead times may vary depending on customer requirements and volume requested.

Propex® GEOSOLUTIONS

ENGINEERED EARTH SOLUTIONS™

www.propexglobal.com

Propex Operating Company, LLC · 4019 Industry Drive Chattanooga, TN 37416 · ph 800 621 1273 · ph 423 855 1466

StrataTex Geotextile Product Data Sheet

SW-200
4.0 oz Woven Geotextile

STRATA woven geotextile fabrics are woven polypropylene materials offering optimum performance when used in stabilization applications. Produced from first quality raw materials, they provide the perfect balance of strength and separation in styles capable of functioning exceptionally well in a wide range of performance requirements. Unless indicated below, all listed properties are Minimum Average Roll Values:

PROPERTY	TEST METHOD	UNIT	M.A.R.V. (Minimum Average Roll Value)
Weight (Typical)	ASTM D 5261	oz/yd^2 (g/m^2)	4.0 (136)
Grab Tensile	ASTM D 4632	lbs (kN)	200 (0.9)
Grab Elongation	ASTM D 4632	%	15
Trapezoid Tear Strength	ASTM D 4533	lbs (kN)	75 (0.33)
CBR Puncture Resistance	ASTM D 6241	lbs (kN)	700 (3.12)
Permittivity*	ASTM D 4491	sec^{-1}	.05
Water Flow*	ASTM D 4491	gpm/sf (l/min/sm)	5 (203)
AOS*	ASTM D 4751	US Sieve (mm)	40 (.43)
UV Resistance	ASTM D 4355	%/hrs	70/500

* At the time of manufacturing. Handling, storage and shipping may change these properties.

PACKAGING	
Roll Dimensions (W x L) – Feet	12.5 x 432 / 17.5 x 309
Square Yards Per Roll	600
Estimated Roll Weight - Lbs	190

This information is provided for reference purposes only and is not intended as a warranty or guarantee. STRATA assumes no liability in connection with the use of this information.

STRATA

Strata Systems, Inc.
380 Dahlonega Rd., Suite 200
Cumming, GA 30040
(770)888-6688 • (800)680-7750 • (770)888-6680 fax
Email: strata@geogrid.com Website: www.geogrid.com

Made in U.S.A.

Landis & Landis Construction

P.O. 50, Marylhurst, OR 97036
Phone: (503) 466-9043 Fax: (503) 213-5964

Aggregate ¾-0” & 1-1/2-0” Fill & Base Rock Submittal

Attention:	Engineering –
Today’s Date:	April 25, 2024
Contractor:	Landis & Landis Construction
Owner:	City of Portland
Project Title:	TASS 2 Alt 6 Project
Work Location Boarders:	Portland, Oregon

Landis & Landis Construction is submitting on Knife River Angell Quarry ¾-0” and 1-1/2-0” aggregate for pipe zone backfill, manholes backfill around pipe zone, structural fill, & base aggregate for curbs and asphalt.

Cody Carpenter
Landis & Landis Construction

KNIFE RIVER

Statistical Analysis 11/09/2023 - 11/09/2023 Acceptance
Knife River Corporation 242010-Angell Agg B00340009-3/4"-0 Base ODOT

Sample Id	Date	1" (%)	3/4" (%)	1/2" (%)	3/8" (%)	1/4" (%)	#4 (%)	#5 (%)	#6 (%)	#8 (%)	#10 (%)	PAN (%)	SE (%)	2.0mm/6.3mm
66305691/23b-1173	11/09/2023 10:15	100	99	79	67	52	43	38	33	25	23	0.0	50	0.44
		1" (%)	3/4" (%)	1/2" (%)	3/8" (%)	1/4" (%)	#4 (%)	#5 (%)	#6 (%)	#8 (%)	#10 (%)	PAN (%)	SE (%)	2.0mm/6.3mm
	Count	1	1	1	1	1	1	1	1	1	1	1	1	1
	Mean	100	99	79	67	52	43	38	33	25	23	0.0	50	0.44
	St Dev													
	Pay Factor													
	Lower Spec (LSL)	100	90		55	40							30	0.4
	Upper Spec (USL)	100	100		75	60								0.6

