



## **REMEDIAL INVESTIGATION REPORT**

Fred Meyer Stores, Inc. - Port Orchard Site  
1900 SE Sedgewick Road  
Port Orchard, Washington  
Ecology Site ID #96424236 (formerly J5E03)

Submitted to:

Washington Department of Ecology  
Northwest Regional Office - Voluntary Cleanup Program  
3190 160<sup>th</sup> Avenue SE  
Bellevue, Washington 98008

Submitted by:

AMEC Earth & Environmental, Inc.  
7376 SW Durham Road  
Portland, Oregon 97224

9-61M-102820

May 2010

May 4, 2010

9-61M-102820

Mr. Russ Olsen, MPA  
Voluntary Cleanup Program Unit Manager  
State of Washington Department of Ecology, NW Regional Office  
3190 160<sup>th</sup> Avenue SE  
Bellevue, Washington 98008

Dear Mr. Olsen:

**Re: Remedial Investigation Report  
Fred Meyer Stores, Inc. - Port Orchard Site  
1900 SE Sedgewick Road  
Port Orchard, Washington  
Ecology Site ID #96424236 (formerly J5E03)**

On behalf of Fred Meyer Stores, Inc. (Fred Meyer), AMEC Earth & Environmental, Inc. (AMEC) has prepared this Remedial Investigation (RI) Report for the above-referenced Port Orchard property (Site). This report has been prepared to:

- Document previous investigations and remedial efforts conducted at the Site;
- Describe the nature and extent of petroleum hydrocarbons and volatile organic compounds (VOCs) present in soil and groundwater at the Site; and
- Evaluate the potential risk to human health and the environment due to remaining constituents in Site soil and groundwater.

The following general conclusions are based upon AMEC's review of available historical soil and groundwater investigation datasets, evaluation of the current Site conditions, and conceptual Site model (CSM) exposure pathway assessment:

- The source of petroleum hydrocarbon (gasoline) impacts to groundwater and soil discovered in 1990 by Ecology are attributed to an underground storage tank (UST) system release associated with the former Texaco service station located at the Site. Gasoline-related compounds were detected in private domestic wells located up to approximately 480 feet downgradient from the Site.
- Subsequent remedial investigations adequately characterized the nature and extent of the release and indicated gasoline range organics (GRO) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were the primary constituents present in Site soil and groundwater.
- In 1999, Fred Meyer purchased the Site and entered into an agreement with Ecology to complete the Remedial Investigation/Feasibility Study (RI/FS) and achieve regulatory closure.



- Interim remedial actions conducted at the site since 1995, including the operation of a free product recovery system and two separate air-sparge/soil-vapor-extraction (AS/SVE) systems, have successfully removed free product from the Site and substantially reduced the extent and magnitude of subsurface contamination caused by the former Texaco service station release.
- Current and reasonably likely future land use at the property is commercial/industrial, although it is possible that future use could involve redevelopment of the property as a residential property. Potential receptors include on-property occupational workers and construction/excavation workers involved with landscaping, maintenance, construction, or excavation activities, or potentially residential receptors should the property be redeveloped.
- Ecology's Model Toxics Control Act (MTCA) Method A cleanup levels for soil and groundwater were selected to be protective of drinking water beneficial uses and direct contact with affected soil or leaching of COPCs from soil to groundwater. Continued operation of the AS/SVE system is recommended until concentrations of COPCs remaining in the groundwater plume beneath the Site and residual concentrations of COPCs in soil beneath the property are reduced to levels within the MTCA Method A cleanup levels.

Sincerely,

**AMEC Earth & Environmental, Inc.**



William H. Collins, RG, LHG  
Project Hydrogeologist



Kurt Harrington, PE, PMP  
Project Manager

Attachments

WHC/JKH/Im

c: Daniel Hermann, Fred Meyer Stores, Inc.

**Table of Contents**

	<b><u>Page</u></b>
1.0 INTRODUCTION.....	1
1.1 Site Background .....	1
1.2 Remedial Investigation Objectives .....	2
1.3 General Site Information.....	3
1.4 Report Organization .....	4
2.0 STUDY AREA CONDITIONS.....	5
2.1 Regional Physiography and Geology .....	5
2.2 Hydrogeology .....	6
2.2.1 Regional Hydrogeology .....	6
2.2.2 Local Hydrogeology .....	7
2.3 Surface Water and Sediment .....	7
2.4 Air .....	7
2.5 Natural Resources and Ecology .....	8
2.6 Hazardous Substance Sources .....	8
2.7 Regulatory Classifications .....	9
3.0 SITE AREA CONDITIONS .....	9
3.1 Groundwater Contamination Assessment, Washington Department of Ecology (Ecology, 1991) .....	11
3.2 Remediation - Progress Report Summary, Washington State Department of Ecology (Ecology, 1998).....	12
3.3 Phase I and Limited Phase II Environmental Site Assessments, GN Northern (GN Northern, 1998, 1999).....	13
3.4 Subsurface Exploration and Remediation System Installation Report, AMEC Earth & Environmental, Inc. (AMEC, 2000a) .....	14
3.5 Restoration of Groundwater Monitoring Well Network and Remediation System, and Fourth Quarter 2008 Monitoring Results, AMEC Earth & Environmental, Inc. (AMEC, 2009).....	17
3.6 Additional Groundwater Sampling and Analysis.....	21
3.7 Summary of Nature and Extent of Contamination .....	22
3.8 Quality Assurance .....	24
4.0 POTENTIAL RISKS TO HUMAN HEALTH, NATURAL RESOURCES, AND ECOLOGICAL RECEPTORS.....	24
4.1 Conceptual Site Model .....	24
4.1.1 Hazardous Substances.....	25
4.1.2 Contaminant Sources .....	25
4.1.3 Potentially Contaminated Media .....	25
4.1.4 Conceptual Model Summary .....	26
4.1.5 Exposure Assessment, Cleanup Levels and Points of Compliance .....	26
4.2 Terrestrial Ecological Evaluation .....	28
5.0 CONCLUSIONS AND RECOMMENDATIONS .....	28
REFERENCES.....	31
LIMITATIONS.....	36

### **List of Tables**

Table 1	Site Monitoring Well Construction Summary
Table 2	Soil Analytical Results
Table 3	Groundwater Analytical Results
Table 4	Conceptual Site Model Summary

### **List of Figures**

Figure 1	Site Location Map
Figure 2	Site Plan and Site Features
Figure 3	Groundwater Elevations - January 22, 2010
Figure 4	Approximate Groundwater Plume Extent 1990-1993 GRO and BTEX
Figure 5	GRO and BTEX Concentrations in Soil 1990/1991
Figure 6	Approximate Groundwater Plume Extent 1998-2001 (GRO and BTEX) Select Values
Figure 7	GRO and BTEX Concentrations in Soil 1999
Figure 8	Approximate Groundwater Plume Extent 2008/2009 (GRO and BTEX) Select Values
Figure 9	GRO and BTEX Concentrations in Soil 2008
Figure 10	Approximate Groundwater Plume Extent 2009/2010 (GRO and BTEX)

### **List of Appendices**

Appendix A	Well Logs
Appendix B	Soil Analytical Results
Appendix C	Groundwater Analytical Results
Appendix D	Terrestrial Ecological Evaluation

## 1.0 INTRODUCTION

This Remedial Investigation (RI) Report summarizes work performed by Fred Meyer Stores, Inc. (Fred Meyer) and others at the Fred Meyer-Port Orchard service station property located at 1900 SE Sedgewick Road in Port Orchard, Washington, shown in Figure 1. A leak from an underground storage tank (UST) system at a former Texaco-branded service station which operated at the property until 1988 is allegedly responsible for petroleum hydrocarbon impacts to soil and groundwater at the property and adjacent parcels located to the southwest. The property and the affected parcels to the west collectively comprise and are referred to as the Site. AMEC Earth & Environmental, Inc. (AMEC) is submitting this RI on behalf of Fred Meyer to the Washington State Department of Ecology (Ecology). This document is intended to fulfill Ecology's request for a remedial investigation deliverable dated February 26, 2010. Since October 2007 the Site has been assigned Ecology Facility-Site ID number 96424236 (previously J5E03). The Release ID number assigned by Ecology for the Site is 2555 (AMEC, 2010b).

### 1.1 Site Background

Site investigation and remediation efforts have been conducted since June 1990 to address gasoline-impacted soil and groundwater present at the Site. Efforts were prompted by a discovery in 1990 revealing gasoline-range petroleum hydrocarbon impacts in downgradient domestic drinking water wells located west and southwest of the property across Bethel Road S.E. Impacts are allegedly attributed to a leaking UST operated by Texaco, who previously owned the property (AMEC, 2009b). Benzene, toluene, ethylbenzene, and xylenes (BTEX) and gasoline-range organics (GRO) concentrations in soil and groundwater samples collected from the Site historically have exceeded Ecology's Model Toxics Control Act (MTCA) Method A cleanup levels. The most recent quarterly Site report summarizes historic concentrations of BTEX compounds and GRO detected groundwater beneath the Site, as well as subsurface remediation system performance data (AMEC, 2010b).

An on-Site remediation system including a light non-aqueous phase liquid (LNAPL) recovery system, an air-sparge/soil-vapor-extraction (AS/SVE) remediation system, an effluent soil vapor treatment unit, and a mechanism to inject hydrogen peroxide into shallow groundwater were installed and operated by Ecology from July 1995 through April 1998 (Ecology, 1998). Ecology reported the on-Site remediation system recovered a total of approximately 19 gallons of LNAPL and approximately 4,600 pounds of petroleum hydrocarbons. Active remediation efforts were ceased during 1998 once recoverable LNAPL was removed and the lateral extent of gasoline-impacted groundwater was limited to within the property boundaries (AMEC, 2009b).

Fred Meyer purchased the property in 1999 following Phase I and Phase II Environmental Site Assessments (ESAs) performed by GN Northern, Inc. of Kirkland, WA (GN Northern, 1998, 1999). Between 1999 and 2001, the property was redeveloped with a new Fred Meyer branded fueling station (referred to on construction documents as Pad C). Fred Meyer retained AMEC in 2000 to conduct additional Site characterization, indicating gasoline-impacted groundwater was still present beneath the western margins of the property and extended off property within the adjacent Bethel Road SE right-of-way (ROW). AMEC expanded the AS/SVE network in March 2000. The system was operated nearly continuously between March 2000 and June 2001. Additional monitoring wells were installed during this time to replace damaged or destroyed monitoring wells. The AS groundwater treatment system was inactivated in August 2002 as a result of damages incurred during construction of the Fred Meyer fueling station. The SVE system was operated at limited capacity after damage around June 2001 during expansion of the Bethel Road SE and SE Sedgewick Road ROWs adjacent to the property. During June 2006, further damage to the SVE systems above ground components resulted in the SVE being inactivated. By February 2009, the dual AS/SVE *in-situ* treatment systems had been rebuilt and reactivated. Approximately 1,119 lbs of petroleum hydrocarbons are estimated to have been removed from soil and groundwater beneath the Site since March 2000 (AMEC, 2010b). Quarterly groundwater monitoring has been conducted at Site wells since 2001 (references for individual quarterly Site reports are provided in References section).

Fourth Quarter 2009 groundwater monitoring results indicated GRO detections of 1,320 micrograms per liter ( $\mu\text{g/L}$ ) in monitoring well MW-103, exceeding the MTCA Method A cleanup level of 800  $\mu\text{g/L}$ . Constituents including ethylbenzene, total xylenes, isopropylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 4-isopropyltoluene, and n-butylbenzene were detected in groundwater samples collected from Site wells (AMEC, 2010b).

## 1.2 Remedial Investigation Objectives

Site investigations conducted to date were intended to:

- Delineate the horizontal and vertical extent of hydrocarbon impacts to soil and groundwater beneath the Site;
- Characterize the extent of petroleum impacts to groundwater located to the west of the property and underlying Bethel Road SE;
- Recover free product from Site monitoring wells; and
- Evaluate hydrocarbon constituents continuing to exceed MTCA Method A cleanup levels in soil and groundwater at the Site. Method A levels were selected since the

Site was subject to relatively routine cleanup actions based upon relatively few hazardous substances.

This RI is intended to comply with Washington Administrative Code (WAC) 173-340-350 in fulfilling the following objectives:

- Summarize previous investigations conducted by Fred Meyer and others at the Site to date, and
- Provide adequate Site characterization based on previous investigation results to support cleanup action alternative development and evaluation under WAC 173-340-360 through 173-340-390.

For the purposes of this report, remedial investigation efforts were conducted at the Site between 1999 and 2009. Interim remediation efforts previously were conducted by Ecology at the Site between 1991 and 1999; and by Fred Meyer between 2001 and 2006. In February 2009, AMEC on behalf of Fred Meyer, restored and reactivated the current *in-situ* remediation system.

### 1.3 General Site Information

Project Title: Remedial Investigation: Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Ecology Site ID #96424236

Project Coordinator: Name: Mr. Russ Olsen, MPA; State of Washington Department of Ecology; Voluntary Cleanup Program Unit Supervisor

Address: Northwest Regional Office, 3190 160th Avenue SE Bellevue, WA 98008

Phone number: (425) 649-7038

Facility Location: The property is located at 1900 SE Sedgewick Road at the southeast corner of the intersection of Sedgewick Road S.E. and Bethel Road S.E. in Port Orchard, Kitsap County, Washington 98366. The legal description for the property is: a portion of the Northwest Quarter of the Northwest Quarter of Section 12, Township 23 North, Range 1 East, Willamette Meridian. Figure 1 shows the approximate property location relative to surrounding properties and vicinity physical features.

The property is bounded to the south by the northwest entrance driveway to Fred Meyer, to the west of the Bethel Road SE ROW, to the north by the SE Sedgewick Road ROW, and to the east by the Fred Meyer store parking lot (Figure 2).

The Site extends from the current Fred Meyer property to the southwest across Bethel road and includes parcels including the Tripp and Petersen residential domestic drinking water supply wells. The approximate extent of the groundwater plume defining the Site is described in Figure 4.

The Site vicinity is characterized by residential and commercial properties, open fields, and wooded areas. A BP-branded gasoline service station (currently shut down) is located to the north across S.E. Sedgewick Road, and an operating Chevron-branded service station is located to the northwest across the intersection of S.E. Sedgewick Road and Bethel Road S.E.

Facility Dimensions: The former Texaco-branded service station property occupied an area of approximately 0.57 acres. The full extent of the Site, based on the approximate groundwater plume at the time of discovery during 1990, is estimated to occupy an area of approximately 3 acres. The current Fred Meyer-branded fueling station facility (Pad C) is located in the northwest corner of a larger Fred Meyer Store property.

Present Owner and Operator: The property is currently owned and operated by Fred Meyer.

Chronological listing of past owners and operators and operational history: Section 3 of this report presents a discussion of previous property owners and operators in addition to the operational history.

## 1.4 Report Organization

This report is organized by section:

- Section 1 - Introduction
- Section 2 - Study Area Conditions
- Section 3 - Site Area Conditions
- Section 4 - Risk Assessment
- Section 5 - Conclusions and Recommendations



## 2.0 STUDY AREA CONDITIONS

This section describes physical conditions within the Site vicinity, including a discussion of the regional geology and physiography, hydrogeology, air conditions, natural resources and ecology, hazardous substance sources, and regulatory classifications.

### 2.1 Regional Physiography and Geology

Port Orchard is located in Kitsap County on the Sinclair Inlet of the Puget Sound and within the Kitsap Peninsula. Physiographic conditions throughout the county are described as being relatively consistent and attributed to glacial remnants (described below). The vicinity is characterized by hills and ridges (Kitsap Public Utility District, 1997). The Site slopes to the southwest with approximate ground surface elevations above mean sea level ranging between 320 and 300 feet (Figure 1). The average annual precipitation for Port Orchard is approximately 54 inches (City Information, 2010).

Geologic deposits encountered regionally throughout Kitsap County represent the Tertiary through the Quaternary Periods. Bedrock deposits comprised of basalt and andesite were deposited during the Tertiary, typically in a northwest-southeast trend. These deposits also are found interbedded with marine sedimentary deposits due to sea level fluctuations and lava flows. Marine sediments also were deposited on top of volcanic rocks during the Oligocene and Miocene. Northwest-southeast trending folds that formed during the late Miocene were subsequently eroded during the early to middle Pliocene. The present Puget Trough formed during the late Tertiary (late Pliocene) during uplift of the present Cascade and Olympic ranges. Sedimentary deposits accumulated in the lowland Trough during the late Pliocene and throughout most of the Pleistocene (Quaternary Period) due to erosion and depositional events and several advances of glacial deposition. Materials consist of fine-grained silt and clay and coarser grained sands and gravels (Garling, M.E., Molenaar, D., and others, 1965).

The Kitsap Peninsula, in the center of the Puget Lowland, has been glaciated repeatedly during the last 2 million years. Geologic maps of the region indicate the surface geology in the Site vicinity generally is comprised of glacial outwash deposits. Early studies (Molenaar, 1962) described these deposits as well-stratified to massive beds of brown to grey sand with occasional lenses of clay and gravel and basal blue clay, collectively referred to as the Colvos Sand. Observed thickness ranges from a few feet to over 100 feet in upland regions. More recent field studies and publications have dropped the use of Colvos Sand in favor of Quaternary Vashon-age advance outwash deposits (Ecology, 2010). Subsurface conditions encountered at the Site



during advancement of boreholes and monitoring wells and described in Section 3 below are consistent with the regional geology.

## **2.2 Hydrogeology**

### **2.2.1 Regional Hydrogeology**

Over 80% of domestic water supply in Kitsap County is provided by groundwater resources according to the Kitsap Public Utility District (GeoEngineers, 2006). Precipitation events during wet winter months (October through March) provide most of the replenishment for surface water and groundwater in the basin (Kitsap Public Utility District, 1997). Therefore, shallow groundwater and surface water features typically respond to seasonal fluctuations and precipitation events (GeoEngineers, 2006). Groundwater is recharged in higher elevations, and groundwater discharge occurs in low-lying areas that are typically adjacent to surface water features (Kitsap Public Utility District, 1997).

Near-surface soils in this vicinity generally consist of Vashon-age deposits. The hydrogeologic units typically consist of the shallow aquifer, the Vashon till confining unit, and the Vashon aquifer. These units are commonly heterogeneous and locally discontinuous. The following unit descriptions and thickness ranges provided by Kahle (1998) are typically found in areas of Kitsap County based upon a study conducted to the north of the Site at the Naval Submarine Base Bangor and nearby vicinity:

- Shallow aquifer (Qvr) - This discontinuous unconfined aquifer consists of sand, gravel, and silt and generally ranges from about 10 to 40 ft in thickness (with an average of 25 ft), where encountered. It is composed mostly of recessional outwash, but may include younger stream, beach, or landslide deposits.
- Vashon till confining unit (Qvt) - This low-permeability unit consists of compacted and poorly sorted silt, sand and gravel, although it may contain local water-bearing lenses of sand and gravel. This unit generally ranges from about 10 to 100 ft in thickness, with an average encountered thickness of 45 ft.
- Vashon aquifer (Qva) - This aquifer consists of well-sorted sand or sand and gravel, with lenses of silt and clay. Most of the unit is unconfined; however, it is confined locally where it is fully saturated and overlain by till. The unit typically ranges from about 20 to 200 ft in thickness, with an average encountered thickness of about 100 ft. Most of the wells in the area tap this aquifer.

A groundwater divide separates flow toward the north into Blackjack Creek from the south toward Burley Creek (Garling, M.E., Molenaar, D., and others, 1965).

Regionally, groundwater flow within the Site vicinity would be expected to discharge to the north, toward Sinclair Inlet.

## **2.2.2 Local Hydrogeology**

Locally, shallow groundwater near the Site appears to flow toward the west or southwest based upon review of available groundwater elevation data. This flow direction is consistent with topographic conditions near the Site and the observed historical plume direction from the Site. The hydraulic gradient observed between Site monitoring wells MW-109 and MW-111 is typically 0.10 vertical feet per lateral foot (ft/ft) based upon data collected in January 2010 (AMEC, 2010b), as shown in Figure 3. Groundwater is observed within the sand deposits across the Site at depths typically between 15 and 25 feet below ground surface (bgs) (AMEC, 2000a). Groundwater levels observed at the Site appear to vary with seasonal precipitation events.

## **2.3 Surface Water and Sediment**

A small creek was identified near the Site “flowing southward along the east side of Bethel Road” during an initial investigation (Ecology, 1991). The closest mapped creek appears to be Blackjack Creek, located approximately one-half mile downgradient from the Site (Figure 1). The majority of streams within the vicinity, including Blackjack Creek, ultimately drain into Sinclair Inlet, located north of the Site.

A man-made stormwater retention pond is located south of the property and receives stormwater from on-property drainage ditches located along Sedgewick and Bethel roads to the north and west of the current Fred Meyer service station (Figure 4). With the exception of these stormwater drainage ditches, no other surface water features or stream sediment appear to be present on the property or Site. AMEC’s literature search performed in March 2010 did not reveal any documented impacts to nearby surface water features or sediment as a result of contaminated groundwater migration or transport from the Site.

## **2.4 Air**

Hazardous substance release into the air is not anticipated at the Site. The majority of the site is currently paved, and operation of the AS/SVE system will continue to reduce residual concentrations of GRO and BTEX compounds potentially trapped within a deep smear zone (i.e., 15 to 25 feet bgs) created by seasonal fluctuation of the groundwater table.

## 2.5 Natural Resources and Ecology

All of Kitsap County in addition to portions of Mason and Pierce Counties and Vashon Island in King County are included within the Water Resource Inventory Area (WRIA) 15. WRIA focus is on managing watershed resources. The Site is located within the Blackjack Creek watershed (Kitsap County, 2007a).

In March, 2010, AMEC searched available online Kitsap County Department of Community Development databases for natural resource and ecology designations within the Site vicinity. Information reviewed included surface water and wetland features and critical aquifer zones with the following results:

- The Site appears to be in an area designated as having wetland potential based upon the presence of hydric soils (Kitsap County, 2007b). GN Northern, Inc. collected three surface water samples (SW-1, SW-2, and SW-3) from standing water during Phase II ESA efforts conducted in 1998 to the southeast of the immediate Site vicinity (GN Northern, Inc., 1999).
- The Site also appears to be located within a Category One designation for aquifer protection, meaning the potential is high for “certain land use activities to adversely affect groundwater”. The Site appears to be surrounded by a Category Two aquifer, indicating this area may provide recharge to aquifers that either currently serve or are planned for potable water supply and susceptible to contamination based upon the type of land use activity (Kitsap County, 2007c).

## 2.6 Hazardous Substance Sources

Ecology (1991) identified potential human health risks associated with exposure to Site groundwater and soil media containing elevated levels of benzene, xylenes, and total volatile petroleum hydrocarbons. These risks included:

- Ingestion of groundwater from the Site in nearby drinking water wells. Groundwater at the Site is classified as potable and is a potential drinking water source. Consequently, the cleanup levels must be protective of drinking water uses.
- Dermal exposure to and/or inhalation of contaminated soil during excavation activities by Site workers. The property and adjacent parcels that comprise the Site do not meet the MTCA definition of an industrial property. Consequently unrestricted land uses with direct contact and residential exposure must be considered.