Query

Query Selections
Date Created 11/10/2023
Date Range 11/09/2023 - 11/09/2023
Plant 242010-Angell Agg
Product B00340009-3/4"-0 Base ODOT
Specification ODOT Base Dense 3/4 "
Limit Auto-Compute
Acceptance
Number Of Tests 30

Passing: 1
Failures: 0
Conformance: 100.0 %
Non-Conformance: 0.0 %

KNIFE RIVER

Statistical Analysis 10/20/2023 - 10/27/2023 Acceptance
Knife River Corporation 242010-Angell Agg B01120009-1 1/2" - 0 Base ODOT

Sample Id	Date	2" (%)	1 1/2" (%)	1" (%)	3/4" (%)	3/8" (%)	1/4" (%)	#4 (%)	#10 (%)	PAN (%)	SE (%)	2.0mm/6.3mm
60626588/23B-1124	10/20/2023 10:20	100	100	89	71	47	38	31	17	0.0	57	0.45
54859368/23B-1132	10/24/2023 08:40	100	100	90	72	50	40	33	17	0.0	58	0.42
65462720/23B-1133	10/25/2023 08:40	100	100	89	72	47	37	30	16	0.0	44	0.43
51889307/23A-1138	10/26/2023 08:30	100	98	89	75	51	40	33	20	0.0	35	0.50
65034264/23B-1143	10/27/2023 08:25	100	100	89	75	49	38	32	18	0.0	39	0.47

	2" (%)	1 1/2" (%)	1" (%)	3/4" (%)	3/8" (%)	1/4" (%)	#4 (%)	#10 (%)	PAN (%)	SE (%)	2.0mm/6.3mm
Count	5	5	5	5	5	5	5	5	5	5	5
Mean	100	100	89	73	49	39	32	18	0.0	47	0.45
St Dev	0.0	0.9	0.4	1.9	1.8	1.3	1.3	1.5	0.00	10.5	0.032
Pay Factor	1.05	1.05		1.02		1.05				1.04	1.04
Lower Spec (LSL)	100	95		55		35				30	0.4
Upper Spec (USL)	100	100		75		50					0.6

Query

Query Selections
Date Created 10/30/2023
Date Range 10/20/2023 - 10/29/2023
Plant 242010-Angell Agg
Product B01120009-1 1/2" - 0 Base ODOT
Specification ODOT Base Dense 1 1/2 "
Limit Auto-Compute
Acceptance
Number Of Tests 30

Passing: 5
Failures: 0
Conformance: 100.0 %
Non-Conformance: 0.0 %

APPENDIX F
Monitoring and Inspection Forms

Cap Inspection Plan

TASS 2 Facility

INSPECTION DATE

WEATHER

INSPECTOR'S NAME AND TITLE

INSPECTOR'S NAME AND TITLE

Criteria		Yes	No	
1. Land Use				
A. Has any unauthorized use or activity taken place on or adjacent to the capped area?				
If yes:	Identify the use or activity			
	Identify the current or potential impact			
2. Vegetation				
A. Is vegetation degrading the integrity of the cap?				
If yes:	Identify the extent of the damage			
	Identify the recommended corrective action			
B. Is vegetation hindering a through inspection of the cap?				
If yes:	Identify recommended correction action			
3. Cap Integrity				
A. Any cracks or penetrations of the cap observed?				
If yes:	Identify the cause of the disturbance			
	Identify the extent of the damage			
	Identify the recommended corrective action			
B. Has the underlying material reached the surface?				
If yes:	Identify the extent of the damage			
	Identify the recommended corrective action			
C. Is there any disturbance adjacent to the cap that threatens cap integrity?				
If yes:	Identify the cause of the disturbance			
	Identify the extent of the damage			
	Identify the recommended corrective action			

Cap Inspection Plan

TASS 2 Facility

Criteria		Yes	No	
4. Prior Repairs				
A. Do any previous repair areas require additonal corrective action?				
If yes:	Identify the extent of the damage			
	Identify the recommended corrective action			