Since Ecology’s initial investigation and subsequent Site cleanup efforts, the occurrence of these constituents in soil and groundwater has been reduced to

localized on-property locations in the vicinity of monitoring well MW-103. Although no longer a risk to downgradient domestic well users, remediation of residual groundwater impacts to MTCA Method A cleanup levels is necessary to be protective of drinking water uses. Remediation of residual soil impacts to MTCA Method A cleanup levels is necessary to achieve unrestricted land use based on potential residential exposure and leaching potential to groundwater through the soil profile.

## **2.7 Regulatory Classifications**

Specific regulatory classifications associated with the Site regarding air or surface water were not defined as part of the RI process. Air and surface water are not likely to be adversely affected by the residual concentrations of petroleum hydrocarbons remaining in soil and groundwater beneath the Site. Residual soil and groundwater impacts above respective MTCA Method A levels and resulting from previous Site activities are currently confined to the property boundary as indicated on Figures 9 and 10. The extents of residual impacts to groundwater are limited to the northwest corner of the property. Impacts to soil have been reduced substantially through operation of air sparging/soil vapor extraction (AS/SVE) remediation systems on the property with remaining impacts limited to isolated areas at relatively deeper depths. A description of the extent of hazardous constituents (concentrations and lateral and vertical extent) present in soil and groundwater beneath the Site is provided in Section 3 below.

## **3.0 SITE AREA CONDITIONS**

Remedial investigations to collect data necessary to adequately characterize the Site for purposes of developing and implementing an appropriate cleanup action alternative have been conducted since May 31, 1990, when a complaint was received by the Kitsap County Health Department concerning possible petroleum contamination in a domestic drinking water well west of the property and at the Tripp residence (4940 Bethel Road SE, Port Orchard, Washington) (Figure 4). Visual analysis of water sampled from the well on June 1, 1990 confirmed the presence of a light sheen floating on the water surface and an odor typical of petroleum hydrocarbons. A subsequent investigation led by Ecology identified the source of the groundwater contamination plume as a historical release from a UST system associated with a former Texaco service station which operated to the east of the affected residences. Since discovery of petroleum hydrocarbons in the Tripp residence well, a six-phased investigation of Site conditions has been conducted, including the installation and operation of two separate remediation systems to recover free product and reduce contaminant concentrations in soil and groundwater. Periodic monitoring of groundwater conditions was initiated during 1991 and has been conducted on a quarterly basis since 2000.

The investigations and interim remedial actions conducted at the Site include:

- An initial assessment of soil and ground water conditions conducted by the Washington Department of Ecology (Ecology) from June 1990 through March 1991 (Ecology, 1991).
- Operation of on-Site remediation systems involving free product recovery and AS/SVE by Ecology from July 1995 through April 1998 (Ecology, 1998).
- A Phase I Environmental Site Assessment (ESA) of the property and adjacent parcels proposed for development into a Fred Meyer store by GN Northern during October 1998 (GN Northern, 1998).
- A follow-up limited Phase II ESA Site Assessment conducted by GN Northern during January 1999 which included additional soil and groundwater characterization in the vicinity at the property (GN Northern, 1999).
- Additional investigations by AMEC Earth & Environmental, Inc. (AMEC) to further assess the magnitude and extent of soil and groundwater contamination and installation of a new AS/SVE remediation system from June 1999 through May 2000 (AMEC, 2000a).
- Activities conducted by AMEC to replace groundwater monitoring wells lost during construction of the Fred Meyer store and restoration of the remediation system during August 2008 and February 2009 (AMEC, 2009).
- Periodic monitoring of groundwater conditions by Ecology between 1991 and 1998, followed by regular quarterly monitoring of groundwater conditions from 2000 to the present time by AMEC.

Historical well construction details and cumulative soil and groundwater analytical results are summarized in Tables 1, 2, and 3, respectively. The locations of various borings and monitoring wells completed to characterize the nature and extent of gasoline-related compounds in soil and groundwater are shown in Figures 4 through 10. Borehole logs and well completion details are provided in Appendix A. Each phase of investigation is further summarized below.

### **3.1 Groundwater Contamination Assessment, Washington Department of Ecology (Ecology, 1991)**

#### ***Domestic Water Supply Well Investigation***

From June 1990 through March 1991, drinking water samples were collected from the Tripp residence well, along with six additional and nearby domestic water supply wells (the Sommers, Beatty, Warrington, Peterson, Beck and Evans residences), and analyzed for the presence of BTEX compounds. The last samples collected from the Tripp and Peterson residence wells were also evaluated for total petroleum hydrocarbons (TPH) (alternatively referred to as GRO).

Benzene, total xylenes, and GRO were detected in the samples collected from the Tripp well at maximum concentrations of 320 µg/L, 270 µg/L, and 130 µg/L, respectively. Benzene, total xylenes, and GRO were also detected in the Peterson residence well, which is located north of the Tripp residence, at maximum concentrations of 38 µg/L, 16 µg/L and 93 µg/L, respectively. The Tripp and Peterson residences were subsequently supplied with bottled water, and during late August 1990, both residences were equipped with filtration systems to remove petroleum hydrocarbons from well water.

#### ***Initial Monitoring Well Network***

An eight-well network of groundwater monitoring wells (MW-1-D, MW-1-S, MW-2-D, MW-2-S, MW-101, MW-102, MW-103, and MW-104) was installed by Ecology to characterize subsurface soil and groundwater conditions. During October 1990, deep and shallow paired monitoring wells were installed to approximate depths of 40 and 80 feet bgs, respectively, at the southwest corner of the former Texaco service station (MW-1-D and MW-1-S) and near the southeast corner of the Tripp residence (MW-2-D and MW-2-S). During May 1991, monitoring wells MW-101, MW-102, MW-103, and MW-104 were installed. Monitoring wells MW-101 and MW-102 were installed to approximately 80 feet bgs on the Beck and Tripp properties, respectively. Monitoring wells MW-103 and MW-104 were installed to depths of 30 and 40 feet bgs, respectively, at the former Texaco-branded service station. More specifically, monitoring well MW-103 was installed near the western boundary of the property, and monitoring well MW-104 was installed near the northwest corner of the property close to the intersection of SE Sedgwick Road and SE Bethel Road. Soil samples collected at various depths from the monitoring well borings were analyzed for the presence of GRO and BTEX compounds. Groundwater samples collected from the completed monitoring wells were also evaluated for the presence of GRO and BTEX compounds.



Assessment results indicated GRO and BTEX compounds were present in soil and groundwater at concentrations greater than MTCA Method A cleanup levels. The maximum concentration GRO in soil (3,700 milligrams per kilogram [mg/kg]) was detected in soil sampled from boring MW-103 at 17.5 feet bgs (Figure 5). BTEX compounds were also detected in soil from boring MW-103 (at 17.5 feet bgs) at concentrations of 0.210 mg/kg, 19 mg/kg, 33 mg/kg, and 200 mg/kg, respectively. The MTCA Method A cleanup levels for GRO and BTEX compounds in soil are 30 mg/kg, 0.03 mg/kg, 7 mg/kg, 6 mg/kg, and 9 mg/kg, respectively.

In groundwater, the highest concentrations of GRO and BTEX compounds were detected in samples collected from monitoring wells MW-1-D and MW-103 (Figure 4). In these wells, concentrations of GRO and BTEX compounds in groundwater ranged from 2,400 to 22,000 µg/L, 280-2,200 µg/L, 4.9-3,900 µg/L, 5-11 µg/L, and 200-6,800 µg/L, respectively. The MTCA Method A cleanup levels for GRO and BTEX compounds are 800 µg/L, 5 µg/L, 700 µg/L, 1,000 µg/L, and 1,000 µg/L, respectively. No evidence of LNAPL at the Site was reported by Ecology during the initial groundwater assessment.

Based on results of the groundwater contamination assessment, Ecology identified the likely source of the groundwater contamination plume which had affected the domestic water wells as a historical release from a UST system associated with the former Texaco service station that was operated at the property. The approximate extent and concentrations of GRO and BTEX compounds in the groundwater contaminant plume during the early 1990s are described in Figure 4. The Texaco service station reportedly closed during September 1988, and the tanks were removed during December 1988. Ecology further concluded that results of tank tightness tests and leak detection monitoring well samples at the BP Mini-Mart (located across S.E. Sedgwick Road from the property) indicated that a release had not occurred at the BP Mini-Mart and that the BP Mini-Mart was not the source of the contaminated groundwater observed at the Tripp and Peterson water wells.

### **3.2 Remediation - Progress Report Summary, Washington State Department of Ecology (Ecology, 1998)**

#### ***Product Recovery and Initial AS/SVE Remediation System***

Ecology operated an on-Site remediation system from July 1995 through April 1998. The remediation system consisted of a LNAPL recovery system to address free product detected during 1993 in monitoring well MW-103, a network of air sparging (AS) wells to add oxygen to and flush contaminated groundwater, a soil vapor extraction (SVE) well system to recover petroleum hydrocarbons from affected soil, a catalytic oxidizer to treat AS/SVE system off gas, and a mechanism to inject hydrogen

peroxide into groundwater. The product recovery system consisted of a four-inch diameter extraction well (i.e., monitoring well MW-103) which was equipped with a floating skimmer pump connected to a 300-gallon aboveground storage tank. Monitoring well MW-103 also was designed to act as the main vapor extraction well. The AS system consisting of four sparging wells (SP-1, SP-2, SP-3 and SP-4) was installed around the extraction well to flush and clean contaminated groundwater. Available details concerning the Ecology AS/SVE system are described in Figure 2.

In a progress report summary, Ecology reported the on-Site remediation system recovered a total of approximately 19 gallons of LNAPL and approximately 4,600 pounds of petroleum hydrocarbons before being deactivated during April 1998. Ecology reported all LNAPL was removed from the Site prior to the system's deactivation. Performance data for the AS/SVE system indicated most of the contamination in soil was removed with only residual soil contamination remaining in place. Results of groundwater monitoring conducted by Ecology from May 1991 through February 1998 showed a steady decline in contaminant concentrations in peripheral wells with the groundwater plume restricted to the Site in the area around the extraction well (i.e., monitoring well MW-103) where LNAPL was once present. For example, the GRO and benzene present in groundwater samples collected from the Tripp residence well decreased from 450 to 120 µg/L and 140 to 2.1 µg/L, respectively, between January 1992 and February 1998. Residual concentrations of GRO (120 µg/L) were detected in samples collected during 1998 from the Tripp well and monitoring well MW-2-S.

### **3.3 Phase I and Limited Phase II Environmental Site Assessments, GN Northern (GN Northern, 1998, 1999)**

#### ***Borings BH-15 and BH-15A***

During October 1998, GN Northern conducted a Phase I Environmental Site Assessment (ESA) on behalf of Fred Meyer for the property (i.e., Parcel 023-2003) and 17 other parcels proposed for redevelopment as a Fred Meyer store. Based on results of the Phase I ESA, GN Northern recommended a limited Phase II ESA be conducted to further evaluate soil and groundwater conditions in the vicinity of the former Texaco service station as well as off-property areas where heating oil USTs, septic drain fields, potential asbestos and lead containing buildings, and other garbage and debris were identified as being of potential concern.

A total of 19 borings (borings BH-1 through BH-19) were completed by GN Northern during January 1999. Two of the borings, BH-15 and BH-15A, were advanced to depths of 15 and 22 feet bgs, respectively, in the vicinity of monitoring well MW-103 to evaluate the effectiveness of Ecology's previous cleanup activities at the Site (Figures



6 and 7). Assessment results for borings BH-15 and BH-15A indicated gasoline related compounds remained in soil and groundwater in the vicinity of monitoring well MW-103 at concentrations exceeding MTCA Method A cleanup levels. Specifically, GN Northern found BTEX compounds and GRO in groundwater collected from 22 feet bgs in boring BH-15A at concentrations of 130 µg/L, 120 µg/L, 530 µg/L, 5,000 µg/L, and 41,000 µg/L, respectively. Concentrations of GRO and BTEX compounds detected in soil collected from 21 feet bgs in boring BH-15 were 17,000 mg/kg, 12 mg/kg, 39 mg/kg, 69 mg/kg, and 280 mg/kg, respectively. Neither BTEX compounds nor GRO were detected in soil sampled from 15 feet bgs in boring BH-15 at concentrations exceeding the method detection limits.

### **3.4 Subsurface Exploration and Remediation System Installation Report, AMEC Earth & Environmental, Inc. (AMEC, 2000a)**

AMEC conducted additional investigations at the Site from June 1999 through May 2000 to further assess the magnitude and extent of remaining gasoline-impacted soil and groundwater beneath the Site. The investigations involved soil and groundwater sampling in direct-push borings to identify areas where residual concentrations of gasoline related compounds required remediation and testing a network of vapor test wells to evaluate the effectiveness of SVE technology at the Site. Based on results of the sampling conducted in the direct-push borings and SVE testing, AMEC installed a new AS/SVE system to replace the previous system installed and operated by Ecology (Figure 2).

#### ***Direct-Push Borings BH-20 through BH-25 and Vapor Test Wells VP-1 through VP-6***

During July 1999, direct-push borings BH-20/20A through BH-25 and vapor test wells VP-1 through VP-6 (Figure 7) were advanced to depths ranging between 18 and 36 feet bgs beneath the Site. Selected soil samples were screened for the presence of VOCs in the field using a photo ionization detector (PID). Maximum VOC readings were observed in borings VP-1 and VP-2 at depths ranging between 10 and 14 feet bgs. Gasoline odors were also noted in soil cuttings from borings VP-1 (at 13 to 23 feet bgs) and VP-2 (14 to 22 feet bgs). Groundwater samples were collected from all the borings using a 4-foot stainless steel screen and peristaltic pump after sufficient groundwater was purged from the borings. Soil and groundwater samples collected during the July 1999 subsurface investigation were analyzed for the presence of GRO and BTEX compounds. More specifically, soil samples collected from near the soil/water interface in borings BH-20 through BH-25, VP-1 through VP-3, and VP-6 were analyzed. Groundwater samples collected from these borings, as well as from borings BH-20A and VP4, were analyzed as well.

Concentrations of GRO exceeding the MTCA Method A cleanup level (30 mg/kg) were detected in soil collected at 6 feet bgs in boring BH-20 (6,500 mg/kg) and 4 feet bgs in borings VP-1 (2,100 mg/kg) and VP-2 (2,200 mg/kg). Detectable levels of benzene were not found in any of the July 1999 soil samples. Toluene, ethylbenzene and total xylenes were detected at concentrations of 65 mg/kg, 65 mg/kg and 390 mg/kg, respectively, in soil sample from 6 feet bgs in boring BH-20. These concentrations exceed the respective MTCA Method A cleanup levels for soil (7 mg/kg, 6 mg/kg, and 9 mg/kg). The gasoline additives EDB, EDC, and MTBE were not detected at concentrations exceeding the method reporting limits. GRO and BTEX compound concentrations in soil during 1999 are described in Figure 7.

In groundwater, concentrations of GRO exceeding the MTCA Method A cleanup level (800 µg/L) were detected in samples from borings BH-20A (78,000 µg/L), BH-22 (1,410 µg/L), VP-1 (47,000 µg/L) and VP-2 (8,200). Benzene was also detected in groundwater sampled from BH-20 (15 µg/L) and BH-20A (200 µg/L) at concentrations exceeding the MTCA Method A cleanup level (5 µg/L). The concentrations of toluene (8,700 µg/L), ethylbenzene (2,400 µg/L) and total xylenes (14,000 µg/L) detected in groundwater from boring BH-20A also exceeded MTCA Method A cleanup levels established for these compounds (1,000 µg/L, 700 µg/L, and 1,000 µg/L respectively). Ethylbenzene and total xylenes were also detected at concentrations exceeding the MTCA Method A cleanup levels in groundwater sampled from borings VP-1 and VP-2.

During November 1999, monitoring wells MW-105, MW-106, MW-107 and MW-108 (Figure 6) were installed to expand the coverage provided by the initial network of monitoring wells installed at the Site by Ecology during 1990 (i.e., MW-1-D, MW-1-S, MW-103, and MW-104). Monitoring well MW-105 was installed approximately 30 feet to the east and cross gradient from monitoring well MW-103. Monitoring wells MW-106, MW-107, and MW-108 were installed downgradient from monitoring well MW-103 along the southwest corner of the former Texaco service station boundaries. Groundwater samples were collected from the newly installed monitoring wells as well as from existing monitoring well MW-103 during March 2000. The samples were evaluated for the presence of GRO, BTEX compounds, and gasoline additives ethylene dibromide (EDB), ethylene dichloride (EDC) and methyl tert-butyl ether (MTBE).

GRO were detected in groundwater sampled from monitoring well MW-103 at a concentration (47,000 µg/L) which exceeds the MTCA Method A cleanup level (800 µg/L) for groundwater. Benzene was not detected in any of the groundwater samples evaluated from the March 2000 sampling event. Concentrations of toluene (450 µg/L), ethylbenzene (1,200 µg/L), and total xylenes (7,900 µg/L), however, were detected in the groundwater sample collected from monitoring well MW-103. The gasoline additives EDB, EDC, and MTBE were not detected at concentrations exceeding the

method reporting limits in any of the groundwater samples evaluated during the March 2000 sampling event.

### ***Replacement AS/SVE Remediation System***

During July 1999, AMEC conducted a SVE feasibility test to determine if SVE was an appropriate remediation technology to implement at the Site. The feasibility test involved installing six temporary SVE test wells (VP-1 through VP-6) near the northwest corner of the Site. A blower was connected to induce a subsurface vacuum on a single extraction well while the effects were monitored in the vapor test wells. Results of the testing indicated SVE would be an appropriate and effective remediation technology to apply at the Site. An effective radius of influence of a single vertical SVE extraction well was estimated to range between 35 and 45 feet. This information was used to design a replacement remediation system for the Site which included SVE as a remediation component.

A remediation system consisting of 10 in-situ AS wells (AS-1 through AS-10) and five new in-situ SVE wells (VE-1 through VE-5) was installed at the Site. Construction of the system began during November 1999, and the system was activated during March 2000. The AS wells were located throughout the Site in areas of suspected and detected residual groundwater contamination. Five of the AS wells were installed vertically to a depth of approximately 35 feet bgs and screened between 30 and 35 feet bgs. The remaining five AS wells were installed at an angle of approximately 45 degrees off from vertical to depths of 30 to 35 feet, with the bottom most 7.5 feet being screened. Three of the SVE wells were installed vertically to a depth of 15 feet bgs, with the bottom 7.5 feet screened. The two remaining SVE wells were installed at an angle of approximately 45 degrees off vertical to a total depth of 15 feet bgs. The bottom 10 feet of the angled SVE wells was screened. A remediation compound was constructed near the northeastern corner of the facility in which system components related to the AS/SVE system and related emissions controls were located. Available details concerning the replacement AS/SVE system are described in Figure 2.

A follow-up groundwater sample was collected from monitoring well MW-103 to evaluate whether the system was effectively sparging groundwater and recovering significant concentrations of gasoline-related compounds during May 2000. The groundwater sample was analyzed for the presence of GRO, BTEX compounds, EDB, EDC, and MTBE. GRO were detected in the follow-up groundwater sample at a concentration of 3,900 µg/L. Benzene was not detected at a concentration greater than the method reporting limit. Toluene, ethylbenzene, and total xylenes were detected at concentrations of 18.3 µg/L, 33.2 µg/L, and 594 µg/L, respectively. The detected concentration of GRO exceeds the MTCA Method A cleanup level; however the detected GRO concentration was substantially less that observed prior to activation of the new remediation system.

## **Conclusions**

Based on results of the investigations and remedial actions conducted at the Site from June 1999 through May 2000, AMEC concluded the extent of the groundwater contaminant plume had diminished substantially relative to that of the early 1990s, with the remaining contamination generally confined to on property and in the immediate vicinity of Pad C (i.e., the portion of the new Fred Meyer store located in the vicinity of the former Texaco service station). The approximate extent and concentrations of GRO and BTEX compounds observed in groundwater at the conclusion of AMEC's additional investigations at the Site during 1999 and 2000 are described in Figure 6. GRO and benzene were not detected by AMEC in borings located west of or downgradient of boring BH-21 which is located along the western boundary of the property.

The results of the follow-up May 2000 groundwater sampling also indicated the replacement AS/SVE system installed by AMEC was effective in removing gasoline-related compounds from groundwater beneath the Site. The concentrations of GRO in groundwater sampled from monitoring well MW-103 during May 2000 decreased by more than 90% relative to results of the March 2000 sampling event (i.e., from 47,000 µg/L to 3,900 µg/L). Substantial decreases were also observed for BTEX compounds between the March and May 2000 sampling events. As observed in a previous sampling event, the gasoline additives EDB, EDC, and MTBE were not detected at concentrations exceeding the method reporting limits.

### **3.5 Restoration of Groundwater Monitoring Well Network and Remediation System, and Fourth Quarter 2008 Monitoring Results, AMEC Earth & Environmental, Inc. (AMEC, 2009)**

Four phases of investigation and maintenance work were completed by AMEC from August 2008 through February 2009 to restore the network of groundwater monitoring wells and AS/SVE remediation system at the Site. Several monitoring wells (MW-104, MW-106, MW-107, and MW-108) were inadvertently destroyed and the AS/SVE system damaged during 1999/2000 redevelopment activities at the Site. The first phase of work was conducted during August 2008 and involved soil and groundwater sampling in additional direct-push soil borings to assess residual hydrocarbons remaining in place and to locate new groundwater monitoring wells to take the place of those that were destroyed. Four replacement groundwater monitoring wells (monitoring wells MW-108A, MW-109, MW-110, and MW-111) were subsequently installed as part of a second phase of work conducted during October 2008. Groundwater from the newly and previously installed wells was then sampled and analyzed as part of a third phase of work conducted at the Site during January 2009.

Lastly, a fourth phase of work was completed during February 2009 and included replacement of miscellaneous components of the AS equipment (compressors, pressure tank, and condensate trap) and reactivation of the dual AS/SVE treatment system.

### ***Direct-Push Soil Borings - B1 through B12, B14, and B15***

The first phase of work was conducted during August 2008 and involved fourteen direct-push soil borings (B1 through B12, B14, and B15) advanced to 22 to 36 feet bgs at various locations around the Site (Figure 8). Soil and groundwater samples were collected from the borings to evaluate residual hydrocarbon impacts to soil and the magnitude and extent of the identified groundwater plume beneath the Site as well as to the west under Bethel Road SE. Borings B-11, B-12, and B-14 were conducted within the central portion of the groundwater plume to evaluate conditions in the source area. Borings B-1, B-2, B-3, B-4, B-7, B-8, and B-9 were advanced within Bethel Road SE ROW. These seven borings were placed to evaluate the nature and extent of impacted groundwater in the cross and down-gradient directions to the west and southwest. Lastly, borings B-5, B-6, B-10, and B-15 were advanced within the Site boundaries to the south of the plume to evaluate the nature and extent of impacted groundwater in the cross-gradient direction to the south. Boring B13 was not completed because of conflicts with underground utilities.