5. Photo Log

Spray paint or mark defiencies and photograph

Photograph overall view of capped area

Attach photos to this inspection form

6. Repairs

Document and photograph repairs

Attach photographs and any additional documentation to this inspection form

7. Notes

OPERATING PROCEDURE
West Property TASS 2 - Methane Monitoring

PURPOSE

The purpose of this Operating Procedure is to provide City of Portland Bureau of Environmental Services (BES) staff with a process to evaluate potential methane concentrations within temporary structures and enclosed spaces at the West Property - Temporary Alternative Shelter Site 2 (TASS 2). Methane was detected in the subsurface at TASS 2 at concentrations of up to 50 percent. Methane gas is typically generated by the decomposition of buried organic material and is of concern due to its potentially explosive properties.

SAFETY

Methane is a non-toxic compound that does not have established human-health-based screening levels. It can, however, pose a fire or explosion risk if present at concentrations between its lower explosive limit of 5 percent by volume (pbv) and its upper explosive limit of 15 pbv, and can act as a simple asphyxiant. Methane is odorless, colorless, and tasteless.

EQUIPMENT

- Landtec GEM 2000 or Similar Landfill Gas Monitor
- Five-foot long section of ¼-inch internal diameter nylon tubing
- Three-foot hollow wand with adapter for tubing attachment
- Methane Monitoring Sheet with Site Plan

MONITORING PROCEDURE

- Calibrate the gas-monitoring instrument according to the manufacturer's instructions. If the instrument is being borrowed or rented and another party is performing the calibration, ensure that the unit has been calibrated within the previous 48 hours. Document the instrument and calibration information on the Methane Monitoring Sheet, including the make and model of the instrument and the date of calibration.
- Proceed to the project location and obtain and record the current barometric pressure. This is typically displayed on the gas-monitoring instrument. If an instrument without this feature is being used, the Portland office of the National Oceanic and Atmospheric Association can be contacted at (503) 261-9246 for this information. Record the current weather conditions as well.
- Consult the Methane Monitoring and attached site map to locate prescribed monitoring locations.
- Attach a five-foot length of ¼-inch internal diameter nylon tubing and hollow wand to the inlet hose of the gas-monitoring instrument. This wand facilitates positioning the intake at difficult to reach locations.
- Turn the instrument on and activate the intake pump. Set the unit to display methane as percent of the lower explosive limit (to allow the unit to register the smallest concentration).
- Position the tip of the wand at the designated sampling point or point of interest. Continue to hold the wand tip in place for 15 seconds, allowing the gas to travel the length of the wand and intake tubing and be analyzed by the instrument. Record the maximum methane concentration that the instrument registered on the Methane Monitoring Sheet.

REPORTING

Use of this procedure and a summary of the screening results should be recorded on the TASS 2 Methane Monitoring Form. If methane is detected at concentrations equal to or greater than 0.5 pbv at any monitoring location, BES must be notified immediately.

REFERENCE DOCUMENTS

Bureau of Environmental Services. *Field Operations – Standard Operating Procedure No. 1.07a, Field Measurement of Methane,* dated 20 May 2003.

Haley & Aldrich, Inc. *Draft Remedial Action Plan, West Property – TASS 2 Site, 10505 North Portland Road, Portland, Oregon*, dated 19 July 2024.

TASS 2 – Methane Monitoring Form

Person Conducting Monitoring: _____

Date: _____

Equipment Used: _____

Calibration Date: _____

Evidence of Cracks or Other Penetrations of Protective Cap?[1] _____

_____

Location Number[2]	Location Description	Time	Temperature (°F)	Barometric Pressure (Atm)	Methane (pbv)	Oxygen (pbv)	Carbon Dioxide (pbv)
1	Kitchen						
2	Hygiene #1						
3	Hygiene #2						
4	Office						
5	Irrigation Box						
6	Transformer #1						
7	Transformer #2						
8	Transformer #3						
9	Transformer #4						
10	Transformer #5						
11	Sleeping Pod (if unoccupied)						
12	Sleeping Pod (if unoccupied)						
13	Sleeping Pod (if unoccupied)						

1. If cracks or other penetrations of the protective cap are observed, document location(s) on the attached site plan, obtain photographic documentation, and notify BES personnel.
2. See attached site plan for monitoring locations

°F: degrees Fahrenheit
Atm: atmospheres
pbv: percent by volume

TASS 2 – Methane Monitoring Form

Location Number[2]	Location Description	Time	Temperature (°F)	Barometric Pressure (Atm)	Methane (pbv)	Oxygen (pbv)	Carbon Dioxide (pbv)
14	Under Pod						
15	Under Pod						
16	Under Pod						
17	Under Pod						
18	Under Pod						
19	Under Pod						
20	Under RV						
21	Under RV						
22	Under RV						
23	Under RV						
24	Under RV						
25	Under RV						
26	Under RV						
27	Under RV						
28	Under RV						
29	Ambient Air						
30	Ambient Air						
31	Ambient Air						
32	Ambient Air						
33	Ambient Air						
34	Ambient Air						

2. See attached site plan for monitoring locations

°F: degrees Fahrenheit

Atm: atmospheres

pbv: percent by volume

TASS 2 – Methane Monitoring Form

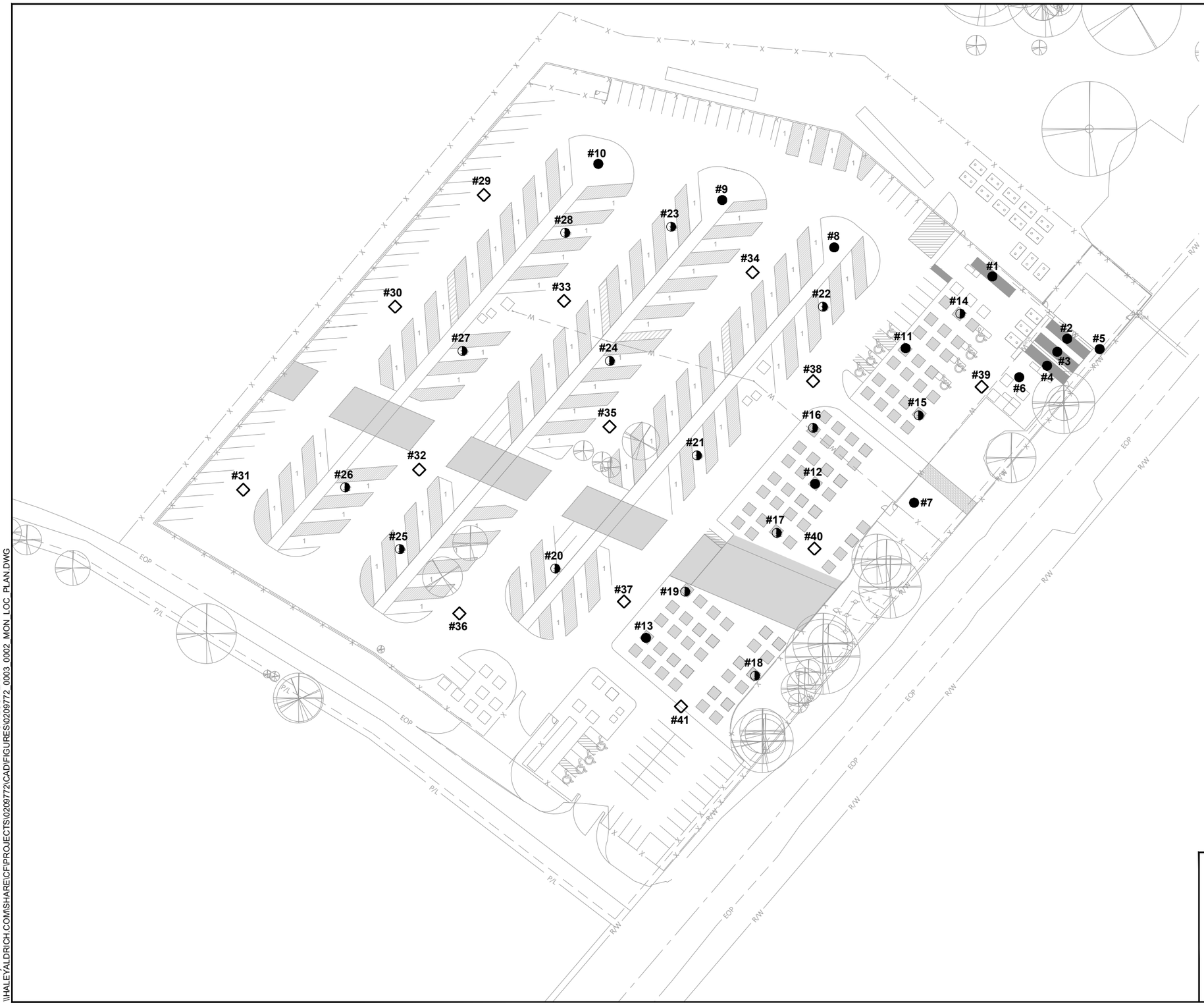
Location Number[2]	Location Description	Time	Temperature (°F)	Barometric Pressure (Atm)	Methane (pbv)	Oxygen (pbv)	Carbon Dioxide (pbv)
35	Ambient Air						
36	Ambient Air						
37	Ambient Air						
38	Ambient Air						
39	Ambient Air						
40	Ambient Air						
41	Ambient Air						
	Additional Sleeping Pod (if unoccupied)						
	Additional Sleeping Pod (if unoccupied)						
	Additional Sleeping Pod (if unoccupied)						
	Additional Sleeping Pod (if unoccupied)						
	Additional Sleeping Pod (if unoccupied)						
	Additional Sleeping Pod (if unoccupied)						