Three soil samples collected from borings B1, B2, and B7 at depths ranging between 20 and 26 feet bgs were analyzed for the presence of GRO, diesel-range organics (DRO), and VOCs including BTEX compounds, EDB, EDC, MTBE, and naphthalene. None of the evaluated analytes were detected at concentrations exceeding the method reporting limits. Groundwater samples collected from borings B3 through B7, B10 through B12, B14, and B15 were also evaluated for the presence of GRO, DRO, and/or VOCs including BTEX compounds, EDB, EDC, MTBE, and naphthalene. GRO were detected in groundwater sampled from borings B-12 and B-14 at concentrations of 2,000 µg/L and 1,100 µg/L, respectively. DRO were detected in groundwater sampled from borings B-3, B-6, Duplicate (B-6) and B-14 at the relatively low concentrations of 140 µg/L, 100 µg/L, 64 µg/L and 710 µg/L, respectively, and are presumed to be due to overlap of weathered GRO into the DRO range. The concentrations of GRO detected in the B-12 and B-14 groundwater samples and DRO detected in the B-14 sample exceed the MTCA Method A cleanup levels for GRO (800 µg/L) and DRO (500 µg/L) in groundwater.

One or more VOCs were detected in groundwater sampled from borings B-12 and B-14. Benzene was detected at a concentration of 980 µg/L in the groundwater sample from boring B-12. Ethylbenzene was detected at a concentration of 4.2 µg/L in groundwater sampled from boring B-14. Total xylenes were detected in groundwater sampled from borings B-12 and B-14 at concentrations of 9.0 µg/L and 2.2 µg/L,



respectively. The benzene concentration detected in groundwater from boring B-12 exceeds the MTCA Method A cleanup level for benzene (5 µg/L) in groundwater. EDB, EDC, MTBE, and naphthalene were not detected.

### ***Replacement Groundwater Monitoring Wells - MW-108A, MW-109, MW-110, and MW-111***

Based on results of the direct-push assessment, new groundwater monitoring wells MW-108A, MW-109, MW-110 and MW-111 (Figure 8) were installed during October 2008 to replace wells (MW-104, MW-106, MW-107, and MW-108) that were inadvertently damaged during 1999 and 2000 Site redevelopment activities (i.e., installation of the Fred Meyer branded service station and expansion of adjacent roadways). Specifically, monitoring well MW-108A was installed approximately 6 feet to the north of former well MW-108 and was placed to monitor potential movement of contaminants downgradient and to the south. Monitoring well MW-109 was installed approximately 60 feet to the southeast of former well MW-104 and was placed as an upgradient well to confirm the interpreted eastward extent of the plume boundary. Monitoring well MW-110 was installed approximately 70 feet to the northeast of former well MW-106 and was placed to evaluate plume conditions in the northwestern portion of the Site. Lastly, monitoring well MW-111 was installed approximately 38 feet to the west of former well MW-107 and was placed to monitor potential movement of contaminants in the downgradient direction (to the southwest). Depths of the replacement monitoring wells ranged between 30 and 40 feet bgs, with groundwater encountered at depths ranging between 20 and 33 feet bgs.

Four soil samples collected from the newly installed monitoring well borings were analyzed for petroleum hydrocarbon identification by NWTPH-HCID, with a follow-up analysis for GRO and BTEX compounds on the soil sample collected from boring MW-110 at a depth of 20 to 25 feet bgs. GRO were detected in the soil sample at a concentration (300 mg/kg) exceeding the MTCA Method A cleanup level (Figure 9). Benzene was not detected at a concentration exceeding the method detection limit. Toluene (0.85 mg/kg), ethylbenzene (2.0 mg/kg) and total xylenes (5.3 mg/kg) were detected at concentrations less than the respective MTCA Method A cleanup levels.

### ***Groundwater Quality Monitoring - Existing Network and New Monitoring Wells***

During January 2009, a third phase of work involved collection of groundwater samples from the four new monitoring (monitoring wells MW-108A, MW-109, MW-110 and MW-111) and two of the pre-existing wells (monitoring wells MW-103 and MW-105). The groundwater samples were analyzed for the presence of GRO and VOCs including BTEX compounds, EDC, EDB, MTBE, and naphthalene. GRO and BTEX groundwater results are summarized in Figure 10. GRO were detected in groundwater

sampled from monitoring well MW-103 and MW-110 at concentrations of 202 µg/L and 10,900 µg/L, respectively. The GRO concentration detected in groundwater sampled from MW-110 exceeds the MTCA Method A cleanup level. BTEX compounds were detected at concentrations less than MTCA Method A Cleanup Levels in groundwater sampled from monitoring wells MW-103 (ethylbenzene at 0.620 µg/L, total xylenes at 4.36), MW-109 (benzene at 1.51 µg/L), and MW-110 (ethylbenzene at 251µg/L, total xylenes at 938 µg/L). EDB, EDC, MTBE, and naphthalene were not detected in any of the samples at concentrations exceeding the method reporting limits.

### ***Replacement AS/SVE Remediation System Upgrades***

Beginning in August 2002, the AS component of the groundwater treatment system became inoperative as a result of damages incurred during construction of the Fred Meyer branded fuel station. The SVE system was operated at a limited capacity during this period. In June 2006, the SVE system became completely inoperative following further damage to its aboveground components.

An assessment of the combined AS/SVE system was conducted during June 2008. Following the assessment, two new SVE blowers, a condensate trap, and two rebuilt AS compressor heads were installed. The AS/SVE systems were reactivated during February 2009. Shortly following system startup, AMEC measured and/or recorded vacuum pressure, air velocity and vapor level (using a PID) in each SVE conveyance line, as well as flow rate in each AS conveyance line. Based on the measured vapor levels and volumetric flow rates, the AS/SVE system was removing volatile petroleum constituents from the subsurface at an average calculated rate of approximately 0.9 pounds per day (lbs/day).

### ***Conclusions***

Soil samples from only one boring (monitoring well MW-110) contained GRO at concentrations exceeding the MTCA Method A cleanup level. Monitoring well MW-110 is located at the northwestern corner of the Site near the intersection of Bethel Road and Sedgewick Road. The results of soil field screening and chemical testing indicate that a relatively localized area of gasoline-impacted soil remains at an approximate depth of 20 feet bgs within the immediate vicinity of monitoring well boring MW-110 (Figure 9). The analytical results also suggest the edge of the GRO and benzene groundwater plume has been defined with the extent limited to the western edge of the Site and under what is now Bethel Road SE. The approximate extent and concentrations of GRO and BTEX compounds observed in groundwater during AMEC's 2008/2009 investigations at the Site are described in Figure 8. The decreases observed in concentrations of GRO and BTEX compounds in groundwater from 1999/2000 (Figure 6) to 2008/2009 (Figure 8) indicate operation of the AS/SVE, even at a reduced capacity as a result of damages incurred during construction,

resulted in continued reductions of GRO and BTEX concentrations in groundwater beneath the Site.

### **3.6 Additional Groundwater Sampling and Analysis**

Additional groundwater sampling and analysis, beyond that associated with the initial assessment and subsequent remedial investigations, have been conducted by Ecology and AMEC in the existing and expanded network of groundwater monitoring wells since the early 1990s. After sampling the initial network of monitoring wells during 1991, Ecology conducted periodic groundwater sampling and analysis in selected wells of the initial monitoring well network during 1993, 1997, and 1998 (Ecology 1998). Beginning in 2000, AMEC initiated regular quarterly groundwater sampling and analysis, with groundwater conditions being monitored in the expanded network and replacement monitoring wells through the fourth quarter 2009 (AMEC, 2000b - 2009).

Overall, a decrease in concentrations of GRO and BTEX compounds has been observed in groundwater beneath the Site since the activation of the replacement AS/SVE system during March 2000 and subsequent efforts to restore and reactivate the system in 2008/2009. The concentrations of GRO detected in groundwater sampled from monitoring well MW-103 decreased from 47,000 µg/L in March 2000 to levels less than the MTCA Method A cleanup level during four out of the last five quarterly sampling events. Concentrations of GRO, benzene and toluene have also historically been detected at concentrations exceeding the respective MTCA Method A cleanup levels in groundwater sampled from monitoring well MW-105, which is located approximately 30 feet east-southeast of monitoring well MW-103. The detected concentrations of these compounds in monitoring well MW-105, however, have all decreased to levels less than the respective MTCA Method A cleanup levels over the last eight quarterly sampling events. Likewise, the elevated concentrations of GRO and benzene detected in newly installed monitoring wells MW-110 and MW-109, respectively, have also decreased to levels less than the MTCA Method A cleanup levels during recent monitoring events, likely in response to reactivation of the AS/SVE system during February 2009. Naphthalene was last detected at concentrations exceeding the MTCA Method A cleanup level in groundwater sampled from monitoring well MW-103 during 2001 and 2002. The MTCA Method A level for naphthalene is 160 µg/L.

Based on the results of the quarterly groundwater monitoring conducted on-Site since 2000, the residual impacts to groundwater appear to be limited to a relatively small area in the vicinity of monitoring wells MW-103 and MW-110. GRO and BTEX compounds have generally not historically been detected in groundwater sampled from downgradient or cross gradient monitoring wells MW-106, MW-107, MW-108,



MW-108A, or MW-111. The most recent results of groundwater monitoring conducted during 2009 and 2010, which show the recent downward trend in GRO and BTEX compound concentrations and further restriction of the groundwater plume, are described in Figure 10.

### **3.7 Summary of Nature and Extent of Contamination**

A former Texaco-branded service station operated at the Site until September 1988. A release from a UST system associated with the former service station was identified by Ecology during 1990 as the source of petroleum hydrocarbons detected in domestic drinking water supply wells located west of the Site. Initial investigations in the vicinity of the source area, presumably near where the UST system was located, showed up to 3 feet of NAPL present on top of groundwater in monitoring well MW-103. Concentrations of GRO and BTEX compounds were detected in soil and groundwater at concentrations exceeding the MTCA Method A cleanup levels (Figures 4 and 5).

In the vicinity of the source area, GRO were detected in soil at concentrations exceeding the MTCA Method A cleanup level and ranging up to 3,700 mg/kg in soil sampled between 7.5 and 17.5 feet bgs in monitoring well borings MW-103 and MW-104. Concentrations of toluene, ethylbenzene, and total xylenes were detected in soil at concentrations ranging up to 19 mg/kg, 33 mg/kg, and 200 mg/kg, respectively. Early concentrations of GRO and benzene detected in groundwater sampled from monitoring well MW-103 ranged up to 22,000 µg/L and 860 µg/L, respectively. Elevated concentrations of GRO (up to 17,000 µg/L) and benzene (up to 2,300 µg/L) were also detected in groundwater sampled from monitoring well MW-1-D, which is located approximately 90 feet south of monitoring well MW-103.

When discovered, the contaminated groundwater plume extended downgradient approximately 500 feet to the southwest. Concentrations of GRO and benzene exceeding the MTCA Method A cleanup levels were detected in groundwater at maximum concentrations of 450 µg/L and 320 µg/L, respectively, in the Tripp residence well, which is located approximately 480 feet from the source area. GRO and benzene were not detected in groundwater sampled from monitoring well MW-101 which is located approximately 100 feet beyond the Tripp residence well. The lateral extent of contamination of the groundwater plume is estimated to range between 300 to 350 feet based on the low detected concentration of GRO (93 µg/L) and absence of BTEX compounds in groundwater sampled from Peterson residence well, along with the absence of both GRO and BTEX compounds in groundwater sampled from monitoring wells MW-2-S and MW-2-D. The downgradient and lateral extents GRO and benzene in the groundwater plume soon after discovery are depicted in Figure 4.

Interim remedial actions conducted at the Site since 1995 included the operation of a free product recovery system and two separate AS/SVE systems. The systems were

successful in removing a significant amount of petroleum hydrocarbon mass adsorbed to subsurface soil beneath the Site and resulted in substantial reductions in both the extent of the groundwater contaminant plume and the associated concentrations of GRO and BTEX compounds present within the plume (Figures 4, 6, and 8). Measurable free product has not been observed in any borings or monitoring wells at the Site since November 1999 when 0.03 feet of product was measured near the source area in monitoring well MW-103. An absorbent sock was subsequently installed in monitoring well MW-103 to recover any residual free product, although none has since been detected. The detected concentration of GRO in groundwater sampled from monitoring well MW-103 has been reduced by greater than 99% from a maximum observed concentration of 47,000 µg/L during March 2000 to concentrations ranging from 202 µg/L to less than the method reporting limit (80 to 100 µg/L) during four out of the five most recent groundwater monitoring events. GRO and BTEX compounds have not recently been detected in monitoring wells or exploratory borings completed along the western and at locations further downgradient from the source area.

The extent of the groundwater plume has been reduced to an area limited to the northwest corner of the property and bounded by monitoring well MW-110 and boring B-14 to the northwest, monitoring well MW-109 and boring B-12 to the east, and monitoring well MW-103 to the south (Figure 10). Recent groundwater monitoring results suggest the residual concentrations of GRO and BTEX compounds within the plume are generally less than MTCA Method A cleanup levels. However; concentrations of GRO and BTEX compounds in excess of the MTCA Method A cleanup levels may be present in localized areas within the remaining plume and periodically detected as evidenced by the recent detections of GRO at a concentration of 1,320 µg/L in monitoring well MW-103 (January 2010) or benzene at a concentration of 27.40 µg/L in monitoring well MW-109 (June 2009). The periodic detections of GRO and benzene at concentrations exceeding the MTCA Method A cleanup levels may be attributed to fluctuations in the water table and the resulting remobilization of residual contamination trapped in soil at or near the vadose zone/groundwater interface (smear zone). Continued operation of the AS/SVE system is expected to further reduce the residual concentrations of GRO and benzene present in groundwater over time. Based on PID measurements and air flow readings in the SVE exhaust stack, the vapor extraction system is currently removing less than 0.1 pounds per day of VOCs from the Site vadose zone. It appears that the SVE system has removed over 1,000 pounds of the more mobile fraction petroleum contamination since startup in 2000. The remaining contamination is less volatile and more strongly adsorbed to semi-saturated soil located between 18 and 20 feet below ground surface. Therefore, biodegradation has become the dominant factor in treating residual contamination in the smear zone. Dissolved oxygen (DO) levels in groundwater have increased from

less than 1 mg/L to approximately 6-8 mg/L in most of the Site's monitoring wells since reactivation of the AS system in February 2009. Increased DO levels in groundwater are expected to increase the rate of biodegradation of residual petroleum contamination beneath the Site.

### **3.8 Quality Assurance**

Copies of available laboratory analytical reports from remedial investigations and groundwater monitoring reports are presented in Appendix B for soil analytical results and Appendix C for groundwater analytical results. For earlier studies where laboratory analytical reports are not available, such as the initial assessment of soil and groundwater conditions or follow-up groundwater monitoring conducted by Ecology between 1990 and 1998 (Ecology, 1991), available summary tables from the reports were substituted instead. In some instances, system details [i.e. air sparge (AS-1 through AS-10) and vapor extraction (VE-1 through VE-5)] were not available for RI report inclusion. Available analytical reports were reviewed by AMEC as part of the remedial investigation or quarterly groundwater monitoring to assess overall data quality. Based on these reviews, the analytical data are of acceptable quality for their intended use.

## **4.0 POTENTIAL RISKS TO HUMAN HEALTH, NATURAL RESOURCES, AND ECOLOGICAL RECEPTORS**

MTCA requires that site conditions be protective of human health, natural resources, and ecological receptors. The data collected during the remedial investigation and interim actions previously summarized provide the information necessary to adequately characterize the nature and extent of contamination currently present at the site and the associated potential exposure to human health and the environment.

### **4.1 Conceptual Site Model**

A conceptual Site model (CSM) based on the results of the remedial investigations and interim actions conducted to date is presented in which the physical and chemical data collected for the Site are summarized to describe the known sources of contamination, the pathways by which the contaminants are likely to move, and receptors potentially affected by the contaminants present at the Site today and as they are reasonably likely in the future. The conceptual Site model will serve as a useful tool used during development of cleanup alternatives which are the subject of the cleanup action plan to be submitted in conjunction with the feasibility study.

#### **4.1.1 Hazardous Substances**

GRO and related BTEX compounds are the primary COPCs at the Site. Relatively low levels of DRO were detected in groundwater sampled from several borings, but these detections are believed to be overlap of weathered GRO into the DRO range. The gasoline additives EDB, EDC, and MTBE were not detected in groundwater collected from the source area or at locations downgradient and cross gradient from the source area, although it should be noted that the method reporting limit for EDB is insufficient to demonstrate compliance with the MTCA Method A cleanup level. Naphthalene has not been detected in groundwater at concentrations exceeding the MTCA Method A cleanup level since 2002.

#### **4.1.2 Contaminant Sources**

There are no continuing sources of hazardous substance releases. Based on review of available records, all existing contamination appears to be derived from a gasoline leak from the historical Texaco UST system. The Texaco service station reportedly closed during September 1988, and its UST system removed from the Site in December 1988. Results of tank tightness tests and leak detection monitoring well samples collected at the BP Mini-Mart, located across S.E. Sedgwick Road, and generally upgradient from the Site, indicated the BP Mini-Mart was not a source of the identified contaminated groundwater plume. Other potential off-Site sources (i.e., heating oil USTs, septic drain fields, potential asbestos and lead containing buildings, and other garbage and debris) identified during Phase II ESA activities for parcels eventually redeveloped into the existing Fred Meyer store do not extend on to the Site and are not considered sources of the identified groundwater contamination plume.

#### **4.1.3 Potentially Contaminated Media**

Potentially contaminated media at the Site include soil and groundwater. The interim actions undertaken at the Site were successful in removing LNAPL from the Site and substantial reductions of concentrations of GRO and BTEX compounds in soil and groundwater. The extent of the groundwater plume has been reduced to an area limited to the northwest corner of the property where concentrations of GRO, and BTEX compounds in groundwater are generally less than MTCA Method A cleanup levels. The periodic detections of GRO and BTEX compounds (particularly benzene) at concentrations exceeding the MTCA Method A cleanup levels are attributed to fluctuations in the water table and subsequent remobilization of residual contamination trapped in soil at depths at or near the vadose zone/groundwater interface.

#### **4.1.4 Conceptual Model Summary**

A historical release of gasoline from a UST system associated with the former Texaco service station occurred at the property some time prior to when the station was closed and the UST system removed during 1988. Review of available boring logs, soil field screening results, and soil analytical data suggests the release occurred at depth (i.e., possibly at the base of the leaking UST estimated to be at approximately 12 feet bgs). Shallow soil sample analytical data and results of soil field screening (visual, olfactory and headspace vapor readings) do not support a release from a shallow source or at the surface. The exact location of the leaking UST is unknown based on available records, but is suspected to have been located in the vicinity of monitoring well MW-103 in which free product was encountered.

The gasoline release was sufficient in volume to migrate vertically downward to the water table, with a portion of the release accumulating in soil pore space within the vadose zone above the water table (i.e., residual contamination). Free product did not apparently migrate a substantial lateral distance from the leaking UST given that it was only detected in monitoring well MW-103. Groundwater in contact with free product or residual product in soil became contaminated by dissolution of GRO and related BTEX compounds into the dissolved phase, and a plume of contaminated groundwater migrated downgradient approximately 480 feet to the southwest.

Operation of free product recovery and AS/SVE systems at the property have been successful in removing free product from the source area and reducing the extent of the groundwater plume at levels exceeding the MTCA Method A cleanup levels to the northwest corner of the property while also presumably reducing residual concentrations in overlying soil based on system performance data.. Fluctuation of the groundwater table within a smear zone (i.e., 15 to 25 feet bgs) created by seasonal fluctuation of the groundwater table may periodically remobilize residual concentrations of GRO and BTEX compounds trapped in soil and cause detections exceeding the MTCA Method A cleanup levels. However, continued operation of the AS/SVE system is expected to further reduce concentrations of GRO and BTEX compounds present in groundwater and soil over time.

#### **4.1.5 Exposure Assessment, Cleanup Levels and Points of Compliance**

MTCA requires development of cleanup standards for actual and potential uses based on hazardous substance concentrations that are protective of human health and the environment (i.e., cleanup levels) and location on-Site where the cleanup levels must be attained (i.e., point of compliance). The property is currently an active commercial/industrial property. Current receptors include on-Site occupational workers, and potentially construction/excavation workers involved with landscaping, maintenance, construction, or excavation activities. Future land use is also most likely

to be as a commercial/industrial property. Although less likely, future land use could also involve redevelopment of the Site as a residential property. Off-Site receptors are not likely to be affected since the extent of the groundwater plume and affected soil is limited to the property. The CSM presented in Table 4 describes and shows the potentially complete and incomplete human health exposure pathways present at the Site.

### **Groundwater Exposure Routes, Cleanup Levels, and Point of Compliance**

Groundwater at the Site is classified as potable water. MTCA Method A cleanup levels for groundwater were selected for the Site to be protective of drinking water beneficial uses. MTCA Method A cleanup levels will also be protective of any other current or future land use and related exposure pathways for potential receptors.

The point of compliance for groundwater throughout the Site is from the upper most level of the saturated zone to the lowest depth within groundwater that could potentially be affected. For purposes of this investigation, the upper most level in the saturated zone is assumed to be approximately 15 feet, or the approximate top of the smear zone created by seasonal fluctuations in the groundwater table.

### **Soil Exposure Routes, Cleanup Levels, and Point of Compliance**

MTCA Method A cleanup levels for soil were selected for the Site to be protective of groundwater and direct contact. Since groundwater at the Site has been affected by the gasoline release, soil cleanup levels based on leaching of COPCs to groundwater and subsequent ingestion and inhalation are appropriate. The MTCA Method A cleanup levels for soil were selected to establish soil concentrations that are protective of groundwater. MTCA Method A cleanup levels for soil were also selected to be protective of the direct contact exposure pathway for potential residential receptors. The Site does not meet the MTCA definition of an industrial property; therefore soil cleanup levels suitable for unrestricted land use are appropriate. The MTCA Method A cleanup levels for soil are based on unrestricted land use and are protective of receptors in direct contact with the COPCs.

The point of compliance for soil based on being protective of groundwater is Site wide and extends throughout the soil profile and may extend below the groundwater table. For direct contact, the point of compliance for soil is defined as Site wide from the ground surface to 15 feet below ground surface (i.e., the upper most level in the saturated zone and top of the smear zone created by seasonal fluctuations in the groundwater table).