2. See attached site plan for monitoring locations

°F: degrees Fahrenheit

Atm: atmospheres

pbv: percent by volume



LEGEND

#1 ●	INTERIOR OR UTILITY VAULT MONITORING POINT (SEE NOTE 1)
#14 ◑	UNDER-POD/UNDER-RV MONITORING POINT
#29 ◇	AMBIENT AIR MONITORING POINT

NOTES

1. INTERIOR MONITORING OF PODS SHOULD ONLY BE CONDUCTED OF UNOCCUPIED PODS, AND THE INTERIOR POD MONITORING LOCATIONS (LOCATIONS #11 THROUGH #13) ARE SHOWN FOR EXAMPLE PURPOSES ONLY. ACTUAL LOCATIONS WILL CHANGE BASED ON OCCUPANCY DURING ANY GIVEN MONITORING EVENT. THIS SITE PLAN SHOULD BE MODIFIED TO SHOW UNOCCUPIED POD LOCATIONS MONITORED DURING EACH MONITORING EVENT, IF AVAILABLE. FIELD REPRESENTATIVE SHOULD ATTEMPT TO ACCESS EACH UNOCCUPIED POD, IF AVAILABLE, AT THE TIME OF MONITORING.
2. BASE PLAN TAKEN FROM AN ELECTRONIC FILE TITLED "COP TASS 2 - DEVELOPMENT REVIEW SET_CONST SET_7.31.24.dwg", PROVIDED BY THE CITY OF PORTLAND ON 13 AUGUST 2024.

N

0 80 160

SCALE IN FEET

HALEY ALDRICH

WEST PROPERTY - TASS 2
10505 N PORTLAND ROAD
PORTLAND, OREGON 97203

PROPOSED MONITORING LOCATIONS

SCALE: AS SHOWN
AUGUST 2024

FIGURE 2

Saved by: DTE Printed: 8/14/2024 1:21 PM Sheet: MON LOC PLAN
\\HALEYALDRICH.COM\SHARE\CF\PROJECTS\0209772\CAD\FIGURES\0209772_0003_0002_MON_LOC_PLAN.DWG