## 4.2 Terrestrial Ecological Evaluation

AMEC performed a Terrestrial Ecological Evaluation (TEE) for the Site in accordance with the Model Toxics Control Act, Washington Administrative Code (WAC) 173-340-7490 through 173-340-7494 (Appendix D). Based on current knowledge of the Site, including data review and an evaluation of exposure analysis, there is no unacceptable risk to ecological receptors at the Site.

According to the City of Port Orchard Zoning Map, the Site (including the historic plume area) is zoned commercial. The Site is rated as low quality habitat according to the Washington Department of Fish and Wildlife Local Habitat Assessment. The Site is developed land containing structures, paved and gravel parking areas, paved and dirt road driveways, landscape strips, a portion of a stormwater detention basin for an adjacent parcel and yards associated with nearby residential/commercial structures.

The Site is not on or directly adjacent to a wetland. The closest wetland is located approximately 200 feet to the north of the Site, and is upgradient from the area of known contamination. The Site is not likely to be used by threatened or endangered wildlife or plant species, a wildlife "priority species", a wildlife "species of concern", or a plant "sensitive species". Lastly, native vegetation is likely to occur within the potential wetland to the north of the Site; however, the total area of contiguous undeveloped land, within 500 feet of the Site, is less than 10 acres (i.e., approximately 1.6 acres).

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

A former Texaco-branded service station operated at the Site until 1988. A release of petroleum hydrocarbons (gasoline) from a UST system associated with the former Texaco service station is the source of a groundwater contaminant plume that, at the time of discovery during 1990, extended from the property to neighboring residential properties and domestic water supply wells as far as 480 feet to the southwest. Since discovery of petroleum hydrocarbons in the residential wells, sufficient remedial investigations have been conducted to adequately characterize the nature and extent of the release. Interim remedial actions conducted at the Site since 1995, including the operation of a free product recovery system and two separate AS/SVE systems, have been successful in removing free product from the Site and substantially reducing the extent of the groundwater contaminant plume and the magnitude of gasoline-related contaminants present within the plume and in soil near in the vicinity of the source area.

Results of quarterly groundwater monitoring confirm the extent of the groundwater plume has been reduced to a relatively small area limited to the northwest corner of the Site. COPCs (GRO and BTEX compounds) in groundwater have generally been reduced to concentrations less than MTCA Method A cleanup levels in recent

monitoring events. However, COPC concentrations in excess of the MTCA Method A cleanup levels may still be present in localized areas within the remaining plume as evidenced by the recent detections of GRO and benzene in groundwater sampled from monitoring wells near the source area. The periodic detection of COPCs at concentrations exceeding the MTCA Method A cleanup levels during recent monitoring events is attributed to remobilization of residual COPCs trapped in deep soil (15 to 25 feet bgs) within a smear zone created by fluctuation of the groundwater table elevation.

Current and reasonably likely future land use at the property is commercial/industrial, although it is possible that future use could involve redevelopment of the property as a residential property. Current and future receptors likely include on-property occupational workers and construction/excavation workers involved with landscaping, maintenance, construction, or excavation activities, or potentially residential receptors should the property be redeveloped. Off-Site receptors are not likely to be affected since the extent of contaminated soil and groundwater is limited to on-property. MTCA Method A cleanup levels for soil and groundwater were selected to be protective of drinking water beneficial uses and direct contact with affected soil or leaching of COPCs from soil to groundwater. Based on current knowledge of the Site, including data review and an evaluation of exposure analysis, there is no unacceptable risk to ecological receptors at the Site.

Continued operation of the AS/SVE system is recommended until concentrations of COPCs remaining in the groundwater plume beneath the Site are reduced to levels less than the MTCA Method A cleanup levels. Operation of the AS/SVE system, and the associated reductions in residual COPC concentrations in soil and groundwater, will also reduce potential risks to current and future receptors that may come into contact with Site soil and groundwater. Cleanup to the MTCA Method A cleanup levels will allow for protection of groundwater and unrestricted Site use in the future with no further actions necessary to ensure protection of human health and the environment.



We appreciate the opportunity to be of service to Fred Meyer Stores, Inc. on this project. If you have any questions or comments regarding this report, please contact the undersigned at (503) 639-3400.

**AMEC Earth & Environmental, Inc.**

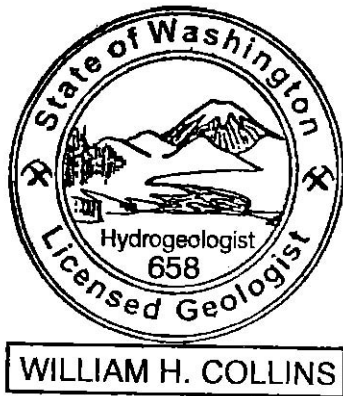


William H. Collins, RG, LHG  
Project Hydrogeologist



Kurt Harrington, PE, PMP  
Project Manager

WHC/lm



## REFERENCES

- AMEC Earth & Environmental, Inc., 2000a, Subsurface Exploration and Remediation System Installation Report, Fred Meyer Property Port Orchard, Washington, October 2000.
- AMEC Earth & Environmental, Inc. 2000b, Quarterly Site Report Third Quarter 2000, Fred Meyer Property, Port Orchard, Washington, Prepared for Fred Meyer Stores, Inc., October 2000.
- AMEC Earth & Environmental, Inc. 2001a, Quarterly Site Report Fourth Quarter 2000, Fred Meyer Property, Port Orchard, Washington, Prepared for Fred Meyer Stores, Inc., March 2001.
- AMEC Earth & Environmental, Inc. 2001b, Quarterly Site Report First Quarter 2001, Fred Meyer Property, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., June 2001.
- AMEC Earth & Environmental, Inc. 2001c, Quarterly Site Report Second Quarter 2001, Fred Meyer Property, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., September 2001.
- AMEC Earth & Environmental, Inc. 2001d, Quarterly Site Report Third Quarter 2001, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2001.
- AMEC Earth & Environmental, Inc. 2002a, Quarterly Site Report Fourth Quarter 2001, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2001.
- AMEC Earth & Environmental, Inc. 2002b, Quarterly Site Report First Quarter 2002, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2002.
- AMEC Earth & Environmental, Inc. 2002c, Quarterly Site Report Second Quarter 2002, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., November 2002.
- AMEC Earth & Environmental, Inc. 2003a, Quarterly Site Report Third Quarter 2002, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., January 2003.
- AMEC Earth & Environmental, Inc. 2003b, Quarterly Site Report Third Quarter 2003, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., January 2003.
- AMEC Earth & Environmental, Inc. 2003c, Quarterly Site Report Fourth Quarter 2002, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., April 2003.

AMEC Earth & Environmental, Inc. 2004a, Quarterly Site Report First Quarter 2003, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2004.

AMEC Earth & Environmental, Inc. 2004b, Quarterly Site Report Second Quarter 2003, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2004.

AMEC Earth & Environmental, Inc. 2004c, Quarterly Site Report Fourth Quarter 2003, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., August 2004.

AMEC Earth & Environmental, Inc. 2004d, Quarterly Site Report First Quarter 2004, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., August 2004.

AMEC Earth & Environmental, Inc. 2004e, Quarterly Site Report Second Quarter 2004, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., September 2004.

AMEC Earth & Environmental, Inc. 2005a, Quarterly Site Report Third Quarter 2004, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., January 2005.

AMEC Earth & Environmental, Inc. 2005b, Quarterly Site Report Fourth Quarter 2004, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., May 2005.

AMEC Earth & Environmental, Inc. 2005c, Quarterly Site Report First Quarter 2005, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., May 2005.

AMEC Earth & Environmental, Inc. 2006a, Quarterly Site Report Second Quarter 2005, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., January 2006.

AMEC Earth & Environmental, Inc. 2006b, Quarterly Site Report Third Quarter 2005, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2006.

AMEC Earth & Environmental, Inc. 2006c, Quarterly Site Report Fourth Quarter 2005, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2006.

AMEC Earth & Environmental, Inc. 2006d, Quarterly Site Report First Quarter 2006, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., May 2006.

AMEC Earth & Environmental, Inc. 2006e, Quarterly Site Report Second Quarter 2006, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2006.

AMEC Earth & Environmental, Inc. 2007a, Quarterly Site Report Third Quarter 2006, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., January 2007.

AMEC Earth & Environmental, Inc. 2007b, Quarterly Site Report Fourth Quarter 2006, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2007.

AMEC Earth & Environmental, Inc. 2007c, Quarterly Site Report First Quarter 2007, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., August 2007.

AMEC Earth & Environmental, Inc. 2007d, Quarterly Site Report Second Quarter 2007, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., August 2007.

AMEC Earth & Environmental, Inc. 2007e, Quarterly Site Report Third Quarter 2007, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2007.

AMEC Earth & Environmental, Inc. 2008a, Quarterly Site Report Fourth Quarter 2007, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2008.

AMEC Earth & Environmental, Inc. 2008b, Quarterly Site Report First Quarter 2008, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., May 2008.

AMEC Earth & Environmental, Inc. 2008c, Quarterly Site Report Second Quarter 2008, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., August 2008.

AMEC Earth & Environmental, Inc. 2008d, Quarterly Site Report Third Quarter 2008, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., October 2008.

AMEC Earth & Environmental, Inc. 2009a, Quarterly Site Report Fourth Quarter 2008, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., March 2009.

AMEC Earth & Environmental, Inc. 2009b, Restoration of Groundwater Monitoring Well Network and Remediation System, and Fourth Quarter 2008 Monitoring Results, Fred Meyer- Port Orchard Site, Ecology Site ID #96424236, Prepared for Fred Meyer Stores, Inc., Submitted to Washington State Department of Ecology. July 2009.

AMEC Earth & Environmental, Inc. 2009c, Quarterly Site Report First Quarter 2009, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., July 2009.

AMEC Earth & Environmental, Inc. 2009d, Quarterly Site Report Second Quarter 2009, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., July 2009.

AMEC Earth & Environmental, Inc. 2010a, Quarterly Site Report Third Quarter 2009, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Lust File #J5E03, Prepared for Fred Meyer Stores, Inc., February 2010.

AMEC Earth & Environmental, Inc., 2010b, Quarterly Site Report, Fourth Quarter 2009, Fred Meyer Property, 1900 SE Sedgewick Road, Port Orchard, Washington, Ecology Site ID #2555; Submitted to Fred Meyer Stores, Inc., April 2010.

City Information, 2010, website: <http://www.citytowninfo.com/places/washington/port-orchard>

Garling, M.E., Molenaar, D., and others, 1965, Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Islands: Water Supply Bulletin No. 18.

GeoEngineers, Inc., 2006, State of the Drinking Water Supply of Kitsap County: Summary of Kitsap Public Utility District's Monitoring Network Data, Prepared for Public Utility District No. 1 of Kitsap County, October 23, 2006.

GN Northern, Inc., 1998. Report of Phase I Environmental Site Assessment: Proposed Fred Meyer Site Southeast of Bethel Road and SE Sedgewick Road, Port Orchard, Washington. October 1998.

GN Northern, Inc., 1999. Phase II Environmental Site Assessment of 24.32 Acre Fred Meyer Development Site Bethel Road S.E. and Sedgewick Road S.E., Port Orchard, Washington. February 5, 1999.

Kahle, S.C., 1998, Hydrogeology of Naval Submarine Base Bangor and Vicinity, Kitsap County, Washington: U.S. Geological Survey Water-Resources Investigations Report 97-4060, 107 p.

Kitsap County, 2007a, Website:  
[http://www.kitsapgov.com/dcd/gis/maps/Standard\\_Maps/Environmental/Watersheds\\_FEB2007.pdf](http://www.kitsapgov.com/dcd/gis/maps/Standard_Maps/Environmental/Watersheds_FEB2007.pdf)

Kitsap County, 2007b, Website:  
[http://www.kitsapgov.com/dcd/gis/maps/Standard\\_Maps/Environmental/SURFACE\\_WATERS\\_DEM\\_DEC2007.pdf](http://www.kitsapgov.com/dcd/gis/maps/Standard_Maps/Environmental/SURFACE_WATERS_DEM_DEC2007.pdf)

Kitsap County, 2007c, Website:  
[http://www.kitsapgov.com/dcd/gis/maps/Standard\\_Maps/Environmental/Critical\\_Aquifer\\_Recharge\\_Areas\\_June2007.pdf](http://www.kitsapgov.com/dcd/gis/maps/Standard_Maps/Environmental/Critical_Aquifer_Recharge_Areas_June2007.pdf)

Kitsap Public Utility District, 1997, Kitsap County Initial Basin Assessment Open File Technical Report No. 97-04, prepared in cooperation with Washington State Department of Ecology, October 1997.

Molenaar, Dee, 1962. Geologic Map and Diagrammatic Sections of the Kitsap Peninsula and Certain Adjacent Islands. State of Washington Department of Conservation, Division of Water Resources, 1962.

Washington State Department of Ecology, 1991. Groundwater Contamination Assessment, Bethel Wells, Port Orchard, Washington J5E03. August 1991.

Washington State Department of Ecology, 1998, Remediation – Progress Report Summary, Bethel Well – Bethel Former Texaco, Bethel Road and Sedgewick, Port Orchard, Washington, October 1998.

Washington State Department of Ecology, 1999, Letter to David R. Walden, Prudential Northwest Real Estate. Bethel Former Texaco- 4831 Bethel Road SE, Port Orchard, Washington. February 19, 1999.

Washington State Department of Ecology, 2010, Communications with Bradley Gilmore, L.G., Washington Department of Ecology, Voluntary Cleanup Division.



## LIMITATIONS

This report was prepared exclusively for Fred Meyer Stores, Inc. (Fred Meyer) by AMEC Earth & Environmental, Inc. (AMEC). The quality of information, conclusions, and estimates contained herein is consistent with the level of effort involved in AMEC services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This Remedial Investigation Report is intended to be used by Fred Meyer for the Port Orchard Site located 1900 SE Sedgewick Road in Port Orchard, Washington, only, subject to the terms and conditions of its contract with AMEC. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

The findings contained herein are relevant to the dates of AMEC's Site data inventory, Site visits, and investigations and should not be relied upon to represent conditions at later dates. In the event that changes in the nature, usage, or layout of the property or nearby properties are made, the conclusions and recommendations contained in this report may not be valid. If additional information becomes available, it should be provided to AMEC so the original conclusions and recommendations can be modified as necessary.

**TABLES**

**TABLE 1**  
**Site Monitoring Well Construction Summary**  
**Fred Meyer Stores- Port Orchard Site**

Well ID	Install Date	Top of Casing Elevation (feet amsl)	Total Depth (feet bgs)	Casing Diameter (inches)	Screen Interval (feet bgs)
<b>Groundwater Monitoring Wells</b>					
MW-1S <sup>d</sup>	10/15/90	312.56	38.5	2	18.5-38.5
MW-1D <sup>d</sup>	10/15/90	313.00	79.5	2	34.5-80
MW-2S <sup>d</sup>	10/23/90	304.53	38	2	18-38
MW-2D <sup>d</sup>	10/23/90	301.13	78	2	43-78
MW-101 <sup>d</sup>	5/13/91	NR	79	2	60-79
MW-102 <sup>d</sup>	5/13/91	NR	81	2	61-81
MW-103	5/6/91	311.70	32	4	12-32
MW-104 <sup>d</sup>	5/6/91	not reported	not reported	2	not reported
MW-105	11/10/99	310.46	30	2	10-30
MW-106 <sup>d</sup>	11/10/99	311.73	30	2	10-30
MW-107 <sup>d</sup>	11/9/99	310.59	30	2	10-30
MW-108 <sup>d</sup>	11/9/99	309.94	30	2	10-30
MW-108A	10/1/08	310.38	30	2	15-30
MW-109	10/2/2008	310.48	32	2	15-30
MW-110	10/1/08	312.77	30	2	15-30
MW-111	10/1/08	310.62	40	2	25-40
<b>Vapor Extraction Wells</b>					
VES-1 <sup>^</sup>	11/4/99	NA	15	0.75	7.5-15
VES-2 <sup>^</sup>	11/4/99	NA	15	0.75	7.5-15
VES-3	11/3/99	NA	15	0.75	7.5-15
VES-4	11/3/99	NA	15	0.75	7.5-15
VES-5	11/3/99	NA	15	0.75	7.5-15
<b>Air-Sparging Wells</b>					
AS-1 <sup>^</sup>	11/4/99	NA	30-35	0.75	~30-35
AS-2 <sup>^</sup>	11/4/99	NA	30-35	0.75	~30-35
AS-3 <sup>^</sup>	11/4/99	NA	30-35	0.75	~30-35
AS-4 <sup>^</sup>	11/4/99	NA	30-35	0.75	~30-35
AS-5	11/3/99	NA	~35	0.75	~30-35
AS-6	11/3/99	NA	~35	0.75	~30-35
AS-7	11/3/99	NA	~35	0.75	~30-35
AS-8 <sup>^</sup>	11/3/99	NA	30-35	0.75	~30-35
AS-9	11/3/99	NA	~35	0.75	~30-35
AS-10	11/3/99	NA	~35	0.75	~30-35

Notes:

amsl: above mean sea level

bgs: below ground surface

<sup>d</sup>: destroyed

<sup>^</sup>: Well at 45 degree angle

NR: not reported

NA: not applicable

**TABLE 2**  
**Summary of Soil Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Sampling Date	Sample Name	Well Status	NWTPH-Gx	BTEX( EPA Method 8021B)			MTBE	EDB	EDC	
			Gasoline	Benzene	Toluene	Ethylbenzene				Total Xylenes
<b>SOIL (mg/kg)</b>										
<b>Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels</b>										
Constituent			Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDB	EDC
Concentration (mg/kg)			100 <sup>a</sup> , 30 <sup>b</sup>	0.03	7.0	6.0	9	0.1	0.005	NG
<b>WASHINGTON DEPARTMENT OF ECOLOGY</b>										
10/15/90	MW-1S	Destroyed during construction	NS	NS	NS	NS	NS	NS	NS	NS
10/15/90	MW-1D@9.5'	Destroyed during construction	NT	0.053 U	0.053 U	0.053 U	0.110 U	NT	NT	NT
10/15/90	MW-1D@35'		NT	0.062 U	0.062 U	0.062 U	0.120 U	NT	NT	NT
10/15/90	MW-1D@47'		NT	0.061 U	0.061 U	0.061 U	0.120 U	NT	NT	NT
10/15/90	MW-1D@75'		NT	0.0019 U	0.0011 U	0.0011 U	3.4	NT	NT	NT
10/22/90	MW-2S	Active	NS	NS	NS	NS	NS	NS	NS	NS
10/22/90	MW-2D@10'	Active	NT	0.056 U	0.056 U	0.056 U	0.110 U	NT	NT	NT
10/22/90	MW-2D@15'		NT	0.056 U	0.056 U	0.056 U	0.110 U	NT	NT	NT
10/22/90	MW-2D@35'		NT	0.063 U	0.063 U	0.063 U	0.130 U	NT	NT	NT
10/22/90	MW-2D@57.5'		NT	0.063 U	0.063 U	0.063 U	0.130 U	NT	NT	NT
10/22/90	MW-2D@78'		NT	0.061 U	0.061 U	0.061 U	0.120 U	NT	NT	NT
10/22/90	MW-2D@80'		NT	0.057 U	0.057 U	0.057 U	0.110 U	NT	NT	NT
05/08/91	MW-101@67.5'	Active	0.100 U	0.050 U	0.050 U	0.050 U	0.050 U	NT	NT	NT
05/08/91	MW-102	Active	NT	NT	NT	NT	NT	NT	NT	NT
05/08/91	MW-103@15'	Active	700	0.070 U	1.2	4.0	29	NT	NT	NT
05/08/91	MW-103@17.5'		3,700	0.210	19	33	200	NT	NT	NT
05/08/91	MW-103@22.5'		0.100 U	0.050 U	0.07	0.06	0.29	NT	NT	NT
05/08/91	MW-103@27.5'		0.100 U	0.050 U	0.06	0.05	0.16	NT	NT	NT
05/08/91	MW-103@32.5'		0.100 U	0.050 U	0.050 U	0.050 U	0.06	NT	NT	NT
05/08/91	MW-104@7.5'		Active	2,200	0.050 U	1.19	13	45	NT	NT
05/08/91	MW-104@12.5'	3,100		0.050 U	7.8	11	40	NT	NT	NT
05/08/91	MW-104@17.5'	3,200		0.050 U	2.0	11	44	NT	NT	NT
05/08/91	MW-104@22.5'	260		0.050 U	0.07	1.0	3.1	NT	NT	NT
05/08/91	MW-104@27.5'	190		0.050 U	0.05	0.81	3.2	NT	NT	NT
05/08/91	MW-104@37.5'	30		0.050 U	0.050 U	0.060 U	0.38	NT	NT	NT
06/13/95	SP-1-20'	Decommissioned	1,800	ND	2.5	11	56	NT	NT	NT
06/13/95	SP-1-25'		5,300	ND	140	72	350	NT	NT	NT
06/13/95	SP-1-30'		2,500	ND	70	35	169	NT	NT	NT
06/13/95	SP-1-35'		130	ND	3.1	1.7	8.2	NT	NT	NT
06/13/95	SP-3-20'	Decommissioned	750	ND	ND	4.6	14.3	NT	NT	NT
06/13/95	SP-3-25'		9	ND	ND	ND	0.59	NT	NT	NT
06/13/95	SP-3-30'		16	ND	0.12	0.18	0.97	NT	NT	NT
06/13/95	SP-4-20'	Decommissioned	3,000	ND	25	33	196	NT	NT	NT
06/13/95	SP-4-25'		310	0.56	4.5	4.1	22.5	NT	NT	NT
06/13/95	SP-4-30'		20	0.39	0.76	0.52	7.69	NT	NT	NT
06/13/95	SP-4-35'		11	0.26	0.37	0.29	1.38	NT	NT	NT

**TABLE 2**  
**Summary of Soil Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Sampling Date	Sample Name	Well Status	NWTPH-Gx	BTEX( EPA Method 8021B)				MTBE	EDB	EDC
			Gasoline	Benzene	Toluene	Ethylbenzene	Total Xylenes			
<b>GN NORTHERN, INC.</b>										
01/22/99	BH-15A-21'	NA	<b>17,000</b>	<b>12</b>	<b>39</b>	<b>69</b>	<b>280</b>	NT	NT	NT
<b>AMEC EARTH &amp; ENVIRONMENTAL</b>										
07/27/99	BH20-6 @ 20'-24'	NA	<b>6,500</b>	0.5 U	<b>65</b>	<b>65</b>	<b>390</b>	NT	NT	NT
07/27/99	BH21-5 @ 16'-20'	NA	5.0 U	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/27/99	BH22-5 @ 16'-20'	NA	<b>24</b>	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/29/99	BH23-9 @ 32'-36'	NA	<b>5.9</b>	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/29/99	BH24-4 @ 12'-16'	NA	<b>6.5</b>	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/29/99	BH25-5 @ 16'-20'	NA	5.0 U	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/28/99	VP1-4 @ 12'-16'	NA	<b>2,100</b>	1.25 U	1.25 U	<b>3.9</b>	<b>8.8</b>	NT	NT	NT
07/28/99	VP2-4 @ 16'-20'	NA	<b>2,200</b>	1.25 U	1.25 U	<b>4.4</b>	<b>9.7</b>	NT	NT	NT
07/27/99	VP3-2 @ 4'-8'	NA	<b>46</b>	0.05 U	0.05 U	<b>0.09</b>	<b>0.17</b>	NT	NT	NT
07/28/99	VP6-3 @ 8'-12'	NA	5.0 U	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
11/10/99	MW-105	Active	NT	NT	NT	NT	NT	NT	NT	NT
11/10/99	MW-106	Active	NT	NT	NT	NT	NT	NT	NT	NT
11/09/99	MW-107	Active	NT	NT	NT	NT	NT	NT	NT	NT
11/09/99	MW-108	Active	NT	NT	NT	NT	NT	NT	NT	NT
8/13/08	B-1 @ 20'-22'	NA	2 U	0.03 U	0.05 U	0.05 U	0.1 U	0.05 U	0.05 U	0.05 U
8/13/08	B-2 @ 22'-24'	NA	2 U	0.03 U	0.05 U	0.05 U	0.1 U	0.05 U	0.05 U	0.05 U
8/13/08	B-7 @ 24'-26'	NA	2 U	0.03 U	0.05 U	0.05 U	0.1 U	0.05 U	0.05 U	0.05 U
10/6/08	MW108A @ 20'	Active	20 U	NT	NT	NT	NT	NT	NT	NT
10/6/08	MW109 @ 20'	Active	20 U	NT	NT	NT	NT	NT	NT	NT
10/6/08	MW110 @ 20'	Active	<b>300</b>	0.2U	<b>0.85</b>	<b>2.0</b>	<b>5.3</b>	NT	NT	NT
10/6/08	MW111 @ 30'	Active	20 U	NT	NT	NT	NT	NT	NT	NT

Notes:

EDB = ethylene dibromide

EDC = ethylene dichloride

MTBE = methyl tert butyl ether

NA = Not applicable

ND = Not detected above method detection limit; detection limit not specified in Ecology report, laboratory data not available

NG = No guideline

NT = Not tested

mg/kg = milligrams per kilogram

U = Analyte not detected above method detection limit reported in table

Values shown in bold represent exceedences of current MTCA Method A Soil Cleanup Levels (30 mg/kg)

Values shown in parentheses represent proposed MTCA Method A Soil Cleanup Levels for Unrestricted Land Uses

**Bold** values indicate constituents detected at concentrations greater than the laboratory reporting limit

**Red** values indicate the concentration exceeds the MTCA Method A cleanup level

a = MTCA Method A Soil Cleanup Level for Unrestricted Land Uses, for gasoline mixtures without benzene and consisting of no more than 20% aromatic hydrocarbons between EC 8 and EC 16

b = MTCA Method A Soil Cleanup Level for Unrestricted Land Uses, all other gasoline mixtures

\* Indicates Ecology well was resampled by AMEC

\*\* Chromatographic evidence indicates that gasoline constituents eluted within the diesel range

**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.
			(µg/L)							(µg/L)												
MTCA Method A		800	5	1,000	700	1,000	20	5	0.01	None	None	None	None	None	None	None	None	160				
<b>Wells</b>																						
Sommers	6/27/90	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-				
	12/17/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	3/5/91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Beatty	8/1/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			270.31	
	12/17/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			268.24	
	3/5/91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			270.04	
Warrington	6/27/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	8/1/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			276.60	
	12/17/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			273.22	
	3/5/91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			276.32	
Peterson	6/27/90	-	0.031	-	-	0.0134	-	-	-	-	-	-	-	-	-	-	-	-				
	8/1/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			280.67	
	8/30/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			280.22	
	8/31/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	12/17/90	-	0.0096	-	-	0.0032	-	-	-	-	-	-	-	-	-	-	-	-			279.42	
	3/5/91	0.093	0.038	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-			281.26	
Tripp	6/5/90	-	0.200	-	-	0.170	-	-	-	-	-	-	-	-	-	-	-	-				
	6/27/90	-	0.166	-	-	0.120	-	-	-	-	-	-	-	-	-	-	-	-				
	8/1/90	-	0.021	-	-	0.054	-	-	-	-	-	-	-	-	-	-	-	-			270.57	
	8/30/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			269.97	
	8/31/90	-	0.130	-	-	0.120	-	-	-	-	-	-	-	-	-	-	-	-				
	10/23/90	-	0.320	-	-	0.270	-	-	-	-	-	-	-	-	-	-	-	-				
	12/17/90	-	0.210	-	-	0.410	-	-	-	-	-	-	-	-	-	-	-	-			268.30	
	3/5/91	0.130	0.150	-	-	0.250	-	-	-	-	-	-	-	-	-	-	-	-			269.86	
Beck	6/5/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	6/27/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
	8/1/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			280.72	
	8/30/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			280.11	
	12/17/90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			280.07	
	3/5/91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			282.47	
MW-1S	05/22/91	20 U	1.0 U	1.0 U	1.0 U	1 U	-	-	-	-	-	-	-	-	-	-	-					
MW-1S	03/25/93	250 U	1.0 U	1.0 U	1.0 U	3.0 U	-	-	-	-	-	-	-	-	-	-	-					
MW-1S	05/28/97	250 U	1.0 U	1.0 U	1.0 U	3.0 U	-	-	-	-	-	-	-	-	-	-	-					
MW-1S	02/18/98	120	1.0 U	1.0 U	1.0 U	3.0 U	-	-	-	-	-	-	-	-	-	-	-					
MW-1D	05/22/91	17,000	2,200	36	5.0	400	^	^	^	^	^	^	^	^	^	^	^					
MW-1D	03/25/93	2,600	2,300	50 U	50 U	320	^	^	^	^	^	^	^	^	^	^	^					
MW-1D	05/28/97	250 U	1.0 U	1.0 U	1.0 U	3.0 U	^	^	^	^	^	^	^	^	^	^	^					
MW-1D	02/18/98	570	12	1.9	0.92	8.6	^	^	^	^	^	^	^	^	^	^	^					



**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.
			(µg/L)							(µg/L)												
<b>MTCA Method A</b>		<b>800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>20</b>	<b>5</b>	<b>0.01</b>	None	None	None	None	None	None	None	None	<b>160</b>				
MW-2S	05/22/91	20 U	1.0 U	1.0 U	1.0 U	1 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-2S	03/25/93	50 U	1.0 U	1.0 U	1.0 U	3.0 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-2S	05/28/97	250 U	1.0 U	1.0 U	1.0 U	3.0 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-2S	02/18/98	120 U	-	-	-	-	^	^	^	^	^	^	^	^	^	^	^	^				
MW-101	02/18/98	1,000 U	1.0 U	1.0 U	1.0 U	1 U	-	-	-	-	-	-	-	-	-	-	-	-				
MW-102	02/18/98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
MW-103	5/22/91	<b>22,000</b>	<b>860</b>	<b>3,900</b>	<b>11</b>	<b>6,800</b>	-	-	-	-	-	-	-	-	-	-	-	-	NM	NM	NM	NM
MW-103	3/25/93	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.70	28.04	0.00	283.66
MW-103	5/28/97	<b>42,000</b>	<b>12</b>	<b>1,100</b>	<b>56</b>	<b>9,500</b>	-	-	-	-	-	-	-	-	-	-	-	-	311.70	17.20	0.00	294.50
MW-103	2/18/98	<b>48,000</b>	<b>22</b>	<b>630</b>	<b>350</b>	<b>7,800</b>	-	-	-	-	-	-	-	-	-	-	-	-	NM	NM	NM	NM
MW-103	8/18/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.70	20.07	0.02	291.65
MW-103	11/2/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.70	20.90	0.03	290.82
MW-103	3/1/00	<b>47,000</b>	20 U	<b>450</b>	<b>1,200</b>	<b>7,900</b>	20 U	20 U	20 U	-	-	-	-	-	-	-	-	-	311.70	16.99	0.00	294.71
MW-103	5/24/00	<b>3,900</b>	1 U	<b>18.3</b>	<b>33.2</b>	<b>594</b>	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	311.70	18.13	0.00	293.57
MW-103	7/10/00	<b>1,850</b>	1 U	<b>15</b>	<b>16</b>	<b>277</b>	1 U	1 U	1 U	1 U	1 U	<b>27.4</b>	<b>49</b>	1 U	1 U	1 U	5.0 U	25 U	311.70	20.00	0.00	291.70
MW-103	10/19/00	<b>1,000</b>	1 U	<b>17</b>	<b>34</b>	<b>322</b>	1 U	1 U	1 U	1	<b>3.5</b>	<b>98.9</b>	<b>27.8</b>	1 U	1 U	1 U	5.0 U	<b>38</b>	311.70	16.15	0.00	295.55
MW-103	12/13/00	<b>3,810</b>	0.5 U	<b>29</b>	<b>74</b>	<b>597</b>	<b>2</b>	-	-	-	-	-	-	-	-	-	-	-	311.70	19.29	0.00	292.41
MW-103	3/19/01	<b>16,600</b>	10 U	<b>218</b>	<b>528</b>	<b>3,750</b>	10 U	10 U	10 U	<b>21</b>	<b>58.5</b>	<b>1290</b>	<b>389</b>	10 U	10 U	10 U	5 U	<b>309</b>	311.70	19.83	0.00	291.87
MW-103	6/28/01	<b>9,660</b>	10 U	<b>26</b>	<b>126</b>	<b>953</b>	40 U	-	-	-	-	-	-	-	-	-	-	-	311.70	21.03	0.00	290.67
MW-103	9/23/01	<b>23,200</b>	10 U	<b>109</b>	<b>628</b>	<b>3,560</b>	40 U	-	-	-	-	-	-	-	-	-	-	-	311.70	21.24	0.00	290.46
MW-103	12/11/01	<b>21,100</b>	10 U	<b>18</b>	<b>264</b>	<b>1,950</b>	40 U	10 U	10 U	40 U	<b>35.0</b>	<b>1130</b>	<b>441</b>	20 U	20 U	40 U	100 U	<b>137</b>	311.70	18.79	0.00	292.91
MW-103	3/20/02	<b>10,700</b>	2.5 U	<b>10</b>	<b>97</b>	<b>1,130</b>	10 U	2.5 U	2.5 U	10 U	<b>19.1</b>	<b>948</b>	<b>389</b>	5 U	5 U	<b>10.1</b>	25 U	<b>83</b>	311.70	16.32	0.00	295.38
MW-103	6/11/02	<b>2,020</b>	2.5 U	<b>3</b>	<b>32</b>	<b>250</b>	10 U	2.5 U	2.5 U	10 U	<b>6.1</b>	<b>141</b>	<b>51.8</b>	5 U	5 U	10 U	25 U	<b>25</b>	311.70	18.05	0.00	293.65
MW-103	9/25/02	<b>5,190</b>	1 U	<b>2</b>	<b>51</b>	<b>65</b>	2 U	1 U	1 U	<b>5</b>	<b>12</b>	<b>53.8</b>	<b>7.43</b>	1 U	<b>1.7</b>	-	<b>6.2</b>	<b>152</b>	311.70	20.43	0.00	291.27
MW-103	12/12/02	<b>15,200</b>	1 U	<b>7</b>	<b>473</b>	<b>2,021</b>	2 U	1 U	1 U	<b>34</b>	<b>115.0</b>	<b>1710</b>	<b>495</b>	1 U	1 U	-	<b>54.2</b>	<b>163</b>	311.70	22.55	0.00	289.15
MW-103	4/1/03	<b>2,270</b>	2.5 U	2.5 U	<b>13</b>	<b>244</b>	10 U	-	-	-	-	-	-	-	-	-	-	-	311.70	18.75	0.00	292.95
MW-103	6/22/03	<b>15,400</b>	5 U	5 U	<b>252</b>	<b>1,060</b>	20 U	-	-	20 U	<b>78.4</b>	<b>1300</b>	<b>440</b>	10 U	10 U	-	50 U	<b>155</b>	311.70	20.70	0.00	291.00
MW-103	9/23/03	<b>12,500</b>	10 U	10 U	<b>354</b>	<b>1,068</b>	10 U	10 U	10 U	<b>27</b>	<b>70.9</b>	<b>1060</b>	<b>323</b>	10 U	10 U	1 U	<b>14.8</b>	<b>80</b>	311.70	22.17	0.00	289.53
MW-103	12/17/03	<b>4,180</b>	10 U	10 U	<b>152</b>	<b>455</b>	20 U	10 U	10 U	10 U	<b>20.40</b>	<b>288</b>	<b>87</b>	10 U	10 U	10 U	10 U	<b>28</b>	311.70	19.56	0.00	292.14
MW-103	3/31/04	<b>623</b>	0.2 U	0.5 U	<b>16</b>	<b>53</b>	2 U	0.5 U	0.5 U	<b>3</b>	<b>7.6</b>	<b>58.2</b>	<b>10.4</b>	1 U	1 U	1 U	5 U	<b>24</b>	311.70	18.42	0.00	293.28
MW-103	6/29/04	<b>17,300</b>	<b>3</b>	2.5 U	<b>243</b>	<b>1,133</b>	2.5 U	2.5 U	2.5 U	<b>25</b>	<b>69.4</b>	<b>1010</b>	<b>281</b>	2.5 U	2.5 U	<b>5.98</b>	<b>14.4</b>	<b>138</b>	311.70	20.58	0.00	291.12
MW-103	9/29/04	<b>9,680</b>	2 U	5 U	<b>276</b>	<b>1,010</b>	20 U	5 U	5 U	<b>31</b>	<b>88.6</b>	<b>1260</b>	<b>391</b>	10.0 U	10.0 U	10.0 U	50.0 U	<b>95</b>	311.70	21.08	0.00	290.62
MW-103	11/9/04	-	2 U	5 U	<b>310</b>	<b>1,020</b>	20 U	5 U	5 U	<b>45</b>	<b>123.0</b>	<b>1420</b>	<b>440</b>	10.0 U	10.0 U	10.0 U	50.0 U	<b>92</b>	311.70	21.97	0.00	289.73
MW-103	3/10/05	<b>1,570</b>	2 U	5 U	<b>140</b>	<b>612</b>	20 U	5 U	5 U	<b>20</b>	U	<b>918</b>	<b>266</b>	10.0 U	10.0 U	20.0 U	50.0 U	<b>89</b>	311.70	21.27	0.00	290.43
MW-103*	6/21/05	<b>6,660</b>	1 U	2.5 U	<b>114</b>	<b>484</b>	10 U	2.5 U	2.5 U	<b>12</b>	<b>31.8</b>	<b>474</b>	<b>128</b>	5.00 U	5.00 U	10.0 U	25.0 U	<b>58</b>	311.70	20.74	0.00	290.96
MW-103	9/23/05	<b>13,700</b>	0.2 U	0.5 U	<b>26</b>	<b>99</b>	2 U	0.5 U	0.5 U	<b>4.08</b>	<b>12.6</b>	<b>173</b>	<b>57.8</b>	1.00 U	1.00 U	2.00 U	8.00 U	<b>9</b>	311.70	22.12	0.00	289.58
MW-103	12/1/05	<b>3,310</b>	1 U	2.5 U	<b>105</b>	<b>694</b>	10 U	2.5 U	2.5 U	<b>13</b>	<b>23.5</b>	<b>780</b>	<b>289</b>	10.0 U	10.0 U	10.0 U	10.0 U	<b>25</b>	311.70	21.72	0.00	289.98
MW-103	3/9/06	80 U	0.2 U	0.5 U	<b>0.75</b>	<b>1 U</b>	2 U	0.5 U	0.5 U	2 U	<b>1.31</b>	<b>1 U</b>	<b>0.78</b>	1 U	1 U	2 U	50 U	2 U	311.70	16.44	0.00	295.26
MW-103	6/8/06	<b>584</b>	0.2 U	0.5 U	<b>8.32</b>	<b>22</b>	2 U	0.5 U	0.5 U	<b>3.64</b>	<b>12.5</b>	<b>81.3</b>	<b>29.0</b>	2 U	2 U	2 U	<b>5.78</b>	<b>13</b>	311.70	17.62	0.00	294.08
MW-103	9/22/06	<b>3,850</b>	2 U	5 U	<b>152</b>	<b>710</b>	20 U	5 U	5 U	<b>28.30</b>	<b>93.1</b>	<b>1150</b>	<b>446.0</b>	10 U	10 U	10 U	50 U	<b>75.3</b>	311.70	21.54	0.00	290.16
MW-103	12/12/06	<b>1,750</b>	0.5 U	0.5 U	<b>23.2</b>	<b>84.7</b>	2 U	0.5 U	0.5 U	<b>5.83</b>	<b>20.6</b>	<b>176</b>	<b>59.8</b>	1 U	1 U	<b>2.15</b>	11 U	<b>18.5</b>	311.70	17.81	0.00	293.89
MW-103	3/28/07	80 U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	2 U	5 U	2 U	311.70	16.58	0.00	295.12
MW-103	6/13/07	<b>2,500</b>	0.400 U	1.00 U	<b>17.5</b>	<b>53.3</b>	4.00 U	1.0 U	1.0 U	<b>6.88</b>	<b>25</b>	<b>137</b>	<b>46.5</b>	2.00 U	2.00 U	4.0 U	10.0 U	<b>16.0</b>	311.70	18.90	0.00	292.80
MW-103	8/28/07	<b>264</b>	<b>84.1</b>	0.500 U	0.500 U	<b>6.6</b>	2.00 U	0.50 U	0.50 U	2.00 U	0.50 U	<b>1.47</b>	0.50 U	1.00 U	1.00 U	2.00 U	5.00 U	2.00 U	311.70	19.91	0.00	291.79

**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.
			(µg/L)							(µg/L)												
MTCA Method A		800	5	1,000	700	1,000	20	5	0.01	None	None	None	None	None	None	None	None	160				
MW-103	11/28/07	7,130	0.200 U	0.500 U	32.2	141.0	2.00 U	0.500 U	0.500 U	2.00 U	69	743	287.0	1.00 U	1.00 U	10.80	5.00 U	39.3	311.70	20.93	0.00	290.77
MW-103	4/15/08	4,020	0.500 U	2.00U	51.8	251.9	0.500 U	0.500 U	1.00 U	11.4	33.3	453	63.5	0.500 U	1.00 U	0.500 U	5.00 U	27.5	311.70	19.09	0.00	292.61
MW-103	6/19/08	10,600	0.250 U	1.00 U	91.1	371.0	2.00 U	0.500 U	0.500 U	20.9	81.1	783	272	0.500 U	6.76	26	1.00 U	41.3	311.70	20.51	0.00	291.19
MW-103	9/16/08	2,527	0.500 U	2.00 U	24.8	207.0	2.00 U	1.00 U	1.00 U	3.3	8.9	282	96	5.00 U	100 U	10.0 U	10.10	22.3	311.70	20.11	0.00	291.59
MW-103	1/24/09	202	0.250 U	1.00 U	0.620	4.36	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	8.11	3.24	-	10.0 U	1.00 U	1.00 U	5.00 U	311.70	19.20	0.00	292.50
MW-103	3/28/09	80 U	0.250 U	1.00 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	311.70	18.16	0.00	293.54
MW-103	6/11/09	100 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	311.70	18.61	0.00	293.09
MW-103	9/10/09	179	0.250 U	0.500 U	0.700	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.940	3.12	2.36	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	311.70	21.47	0.00	290.23
MW-103	1/22/10	1,320	0.250 U	0.500 U	7.350	20.86	1.00 U	0.500 U	0.500 U	1.73	4.27	75.6	10.6	0.500 U	1.00 U	2.72	4.51	5.00 U	311.70	19.31	0.00	292.39
MW-104	05/22/91	1,000	1.0 U	20 U	1.0 U	1.0 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-104	03/25/93	250 U	5.0 U	5.0 U	5.0 U	15 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-104	05/28/97	250 U	1.0 U	1.0 U	1.0 U	3.0 U	^	^	^	^	^	^	^	^	^	^	^	^				
MW-104	02/18/98	120	2.6	1.0	0.88	1.0	^	^	^	^	^	^	^	^	^	^	^	^				
MW-105	11/2/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.99	21.07	0.00	290.92
MW-105	3/1/00	100U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	311.99	15.70	0.00	296.29
MW-105	5/24/00	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.99	17.76	0.00	294.23
MW-105	7/10/00	50U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	311.99	18.50	0.00	293.49
MW-105	10/19/00	50U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	311.99	20.60	0.00	291.39
MW-105	12/13/00	50U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	311.99	21.15	0.00	290.84
MW-105	3/19/01	50U	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	311.99	20.40	0.00	291.59
MW-105	6/28/01	99.8	0.5 U	0.5 U	0.5 U	1 U	2 U	-	-	-	-	-	-	-	-	-	-	-	311.99	20.26	0.00	291.73
MW-105	9/23/01	135	0.5 U	0.5 U	0.5 U	1 U	2 U	-	-	-	-	-	-	-	-	-	-	-	311.99	20.62	0.00	291.37
MW-105	12/11/01	80U	0.5 U	0.5 U	0.5 U	1 U	2 U	5 U	5 U	2 U	0.5 U	1 U	1 U	1 U	1 U	2 U	5 U	2 U	311.99	18.37	0.00	293.62
MW-105	3/20/02	80U	0.5 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	3 U	1 U	1 U	1 U	2 U	5 U	2 U	311.99	15.81	0.00	296.18
MW-105	6/11/02	80U	0.5 U	0.5 U	0.5 U	2	2 U	0.5 U	0.5 U	2 U	2 U	1 U	1 U	1 U	1 U	2 U	5 U	2 U	311.99	17.64	0.00	294.35
MW-105	9/25/02	50U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	311.99	20.65	0.00	291.34
MW-105	12/12/02	50U	1 U	1 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	311.99	21.49	0.00	290.50
MW-105	4/1/03	80U	0.5 U	0.5 U	0.5 U	1 U	2 U	-	-	-	-	-	-	-	-	-	-	-	311.99	17.93	0.00	294.06
MW-105	6/22/03	80U	0.5 U	0.5 U	0.5 U	1 U	2 U	-	-	2 U	0.5 U	1 U	0.5 U	1 U	1 U	-	5 U	2 U	311.99	19.80	0.00	292.19
MW-105	9/23/03	50U	1 U	1 U	1 U	3 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	311.99	21.61	0.00	290.38
MW-105	12/17/03	50U	0.2 U	0.2 U	0.2 U	0.3 U	1 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.2 U	10 U	0.2 U	0.5 U	311.99	19.67	0.00	292.32
MW-105	3/31/04	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	5 U	2 U	311.99	18.42	0.00	293.57
MW-105	6/29/04	50U	0.2 U	0.2 U	0.2 U	0.8 U	0.5 U	0.2 U	0.2 U	0.5 U	0.5 U	0.2 U	0.5 U	0.5 U	0.2 U	0.2 U	0.2 U	1	311.99	19.80	0.00	292.19
MW-105	9/29/04	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	5 U	2 U	311.99	20.47	0.00	291.52
MW-105	11/9/04	-	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	1 U	5 U	2 U	311.99	21.14	0.00	290.85
MW-105	3/10/05	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	2 U	1 U	0.5 U	1 U	1 U	2 U	5 U	2 U	311.99	20.35	0.00	291.64
MW-105*	6/21/05	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	2 U	5 U	2 U	311.99	20.06	0.00	291.93
MW-105	9/23/05	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	2 U	5 U	2	311.99	21.62	0.00	290.37
MW-105	12/1/05	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	2 U	2 U	2 U	2 U	2 U	311.99	20.99	0.00	291.00
MW-105	3/9/06	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	1 U	1 U	2 U	5 U	2 U	311.99	16.55	0.00	295.44
MW-105	6/8/06	80U	0.2 U	0.5 U	0.5 U	1 U	2 U	0.5 U	0.5 U	2 U	0.5 U	1 U	0.5 U	2 U	2 U	2 U	2 U	2 U	311.99	17.33	0.00	294.66
MW-105	9/22/06	2,340	329	412	6.55	151	10 U	2.5 U	2.5 U	10 U	2.5 U	5 U	6.15	5 U	5 U	5 U	25 U	10 U	311.99	20.84	0.00	291.15
MW-105	12/12/06	6,140	1,690	1,870	105	549	40 U	10 U	10 U	40 U	10 U	57.6	24.6	20 U	20 U	40 U	100 U	40 U	311.99	17.48	0.00	294.51
MW-105	3/28/07	702	161	20	1 U	35	4 U	1 U	1 U	4 U	1 U	2.48	2.48	2 U	2 U	4 U	10 U	4 U	311.99	15.55	0.00	296.44

**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
			Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.
			(µg/L)							(µg/L)												
<b>MTCA Method A</b>		<b>800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>20</b>	<b>5</b>	<b>0.01</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>160</b>				
MW-105	6/13/07	647	176	39.2	8.9	65.5	4.0 U	1.0 U	1.0 U	4.0 U	1.0 U	5.4	4.9	2.0 U	2.0 U	4.0 U	10.0 U	4.0 U	311.99	15.95	0.00	296.04
MW-105	8/28/07	4,300	1.00 U	2.50 U	44.1	159.0	10.0 U	2.50 U	2.50 U	17.2	62.9	383.0	109.0	5.00 U	5.00 U	10.0 U	25.0 U	31.9	311.99	18.74	0.00	293.25
MW-105	11/28/07	99.4	45.6	0.500 U	0.500 U	4.15	2.00 U	0.500 U	0.500 U	2.00 U	0.50 U	1.00 U	0.50 U	1.00 U	1.00 U	2.00 U	5.00 U	2.00 U	311.99	19.96	0.00	292.03
MW-105	4/15/08	80 U	2.89	2.00 U	0.500 U	1.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	0.500 U	5.00 U	5.00 U	311.99	18.14	0.00	293.85
MW-105	6/19/08	80 U	3.44	1.00 U	0.500 U	0.540	2.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	0.500 U	1.00 U	5.00 U	311.99	19.61	0.00	292.38
MW-105	9/16/08	80 U	0.250 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	10.0 U	1.00 U	1.00 U	5.00 U	311.99	19.71	0.00	292.28
MW-105	1/24/09	80 U	0.250 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	-	1.00 U	1.00 U	1.00 U	5.00 U	310.46	18.78	0.00	291.68
MW-105	3/28/09	80 U	0.250 U	1.00 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	0.500 U	5.00 U	310.46	17.17	0.00	293.29
MW-105	6/11/09	100 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	310.46	17.63	0.00	292.83
MW-105	9/10/09	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.46	21.48	0.00	288.98
MW-105	1/22/10	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.46	17.46	0.00	293.00
MW-106	11/2/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.73	24.95	0.00	286.78
MW-106	3/1/00	100 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	311.73	20.88	0.00	290.85
MW-106	5/24/00	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.73	25.93	0.00	285.80
MW-106	7/10/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	311.73	27.00	0.00	284.73
MW-106	10/19/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	311.73	25.63	0.00	286.10
MW-106	12/13/00	50 U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	311.73	26.30	0.00	285.43
MW-106	3/19/01	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.73	Dry	Dry	Dry
MW-106	6/28/01	Well destroyed during roadway paving activities																				
MW-107	11/2/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	310.59	23.61	0.00	286.98
MW-107	3/1/00	100 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	310.59	19.46	0.00	291.13
MW-107	5/24/00	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	310.59	23.54	0.00	287.05
MW-107	7/10/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	310.59	24.79	0.00	285.80
MW-107	10/19/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	310.59	23.87	0.00	286.72
MW-107	12/13/00	50 U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	310.59	24.50	0.00	286.09
MW-107	3/19/01	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	310.59	26.67	0.00	283.92
MW-107	6/28/01	Well destroyed during roadway paving activities																				
MW-108	11/2/99	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	309.94	22.96	0.00	286.98
MW-108	3/1/00	100 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	309.94	18.55	0.00	291.39
MW-108	5/24/00	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	309.94	22.72	0.00	287.22
MW-108	7/10/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	-	-	-	-	-	-	-	-	-	309.94	24.48	0.00	285.46
MW-108	10/19/00	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	309.94	20.46	0.00	289.48
MW-108	12/13/00	50 U	0.5 U	0.5 U	0.5 U	1.5 U	0.5 U	-	-	-	-	-	-	-	-	-	-	-	309.94	23.47	0.00	286.47
MW-108	3/19/01	50 U	1.0 U	1.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	25 U	309.94	25.43	0.00	284.51
MW-108	6/28/01	Well destroyed during roadway paving activities																				
MW-108A	1/24/09	80 U	0.250 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	-	10.0 U	1.00 U	1.00 U	5.00 U	310.38	23.51	0.00	286.87
MW-108A	3/28/09	80 U	0.250 U	1.00 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	0.500 U	5.00 U	310.38	22.70	0.00	287.76
MW-108A	6/11/09	100 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	310.38	23.42	0.00	287.04
MW-108A	9/10/09	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.38	25.52	0.00	284.86
MW-108A	1/22/10	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.38	22.69	0.00	287.69
MW-109	1/24/09	80 U	1.51	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	-	1.00 U	1.00 U	1.00 U	5.00 U	310.48	16.27	0.00	294.21
MW-109	3/28/09	80 U	2.02	1.00 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	0.500 U	5.00 U	310.48	16.13	0.00	294.33
MW-109	6/11/09	100 U	27.40	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	310.48	16.27	0.00	294.19
MW-109	9/10/09	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.48	19.77	0.00	290.71

**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.
			(µg/L)							(µg/L)												
<b>MTCA Method A</b>		<b>800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>20</b>	<b>5</b>	<b>0.01</b>	None	None	None	None	None	None	None	None	<b>160</b>				
MW-109	1/22/10	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.48	15.25	0.00	295.23
MW-110	1/24/09	<b>10,900</b>	2.50 U	10.0 U	<b>251</b>	<b>938</b>	10.0 U	5.00 U	5.00 U	<b>22.4</b>	<b>84.1</b>	<b>246.0</b>	<b>193.0</b>	-	1.00 U	<b>17.7</b>	<b>26.1</b>	50.0 U	312.77	19.53	0.00	293.24
MW-110	3/28/09	<b>162</b>	0.250 U	1.00 U	<b>1.26</b>	<b>4.57</b>	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	<b>1.25</b>	<b>1.21</b>	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	312.77	16.44	0.00	294.02
MW-110	6/11/09	100 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	312.77	NA	0.00	NA
MW-110	9/10/09	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	312.77	22.60	0.00	290.17
MW-110	1/22/10	<b>687</b>	0.250 U	0.500 U	<b>1.04</b>	<b>2.34</b>	1.00 U	0.500 U	0.500 U	0.500 U	<b>0.950</b>	<b>4.79</b>	<b>6.59</b>	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	312.77	19.76	0.00	293.01
MW-111	1/24/09	80 U	0.250 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	-	1.00 U	1.00 U	1.00 U	5.00 U	310.62	32.25	0.00	278.37
MW-111	3/28/09	80 U	0.250 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	0.500 U	5.00 U	310.62	32.04	0.00	278.42
MW-111	6/11/09	100 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	2.00 U	310.62	31.44	0.00	279.02
MW-111	9/10/09	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.62	32.02	0.00	278.60
MW-111	1/22/10	80 U	0.250 U	0.500 U	0.500 U	1.500 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U	5.00 U	310.62	31.52	0.00	279.10
<b>Air Sparging Wells</b>																						
AS-5	9/16/08	0.0800 U	0.205 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	10.0 U	1.00 U	1.00 U	5.00 U	NA	20.25	0.00	NA
AS-9	9/16/08	0.0800 U	0.205 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	1.00 U	10.0 U	1.00 U	1.00 U	5.00 U	NA	24.77	0.00	NA
AS-10	9/16/08	0.0800 U	0.205 U	1.00 U	0.500 U	1.50 U	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	10.0 U	1.00 U	1.00 U	5.00 U	NA	23.46	0.00	NA
<b>Grab Samples</b>																						
BH20-31W	7/27/99	<b>256</b>	<b>15.0</b>	<b>10.8</b>	<b>4.49</b>	<b>13.5</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH20A-24W	7/27/99	<b>78,000</b>	<b>200</b>	<b>8,700</b>	<b>2,400</b>	<b>14,000</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH21-25W	7/27/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH22-28W	7/27/99	<b>1,410</b>	0.50 U	<b>1.44</b>	<b>6.14</b>	<b>22.3</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH23-36W	7/29/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH24-16W	7/29/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH25-22W	7/29/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
VP1-23W	7/28/99	<b>47,000</b>	0.50 U	<b>16.2</b>	<b>2,100</b>	<b>9,400</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
VP2-22W	7/28/99	<b>8,200</b>	0.50 U	<b>5.35</b>	<b>110</b>	<b>630</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
VP3-23W	7/28/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
VP4-21W	7/28/99	<b>60</b>	0.50 U	0.50 U	<b>0.56</b>	<b>2.18</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
VP6-18W	7/28/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^
BH-15A-21'	1/22/99	<b>41,000</b>	<b>130</b>	<b>120</b>	<b>530</b>	<b>5,000</b>	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^

**TABLE 3**  
**Groundwater Elevations and Analytical Results**  
**Fred Meyer Stores - Port Orchard Site**

Well No.	Date	Gasoline-Range Organics (µg/L)	Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels																			
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	i-PB	n-PB	1,2,4-TMB	1,3,5-TMB	tertbutyl Benzene	sec-butyl Benzene	4-IP-Toluene	n-butyl-Benzene	Naphthalene	Casing Elev.	Depth to Water	NAPL Thickness	Water Elev.																
			(µg/L)							(µg/L)																												
<b>MTCA Method A</b>		<b>800</b>	<b>5</b>	<b>1,000</b>	<b>700</b>	<b>1,000</b>	<b>20</b>	<b>5</b>	<b>0.01</b>	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
B-3	8/13/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	
B-4	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-5	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-6	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Duplicate (B-6)	8/15/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-7	8/13/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-10	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-11	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-12	8/15/08	<b>2,000</b>	<b>980</b>	1U	1U	<b>9.0</b>	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-14	8/15/08	<b>1,100</b>	1U	1U	<b>4.2</b>	<b>2.2</b>	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
B-15	8/15/08	100U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U

Notes:

MTCA Method A and B: Washington Department of Ecology Model Toxics Control Act cleanup standards A and B

NAPL: non-aqueous phase liquid

MTBE: methyl tert-butyl ether

EDC: 1,2-dichloroethane

EDB: 1,2-dibromoethane

i-PB: isopropylbenzene

n-PB: n-propylbenzene

TMB: trimethylbenzene

\* Corrected field label error for switched MW-103 and MW-105 samples

4-IP-Toulene: p-isopropyltoluene

µg/L: micrograms per liter

**Bold** values indicate concentrations detected >laboratory reporting limit

**Red** values indicate the concentration exceeds the MTCA Method A cleanup level

NM: not measured

-: The analyte was not tested for by this method

^: not sampled

U: The analyte was not detected above method detection limit presented in table.

**TABLE 4**  
**Conceptual Site Model Summary**  
**Fred Meyer Stores - Port Orchard Site**

Medium	Potential Receptor	Exposure Pathway	Selected Pathway	Reason for Selection or Exclusion
<b>Current Land Use - Commercial/Industrial</b>				
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Ingestion of COPCs in on-site soil	No	Land use at the site is currently commercial/industrial, not residential; surficial and shallow soil are not affected; the majority of the site is paved.
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Dermal contact with COPCs in on-site soil	No	Land use at the site is currently commercial/industrial, not residential; surficial and shallow soil are not affected; the majority of the site is paved.
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Inhalation of COPCs adhered to dust particles or in vapors	No	Land use at the site is currently commercial/industrial, not residential; surficial and shallow soil are not affected; the majority of the site is paved.
Subsurface Soil (> 3 feet bgs)	Residential Occupational Construction/Excavation	Volatilization of COPCs to outdoor air with subsequent inhalation	No	Land use at the site is currently commercial/industrial, not residential; Remaining soil impacts are not located in vadose zone, but are instead located within a smear zone created by groundwater elevation fluctuations between 15 and 25 feet bgs; Volatiles that would preferentially be released from the smear zone into the vadose zone would be recovered by the AS/SVE system; With continued operation of the AS/SVE system, this pathway is incomplete for residential, occupational, and construction/excavation worker receptors.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Ingestion of COPCs in on-site soil	No	Land use at the site is currently commercial/industrial, not residential; Residual concentrations of COPCs in soil exist at depth of 15 to 20 feet bgs. This pathway is incomplete since it is doubtful that residential or occupational receptors will be in direct contact with deep soil.
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Ingestion of COPCs in on-site soil	Yes (unlikely)	It is possible that deeper excavations could encounter residual concentrations of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Dermal contact with COPCs in on-site soil	No	Land use at the site is currently commercial/industrial, not residential; Residual concentrations of COPCs in soil exist at depth of 15 to 20 feet bgs. This pathway is incomplete since it is doubtful that residential or occupational receptors will be in direct contact with deep soil.
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Dermal contact with COPCs in on-site soil	Yes (unlikely)	It is possible that construction/excavation workers could encounter residual concentration of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time.



**TABLE 4**  
**Conceptual Site Model Summary**  
**Fred Meyer Stores - Port Orchard Site**

Medium	Potential Receptor	Exposure Pathway	Selected Pathway	Reason for Selection or Exclusion
Subsurface Soil (> 3 feet bgs)	Residential Occupational Construction/Excavation	Volatilization of COPCs to indoor air with subsequent inhalation	No	Land use at the site is currently commercial/industrial, not residential; Areas of soil affected with COPCs are not located within 10 feet of a commercial building; Pavement covers most of the site; Operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time; Exposure to COPCs in indoor air is not likely for construction/excavation worker receptors who primarily work outdoors; This pathway is incomplete for residential, occupational, and construction/excavation worker receptors are not be exposed to indoor air with COPCs.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Leaching of COPCs to groundwater and subsequent incidental ingestion or inhalation of vapors	No	Land use at the site is currently commercial/industrial, not residential; Water is supplied from municipal sources, not groundwater; Water wells are not used onsite; This pathway is incomplete since residential and occupational receptors do not use groundwater.
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Leaching of COPCs to groundwater and subsequent incidental ingestion or inhalation of vapors	Yes (unlikely)	It is possible that deeper excavations could encounter residual concentrations of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time.
Groundwater	Residential Occupational	Ingestion of COPCs in groundwater and inhalation of volatiles at the tap	No	Land use at the site is currently commercial/industrial, not residential; Water is supplied from municipal sources, not groundwater; Water wells are not used onsite; This pathway is incomplete since residential and occupational receptors do not use groundwater.
Groundwater	Construction/Excavation	Ingestion of COPCs in groundwater and inhalation of volatiles at the tap	Yes (unlikely)	It is possible that deeper excavations could encounter residual concentrations of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time.
Groundwater	Residential Occupational Construction/Excavation	Volatilization of COPCs to outdoor air and subsequent inhalation	No	Land use at the site is currently commercial/industrial, not residential; Water is supplied from municipal sources, not groundwater; Water wells are not used onsite; Operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time; With continued operation of the AS/SVE system, this pathway is incomplete for residential, occupational, and construction/excavation worker receptors.
Groundwater	Residential Occupational Construction/Excavation	Volatilization of COPCs to indoor air and subsequent inhalation	No	Land use at the site is currently commercial/industrial, not residential; The area of groundwater affected with COPCs is not located within 10 feet of a commercial building; Most of the site is paved; Operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time; Exposure to COPCs in indoor air is not likely for construction/excavation worker receptors who primarily work outdoors; This pathway is incomplete since residential, occupational, and construction/excavation worker receptors will not be exposed to indoor air with COPCs.

**TABLE 4**  
**Conceptual Site Model Summary**  
**Fred Meyer Stores - Port Orchard Site**

Medium	Potential Receptor	Exposure Pathway	Selected Pathway	Reason for Selection or Exclusion
Groundwater	Residential Occupational	Dermal contact with COPCs in groundwater within excavations	No	Land use at the site is currently commercial/industrial, not residential; Occupational receptors are not likely to enter excavations; This pathway is incomplete for residential and occupational receptors.
Groundwater	Construction/Excavation	Dermal contact with COPCs in groundwater within excavations	Yes (unlikely)	It is possible that construction/excavation workers could encounter residual concentration of COPCs in groundwater; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time.
<b>Future Land Use - Commercial/Industrial or Residential</b>				
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Ingestion of COPCs in on-site soil	No	Surficial and shallow soil are not affected
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Dermal contact with COPCs in on-site soil	No	Surficial and shallow soil are not affected
Surficial and Shallow Soil (0 to 3 feet bgs)	Residential Occupational Construction/Excavation	Inhalation of COPCs adhered to dust particles or in vapors	No	Surficial and shallow soil are not affected
Subsurface Soil (> 3 feet bgs)	Residential Occupational Construction/Excavation	Volatilization of COPCs to outdoor air with subsequent inhalation	No	Remaining soil impacts are not located in vadose zone, but are instead located within a smear zone created by groundwater elevation fluctuations between 15 and 25 feet bgs; Volatiles preferentially released from the smear zone into the vadose zone would be recovered by the AS/SVE system; With continued operation of the AS/SVE system, this pathway is incomplete for future residential, occupational, and construction/excavation worker receptors.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Ingestion of COPCs in on-site soil	No	Residual concentrations of COPCs in soil exist at depths of 15 to 20 feet bgs. This pathway is incomplete since it is doubtful that future residential or occupational receptors will be in direct contact with deep soil. Residual concentrations of COPCs in soil are also likely to be reduced to acceptable levels prior to future redevelopment, if it occurs.

**TABLE 4**  
**Conceptual Site Model Summary**  
**Fred Meyer Stores - Port Orchard Site**

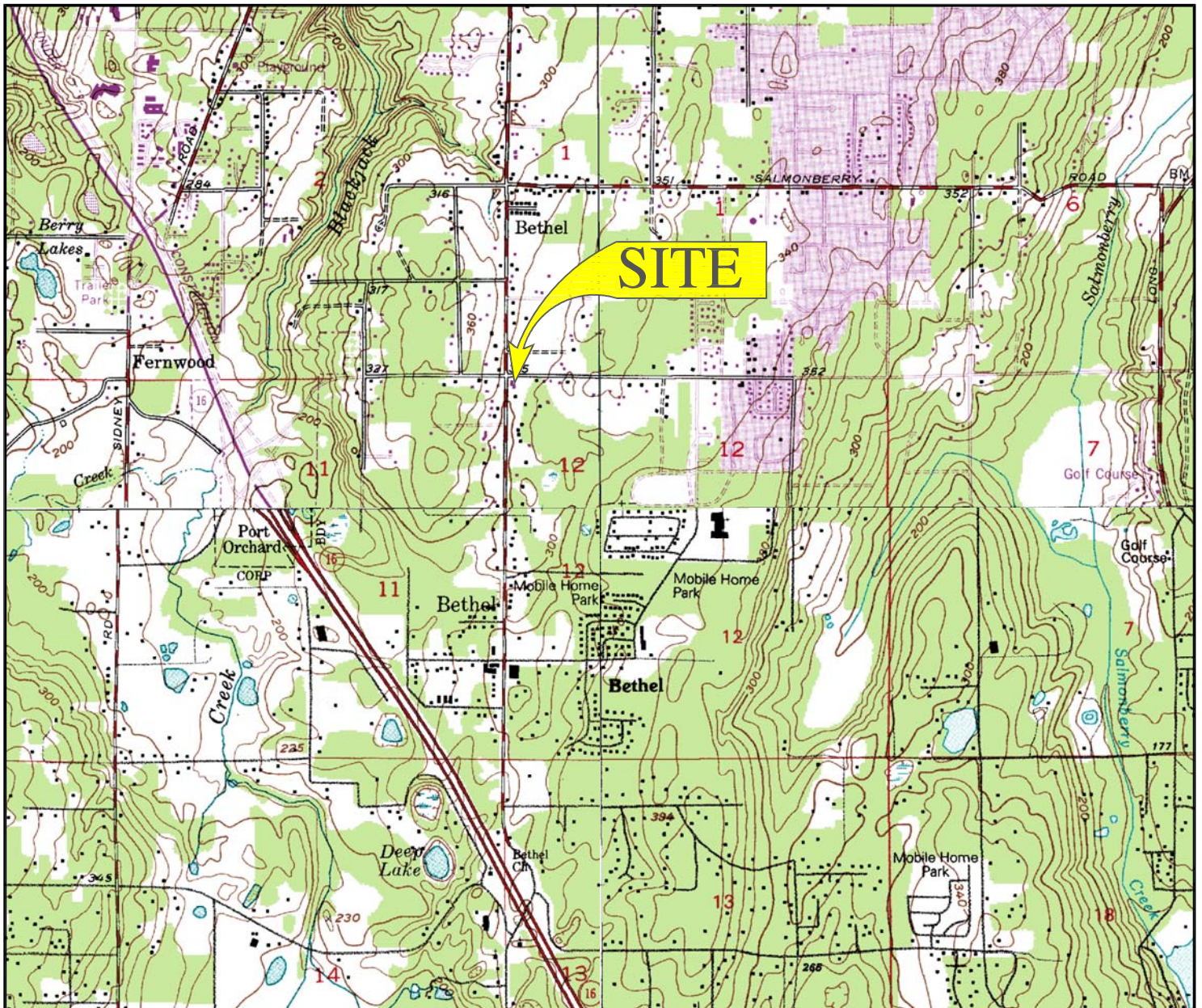
Medium	Potential Receptor	Exposure Pathway	Selected Pathway	Reason for Selection or Exclusion
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Ingestion of COPCs in on-site soil	Yes (unlikely)	It is possible that deeper excavations could encounter residual concentrations of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time. Redevelopment, if it occurs, would likely occur after acceptable levels in soil have been achieved.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Dermal contact with COPCs in on-site soil	No	Residual concentrations of COPCs in soil exist at depths of 15 to 20 feet bgs. This pathway is incomplete since it is doubtful that future residential or occupational receptors will be in direct contact with deep soil; Residual concentrations of COPCs in soil are also likely to be reduced to acceptable levels prior to future redevelopment, if it occurs.
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Dermal contact with COPCs in on-site soil	Yes (unlikely)	It is possible that construction/excavation workers could encounter residual concentration of COPCs in deep soil; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time; Redevelopment, if it occurs, would likely be after acceptable levels in soil have been achieved.
Subsurface Soil (> 3 feet bgs)	Residential Occupational	Volatilization of COPCs to indoor air with subsequent inhalation	Yes (unlikely)	It is possible that future residential or commercial/industrial redevelopment of the site could place buildings over top of or within 50 feet of vadose zone soils affected with COPCs; However, this is unlikely since continued operation of the AS/SVE system will continue to reduce COPC concentrations in soil over time. Redevelopment, if it occurs, would likely occur after acceptable levels in soil have been achieved.
Subsurface Soil (> 3 feet bgs)	Construction/Excavation	Volatilization of COPCs to indoor air with subsequent inhalation	No	Exposure to hazardous substances potential present in indoor air is not likely for construction or excavation workers who primarily work outdoors.
Subsurface Soil (> 3 feet bgs)	Residential Occupational Construction/Excavation	Leaching of COPCs to groundwater and subsequent incident ingestion or inhalation of vapors	Yes (unlikely)	It is possible that future redevelopment of the site could use groundwater. Future construction/excavation workers could encounter groundwater in deep excavations; Although possible, it is unlikely that future redevelopment would involve groundwater given the availability of municipal water; Operation of the AS/SVE system will also continue to reduce COPC concentrations in soil over time. Redevelopment, if it occurs, would likely be after acceptable levels in soil have been achieved.
Groundwater	Residential Occupational Construction/Excavation	Ingestion of COPCs in groundwater and inhalation of volatiles at the tap	Yes (unlikely)	Although unlikely, it is possible that future redevelopment of the site could use groundwater. Future construction/excavation workers could potentially encounter groundwater in deep excavations; Although possible, it is unlikely that future redevelopment would involve groundwater given the availability of municipal water; operation of the AS/SVE system will also continue to reduce COPC concentrations in soil over time. Redevelopment, if it occurs, would likely occur after acceptable levels in soil have been achieved.

**TABLE 4**  
**Conceptual Site Model Summary**  
**Fred Meyer Stores - Port Orchard Site**

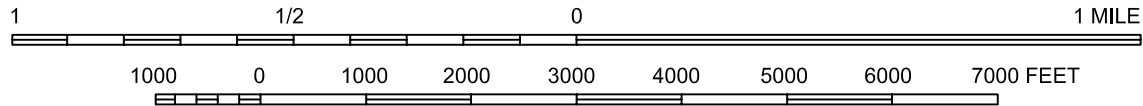
Medium	Potential Receptor	Exposure Pathway	Selected Pathway	Reason for Selection or Exclusion
Groundwater	Residential Occupational Construction/Excavation	Volatilization of COPCs to outdoor air and subsequent inhalation	No	Operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time; With continued operation of the AS/SVE system, this pathway is incomplete since residential, occupational, and construction/excavation worker receptors. Redevelopment, if it occurs, would likely occur after acceptable levels in soil have been achieved.
Groundwater	Residential Occupational Construction/Excavation	Volatilization of COPCs to indoor air and subsequent inhalation	No	Operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time; Exposure to COPCs in indoor air is not likely for construction/excavation worker receptors who primarily work outdoors; This pathway is incomplete since residential, occupational, and construction/excavation worker receptors will not be exposed to indoor air with COPCs.
Groundwater	Residential Occupational	Dermal contact with COPCs in groundwater within excavations	No	Future residential and occupational receptors are not likely to enter excavations deep enough to encounter groundwater. This pathway is incomplete for residential and occupational receptors.
Groundwater	Construction/Excavation	Dermal contact with COPCs in groundwater within excavations	Yes (unlikely)	It is possible that construction/excavation workers could encounter residual concentration of COPCs in groundwater; Although possible, this exposure pathway is unlikely since operation of the AS/SVE system will continue to reduce COPC concentrations in groundwater over time. Redevelopment, if it occurs, would likely occur after acceptable levels in soil have been achieved.

**FIGURES**





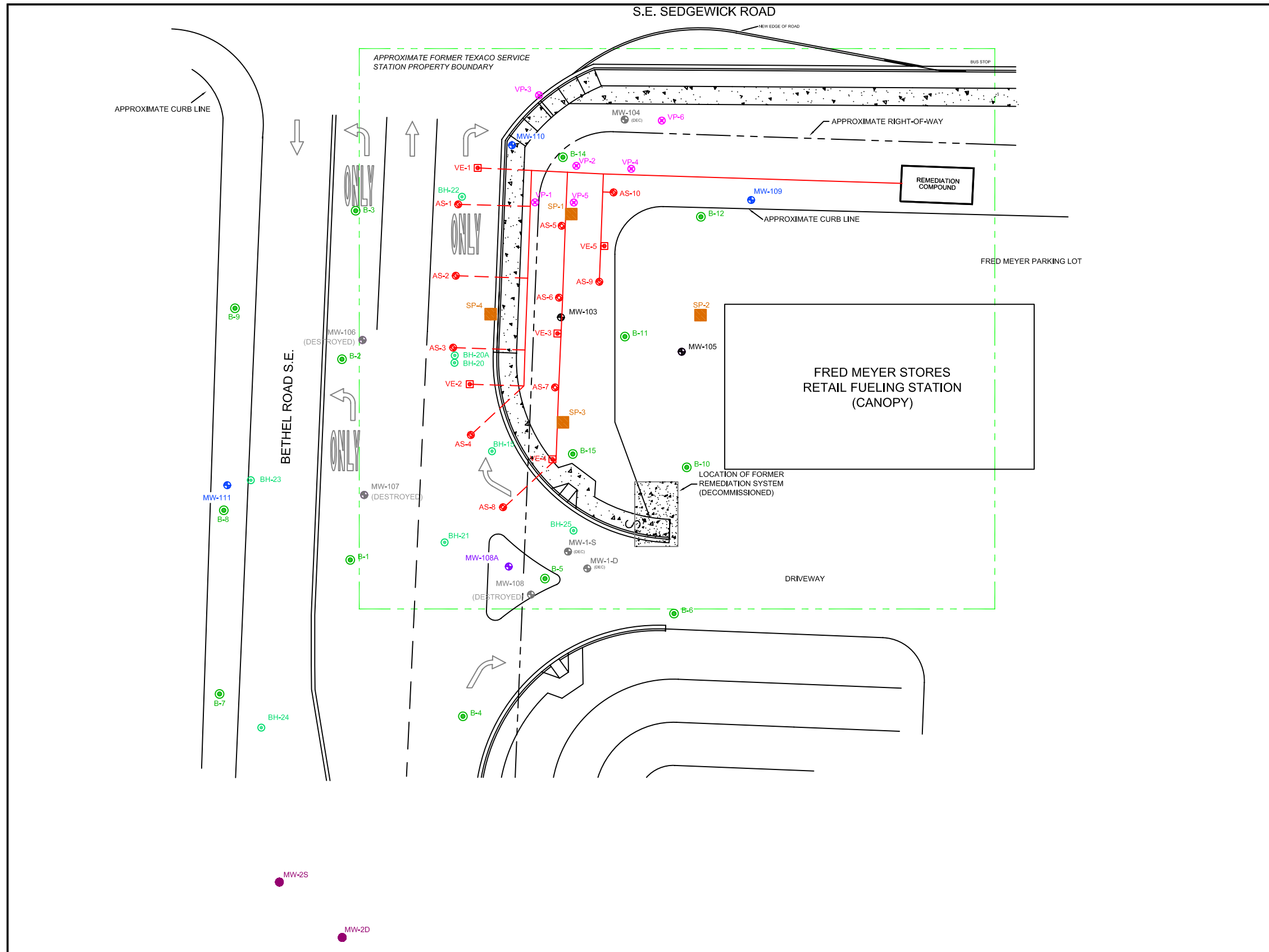
Heavy-duty		<b>BREMERTON WEST, WASH.</b>	<b>BREMERTON EAST, WASH.</b>	<p>WASHINGTON</p> <p>QUADRANGLE LOCATION</p>
Medium-duty		47122-E6-TF-024	N4730-W12230/7.5	
Light-duty		1953	1953	
Unimproved dirt		PHOTOREVISED 1981	PHOTOREVISED 1981	
		DMA 1479 II SERIES V891	DMA 1479 II SERIES V891	
	U.S. Route		State Route	
	Interstate Route	<b>BURLEY, WASH.</b>	<b>OLALLA, WASH.</b>	
		47122-D6-TF-024	47122-D5-TF-024	
		1953	1953	
		PHOTOREVISED 1994	PHOTOREVISED 1981	
		DMA 1478 II NW-SERIES V891	DMA 1478 I NE SERIES V891	



SOURCE: USGS QUAD SHEET: BREMERTON WEST, BREMERTON EAST, BURLEY AND OLALLA, WASH.

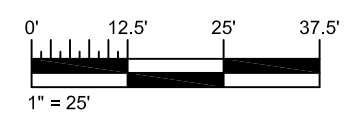
<b>AMEC Earth &amp; Environmental</b> 7376 S.W. Durham Road Portland OR. U.S.A. 97224				CLIENT <b>FRED MEYER STORES, INC.</b>	
PROJECT		DWN BY:		DATE:	
PORT ORCHARD		LR		APRIL 2010	
TITLE		CHK'D BY:		PROJECT NO.:	
SITE LOCATION MAP		DMF		9-61M-10282-0	
		PROJECTION:		SCALE:	
		X		1:24,000	
				FIGURE No.	
				FIGURE 1	





**LEGEND**

- AS-10 AIR SPARGING WELL NUMBER AND APPROXIMATE LOCATION
- VE-5 VAPOR EXTRACTION WELL NUMBER AND APPROXIMATE LOCATION
- MW-103 4" PVC MONITORING WELL NUMBER AND LOCATION. MW-103 AND MW-104 BY ECOLOGY, 1991, ALL OTHERS BY AGRA, NOVEMBER, 1999. MW-104, MW-1-S AND MW-1-D DESTROYED IN 1999/2000. MW-106, MW-107, AND MW-108 DESTROYED IN 2001.
- MW-110 MONITORING WELL INSTALLED 2008
- MW-108A REPLACEMENT MONITORING WELL
- (DEC) WELL DECOMMISSIONED
- B-12 AUGUST 2008 GEOPROBE BORING
- BH-20 STRATO PROBE BORING NUMBER AND LOCATION OF TEMPORARY 3/4" VAPOR TEST WELL VP BORINGS BY AGRA JULY 28, 1999 (APPROXIMATE LOCATION)
- VP-5 STRATO PROBE BORING NUMBER AND LOCATION. BH-15 IS BY GN NORTHERN ON JANUARY 22, 1999. ALL OTHER BORINGS BY AGRA ON JULY 27, 28 AND 29, 1999. (APPROXIMATE LOCATION)
- SP-2 SPARGING WELL, 1995 (APPROXIMATE LOCATION)
- MW-2D MONITORING WELL, 1991 (APPROXIMATE LOCATION)
- REMEDIATION SYSTEM TRENCH
- ANGLED WELL LOCATION
- APPROXIMATE FORMER TEXACO SERVICE STATION PROPERTY BOUNDARY



SOURCE: AHBL CIVIL AND STRUCTURAL ENGINEERS,  
 FILE NAME: 98169-B.dwg.  
 HISTORIC WELL LOCATIONS ARE APPROXIMATE AND ARE  
 FOR ILLUSTRATIVE PURPOSES ONLY.

CLIENT:

**FRED MEYER STORES, INC.**

---

**AMEC Earth & Environmental**  
 7376 S.W. Durham Road  
 Portland, OR. U.S.A. 97224

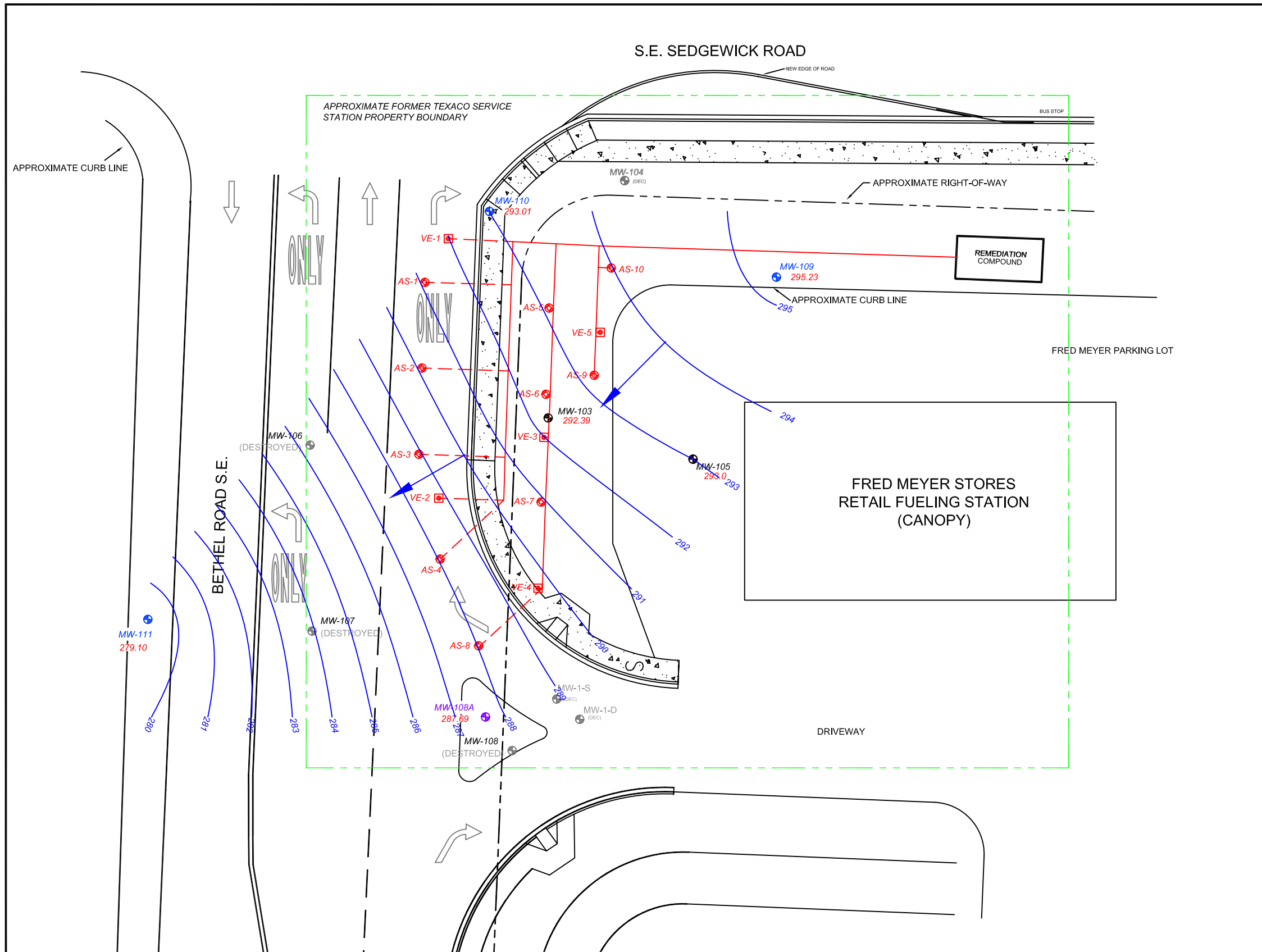
DWN BY: DD/LR  
 CHK'D BY: DS/DMF  
 DATUM: -  
 PROJECTION: -  
 SCALE: 1"=25'

PROJECT: PORT ORCHARD

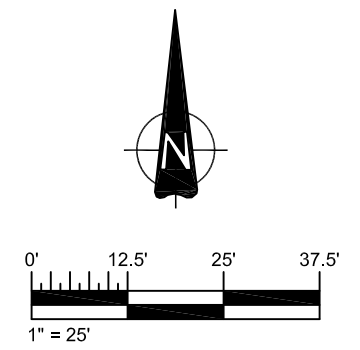
---

TITLE: SITE PLAN AND SITE FEATURES

DATE: APRIL 2010  
 PROJECT NO: 9-61M-10282-0  
 REV. NO.: -  
 FIGURE No. FIGURE 2



- LEGEND**
- AS-10 AIR SPARGING WELL NUMBER AND APPROXIMATE LOCATION
  - VE-5 VAPOR EXTRACTION WELL NUMBER AND APPROXIMATE LOCATION
  - MW-103 4" PVC MONITORING WELL NUMBER AND LOCATION. MW-103 AND 104 BY ECOLOGY, 1991, ALL OTHERS BY AGRA, NOVEMBER, 1999. MW-104, MW-1-S AND MW-1-D DESTROYED BY CONTRACTOR
  - MW-110 MONITORING WELL INSTALLED 2008
  - MW-108A REPLACEMENT MONITORING WELL
  - (DEC) WELL DECOMMISSIONED
  - 291.87 MEASURED GROUNDWATER SURFACE ELEVATION IN FEET ABOVE MEAN SEA LEVEL
  - REMEDIATION SYSTEM TRENCH
  - ANGLED WELL LOCATION
  - 291 APPROXIMATE GROUNDWATER ELEVATION CONTOUR IN FEET
  - APPROXIMATE FORMER TEXACO SERVICE STATION PROPERTY BOUNDARY
  - INFERRED GROUNDWATER FLOW DIRECTION



SOURCE: AHBL CIVIL AND STRUCTURAL ENGINEERS,  
FILE NAME: 98169-B.dwg.

CLIENT:

FRED MEYER STORES, INC.

AMEC Earth & Environmental  
7376 S.W. Durham Road  
Portland, OR. U.S.A. 97224

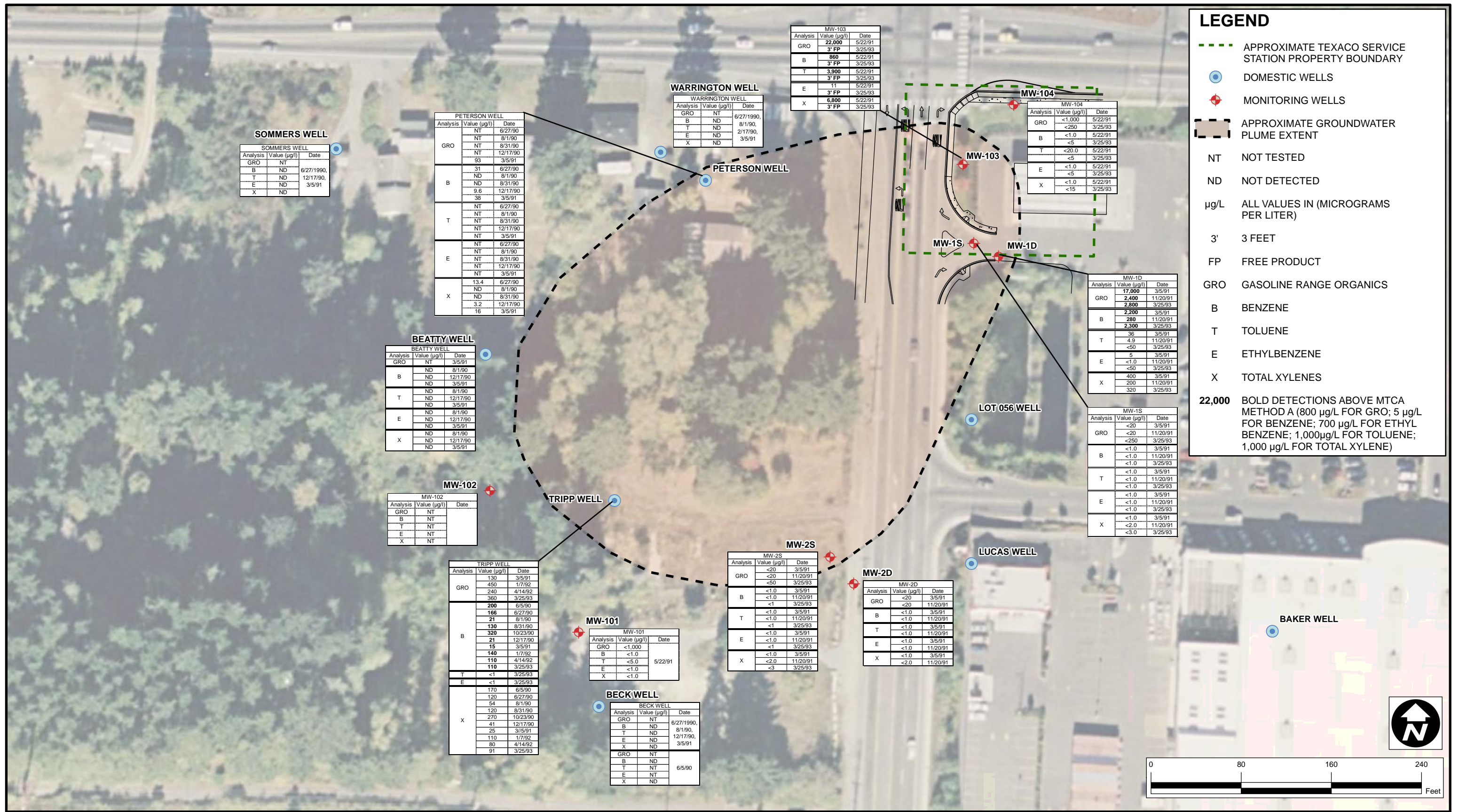
DWN BY: LR  
CHK'D BY: DMF/WHC  
DATUM: -  
PROJECTION: -  
SCALE: 1"=25'

PROJECT: PORT ORCHARD

TITLE: GROUNDWATER ELEVATIONS - JANUARY 22, 2010

DATE: APRIL 2010  
PROJECT NO.: 9-61M-10282-0  
REV. NO.: -  
FIGURE No.: FIGURE 3





**SOMMERS WELL**

Analysis	Value (µg/l)	Date
GRO	NT	
B	ND	6/27/1990,
T	ND	12/17/90,
E	ND	3/5/91
X	ND	

**PETERSON WELL**

Analysis	Value (µg/l)	Date
GRO	NT	6/27/90
	NT	8/1/90
	NT	8/31/90
	NT	12/17/90
	93	3/5/91
B	31	6/27/90
	ND	8/1/90
	ND	8/31/90
	9.6	12/17/90
	38	3/5/91
T	NT	6/27/90
	NT	8/1/90
	NT	8/31/90
	NT	12/17/90
	NT	3/5/91
E	NT	6/27/90
	NT	8/1/90
	NT	8/31/90
	NT	12/17/90
	NT	3/5/91
X	13.4	6/27/90
	ND	8/1/90
	ND	8/31/90
	3.2	12/17/90
	16	3/5/91

**WARRINGTON WELL**

Analysis	Value (µg/l)	Date
GRO	NT	
B	ND	6/27/1990,
T	ND	8/1/90,
E	ND	2/17/90,
X	ND	3/5/91

**MW-103**

Analysis	Value (µg/l)	Date
GRO	<b>22,000</b>	5/22/91
	3' FP	3/25/93
B	860	5/22/91
	3' FP	3/25/93
T	3,900	5/22/91
	3' FP	3/25/93
E	11	5/22/91
	3' FP	3/25/93
X	6,800	5/22/91
	3' FP	3/25/93

**MW-104**

Analysis	Value (µg/l)	Date
GRO	<1,000	5/22/91
	<250	3/25/93
B	<1.0	5/22/91
	<5	3/25/93
T	<20.0	5/22/91
	<5	3/25/93
E	<1.0	5/22/91
	<5	3/25/93
X	<1.0	5/22/91
	<15	3/25/93

**MW-1D**

Analysis	Value (µg/l)	Date
GRO	<b>17,000</b>	3/5/91
	<b>2,400</b>	11/20/91
	<b>2,800</b>	3/25/93
B	2,200	3/5/91
	280	11/20/91
	<b>2,300</b>	3/25/93
T	36	3/5/91
	4.9	11/20/91
	<50	3/25/93
E	5	3/5/91
	<1.0	11/20/91
	<50	3/25/93
X	400	3/5/91
	200	11/20/91
	320	3/25/93

**MW-1S**

Analysis	Value (µg/l)	Date
GRO	<20	3/5/91
	<20	11/20/91
	<250	3/25/93
B	<1.0	3/5/91
	<1.0	11/20/91
	<1.0	3/25/93
T	<1.0	3/5/91
	<1.0	11/20/91
	<1.0	3/25/93
E	<1.0	3/5/91
	<1.0	11/20/91
	<1.0	3/25/93
X	<1.0	3/5/91
	<2.0	11/20/91
	<3.0	3/25/93

**BEATTY WELL**

Analysis	Value (µg/l)	Date
GRO	NT	3/5/91
B	ND	8/1/90
	ND	12/17/90
	ND	3/5/91
T	ND	8/1/90
	ND	12/17/90
	ND	3/5/91
E	ND	8/1/90
	ND	12/17/90
	ND	3/5/91
X	ND	8/1/90
	ND	12/17/90
	ND	3/5/91

**MW-102**

Analysis	Value (µg/l)	Date
GRO	NT	
B	NT	
T	NT	
E	NT	
X	NT	

**TRIPP WELL**

Analysis	Value (µg/l)	Date
GRO	130	3/5/91
	450	1/7/92
	240	4/14/92
	360	3/25/93
	<b>200</b>	6/5/90
	<b>166</b>	6/27/90
B	21	8/1/90
	<b>130</b>	8/31/90
	15	3/5/91
	<b>140</b>	1/7/92
	<b>110</b>	4/14/92
	<b>110</b>	3/25/93
T	<1	3/25/93
E	<1	3/25/93
	170	6/5/90
	120	6/27/90
	54	8/1/90
	120	8/31/90
	270	10/23/90
X	41	12/17/90
	25	3/5/91
	110	1/7/92
	80	4/14/92
	91	3/25/93

**MW-101**

Analysis	Value (µg/l)	Date
GRO	<1,000	
B	<1.0	
T	<5.0	5/22/91
E	<1.0	
X	<1.0	

**BECK WELL**

Analysis	Value (µg/l)	Date
GRO	NT	
B	ND	6/27/1990,
T	ND	8/1/90,
E	ND	12/17/90,
X	ND	3/5/91
GRO	NT	
B	ND	
T	NT	6/5/90
E	NT	
X	ND	

**MW-2S**

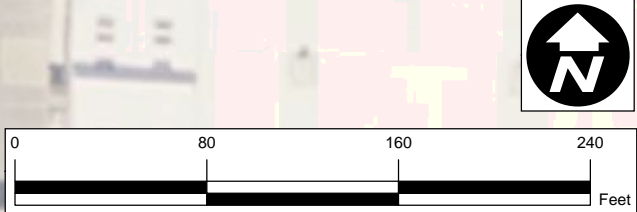
Analysis	Value (µg/l)	Date
GRO	<20	3/5/91
	<20	11/20/91
	<50	3/25/93
B	<1.0	3/5/91
	<1.0	11/20/91
	<1	3/25/93
T	<1.0	3/5/91
	<1.0	11/20/91
	<1	3/25/93
E	<1.0	3/5/91
	<1.0	11/20/91
	<1	3/25/93
X	<1.0	3/5/91
	<2.0	11/20/91
	<3	3/25/93

**MW-2D**

Analysis	Value (µg/l)	Date
GRO	<20	3/5/91
	<20	11/20/91
B	<1.0	3/5/91
	<1.0	11/20/91
T	<1.0	3/5/91
	<1.0	11/20/91
E	<1.0	3/5/91
	<1.0	11/20/91
X	<1.0	3/5/91
	<2.0	11/20/91

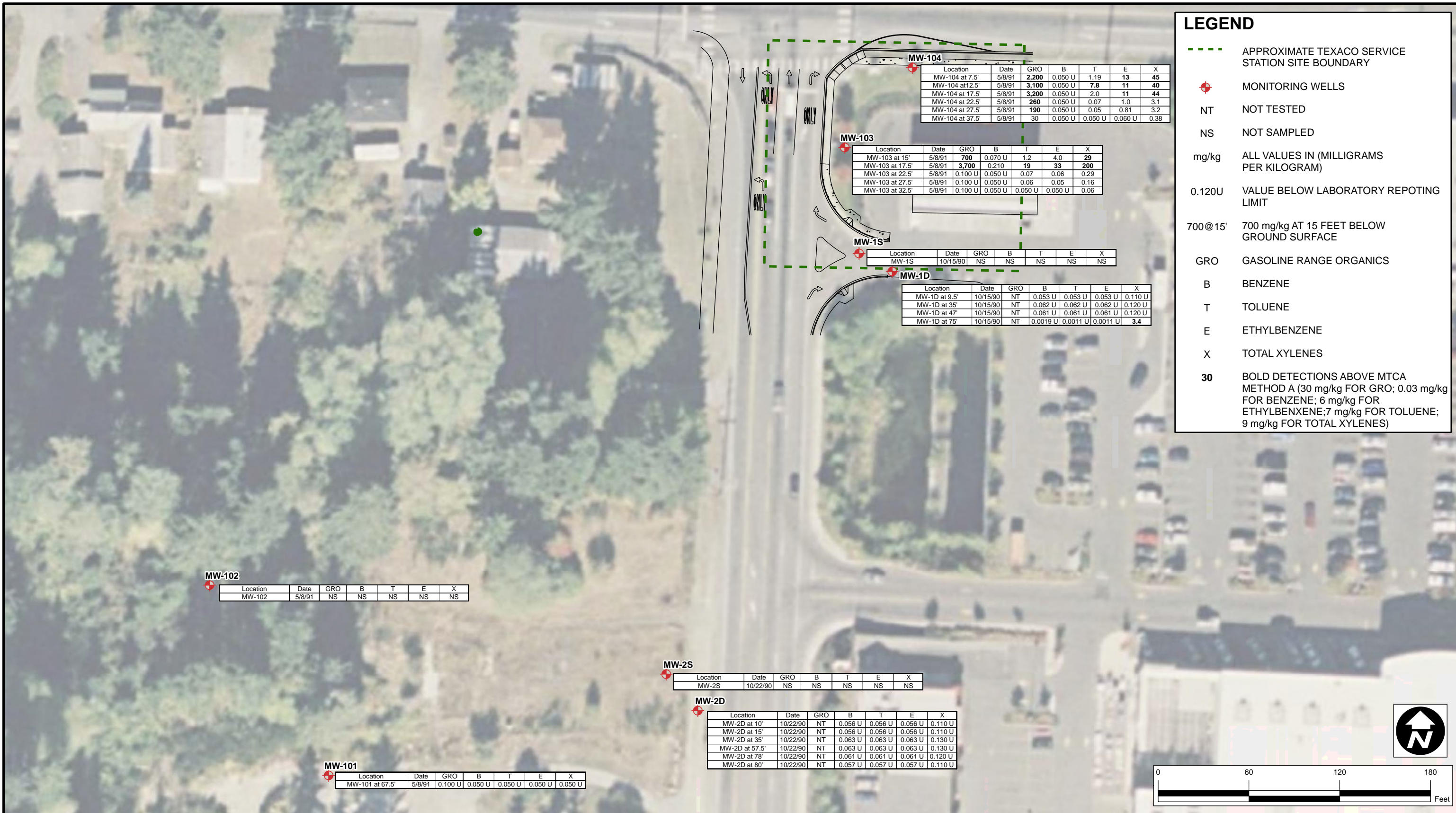
**LEGEND**

- APPROXIMATE TEXACO SERVICE STATION PROPERTY BOUNDARY
- DOMESTIC WELLS
- ⊕ MONITORING WELLS
- - - APPROXIMATE GROUNDWATER PLUME EXTENT
- NT NOT TESTED
- ND NOT DETECTED
- µg/L ALL VALUES IN (MICROGRAMS PER LITER)
- 3' 3 FEET
- FP FREE PRODUCT
- GRO GASOLINE RANGE ORGANICS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- 22,000** BOLD DETECTIONS ABOVE MTCA METHOD A (800 µg/L FOR GRO; 5 µg/L FOR BENZENE; 700 µg/L FOR ETHYL BENZENE; 1,000µg/L FOR TOLUENE; 1,000 µg/L FOR TOTAL XYLENE)



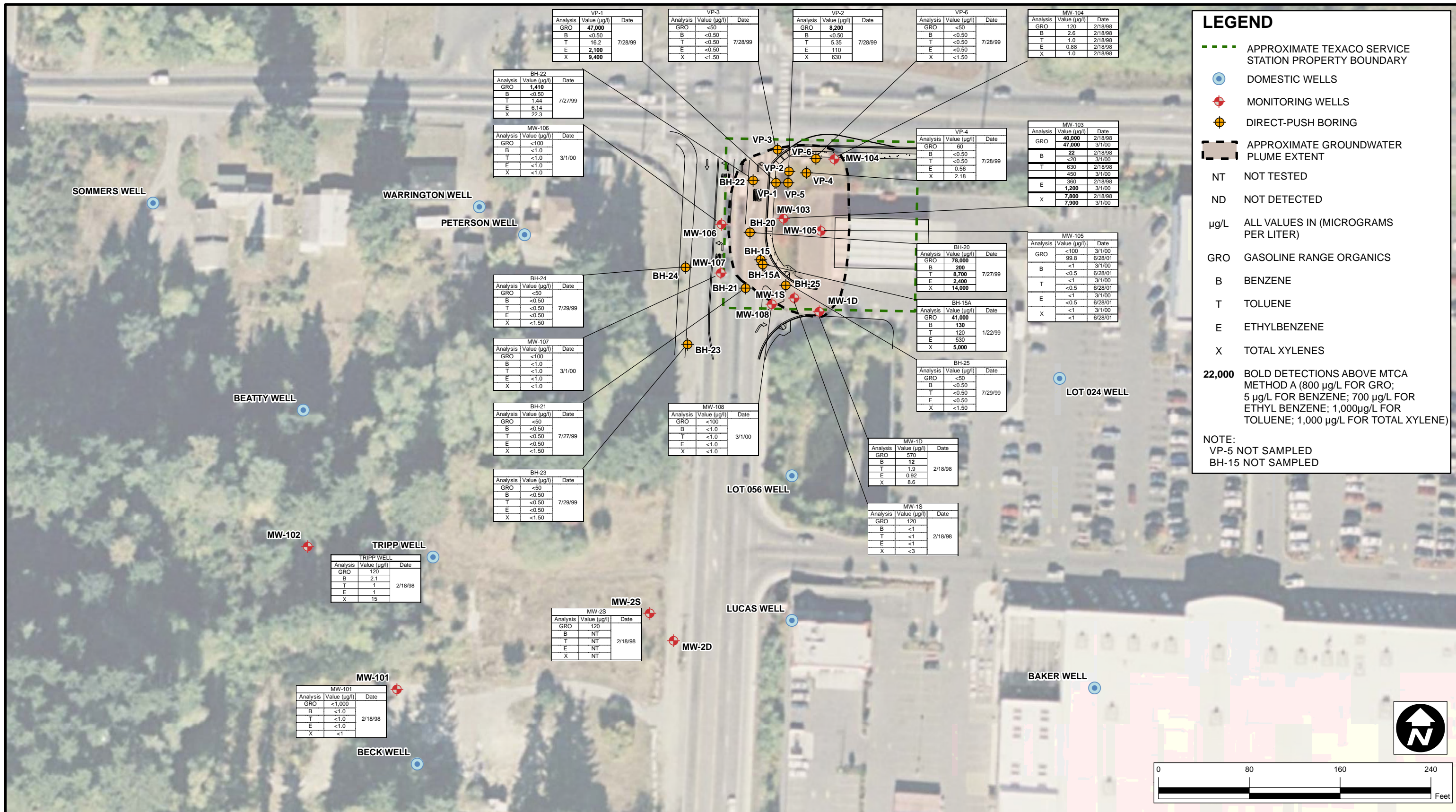
CLIENT: <b>FRED MEYER STORES, INC.</b>	DWN BY: PM	PROJECT: <b>PORT ORCHARD</b>	DATE: APRIL 2010
	CHK'D BY: AC/BC		PROJECT NO.: 9-61M-10282-0
AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224	DATUM: NAD83	TITLE: <b>APPROXIMATE GROUNDWATER PLUME EXTENT 1990 - 1993 GRO AND BTEX</b>	REV. NO.: 1
	PROJECTION: WA SP N. Ft.		FIGURE NO.: FIGURE 4
SCALE: 1 inch = 80 feet			





CLIENT LOGO	CLIENT:	FRED MEYER STORES, INC.	DWN BY:	PM	PROJECT:	PORT ORCHARD	DATE:	APRIL 2010
	AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224		CHK'D BY:	AC/BC			PROJECT NO.:	9-61M-10282-0
			DATUM:	NAD83	TITLE:	GRO AND BTEX CONCENTRATIONS IN SOIL 1990/1991	REV. NO.:	1
			PROJECTION:	WA SP N. Ft.			FIGURE NO.:	FIGURE 5
			SCALE:	1 inch = 60 feet				





### LEGEND

- APPROXIMATE TEXACO SERVICE STATION PROPERTY BOUNDARY
- DOMESTIC WELLS
- ⊕ MONITORING WELLS
- ⊕ DIRECT-PUSH BORING
- APPROXIMATE GROUNDWATER PLUME EXTENT
- NT NOT TESTED
- ND NOT DETECTED
- μg/L ALL VALUES IN (MICROGRAMS PER LITER)
- GRO GASOLINE RANGE ORGANICS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- 22,000** BOLD DETECTIONS ABOVE MTCA METHOD A (800 μg/L FOR GRO; 5 μg/L FOR BENZENE; 700 μg/L FOR ETHYL BENZENE; 1,000 μg/L FOR TOLUENE; 1,000 μg/L FOR TOTAL XYLENE)

NOTE:  
VP-5 NOT SAMPLED  
BH-15 NOT SAMPLED

Analysis	Value (μg/l)	Date
GRO	120	2/18/98
B	2.1	
T	1	
E	1	
X	15	

Analysis	Value (μg/l)	Date
GRO	<1,000	2/18/98
B	<1.0	
T	<1.0	
E	<1.0	
X	<1	

Analysis	Value (μg/l)	Date
GRO	120	2/18/98
B	NT	
T	NT	
E	NT	
X	NT	

Analysis	Value (μg/l)	Date
GRO	<b>47,000</b>	7/28/99
B	<0.50	
T	16.2	
E	<b>2,100</b>	
X	<b>9,400</b>	

Analysis	Value (μg/l)	Date
GRO	<50	7/28/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	<b>8,200</b>	7/28/99
B	<0.50	
T	5.35	
E	110	
X	630	

Analysis	Value (μg/l)	Date
GRO	<50	7/28/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	120	2/18/98
B	2.6	
T	1.0	
E	0.88	
X	1.0	

Analysis	Value (μg/l)	Date
GRO	<b>1,410</b>	7/27/99
B	<0.50	
T	1.44	
E	6.14	
X	22.3	

Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1.0	
T	<1.0	
E	<1.0	
X	<1.0	

Analysis	Value (μg/l)	Date
GRO	<50	7/29/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1.0	
T	<1.0	
E	<1.0	
X	<1.0	

Analysis	Value (μg/l)	Date
GRO	<50	7/27/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	<50	7/29/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1.0	
T	<1.0	
E	<1.0	
X	<1.0	

Analysis	Value (μg/l)	Date
GRO	570	2/18/98
B	<b>12</b>	
T	1.9	
E	0.92	
X	8.6	

Analysis	Value (μg/l)	Date
GRO	120	2/18/98
B	<1	
T	<1	
E	<1	
X	<3	

Analysis	Value (μg/l)	Date
GRO	<b>78,000</b>	7/27/99
B	200	
T	<b>8,700</b>	
E	<b>2,400</b>	
X	<b>14,000</b>	

Analysis	Value (μg/l)	Date
GRO	<b>41,000</b>	1/22/99
B	130	
T	120	
E	530	
X	<b>5,000</b>	

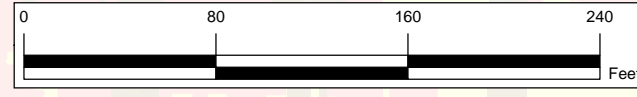
Analysis	Value (μg/l)	Date
GRO	<50	7/29/99
B	<0.50	
T	<0.50	
E	<0.50	
X	<1.50	

Analysis	Value (μg/l)	Date
GRO	<b>40,000</b>	2/18/98
B	<b>22</b>	
T	<20	
E	630	
X	450	

Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1	
T	<0.5	
E	<1	
X	<1	

Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1	
T	<0.5	
E	<1	
X	<1	





Analysis	Value (μg/l)	Date
GRO	<100	3/1/00
B	<1	
T	<0.5	
E	<1	
X	<1	

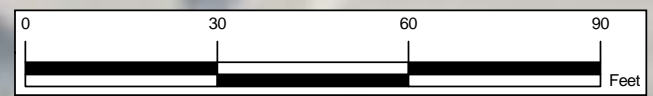
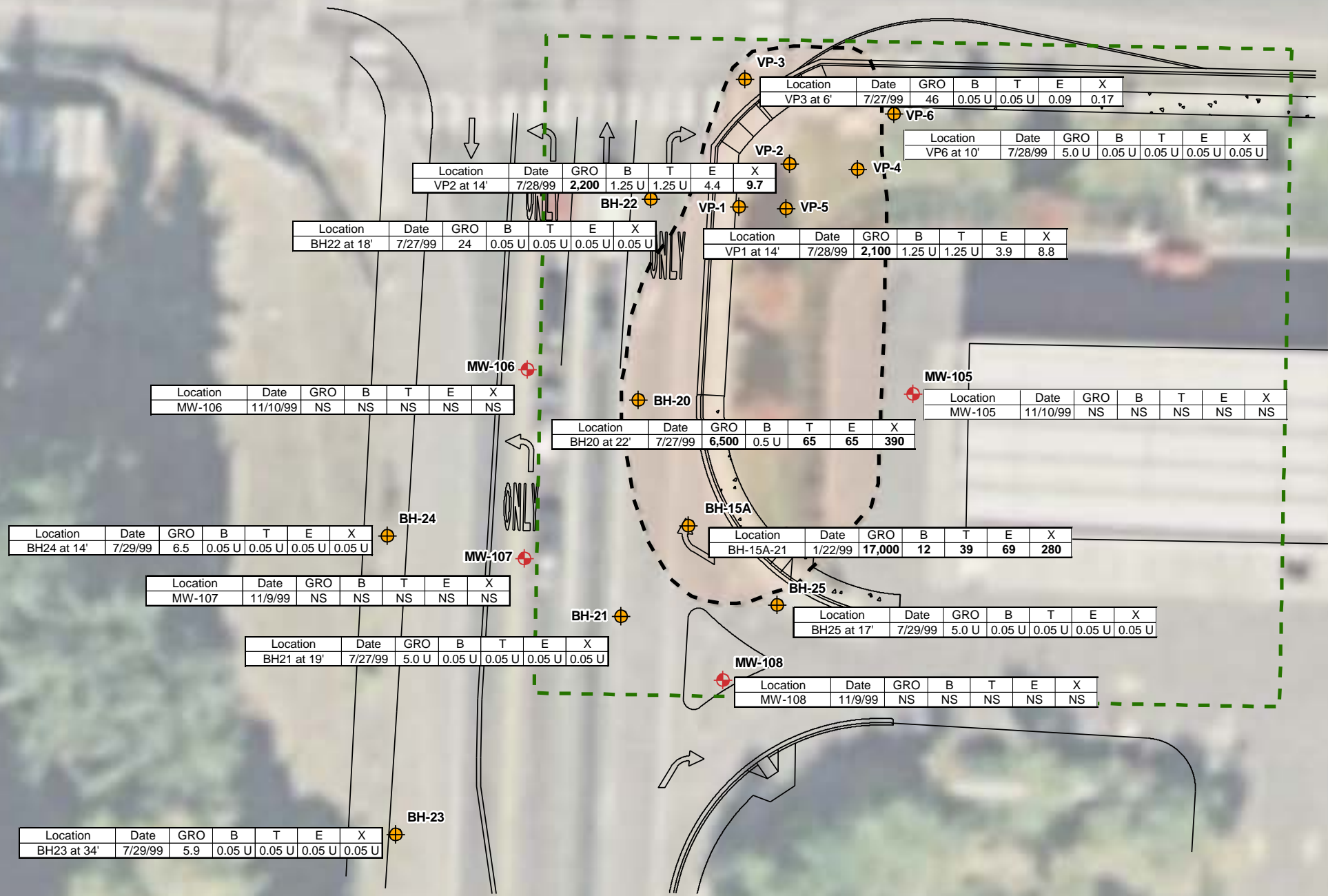



CLIENT LOGO	CLIENT:	FRED MEYER STORES, INC.	DWN BY:	PM	PROJECT:	PORT ORCHARD	DATE:	APRIL 2010
	AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224		CHK'D BY:	AC/BC			PROJECT NO.:	9-61M-10282-0
			DATUM:	NAD83	TITLE:	APPROXIMATE GROUNDWATER PLUME EXTENT 1998 - 2001 (GRO AND BTEX) SELECT VALUES	REV. NO.:	1
			PROJECTION:	WA SP N. Ft.			FIGURE NO.:	FIGURE 6
			SCALE:	1 inch = 80 feet				



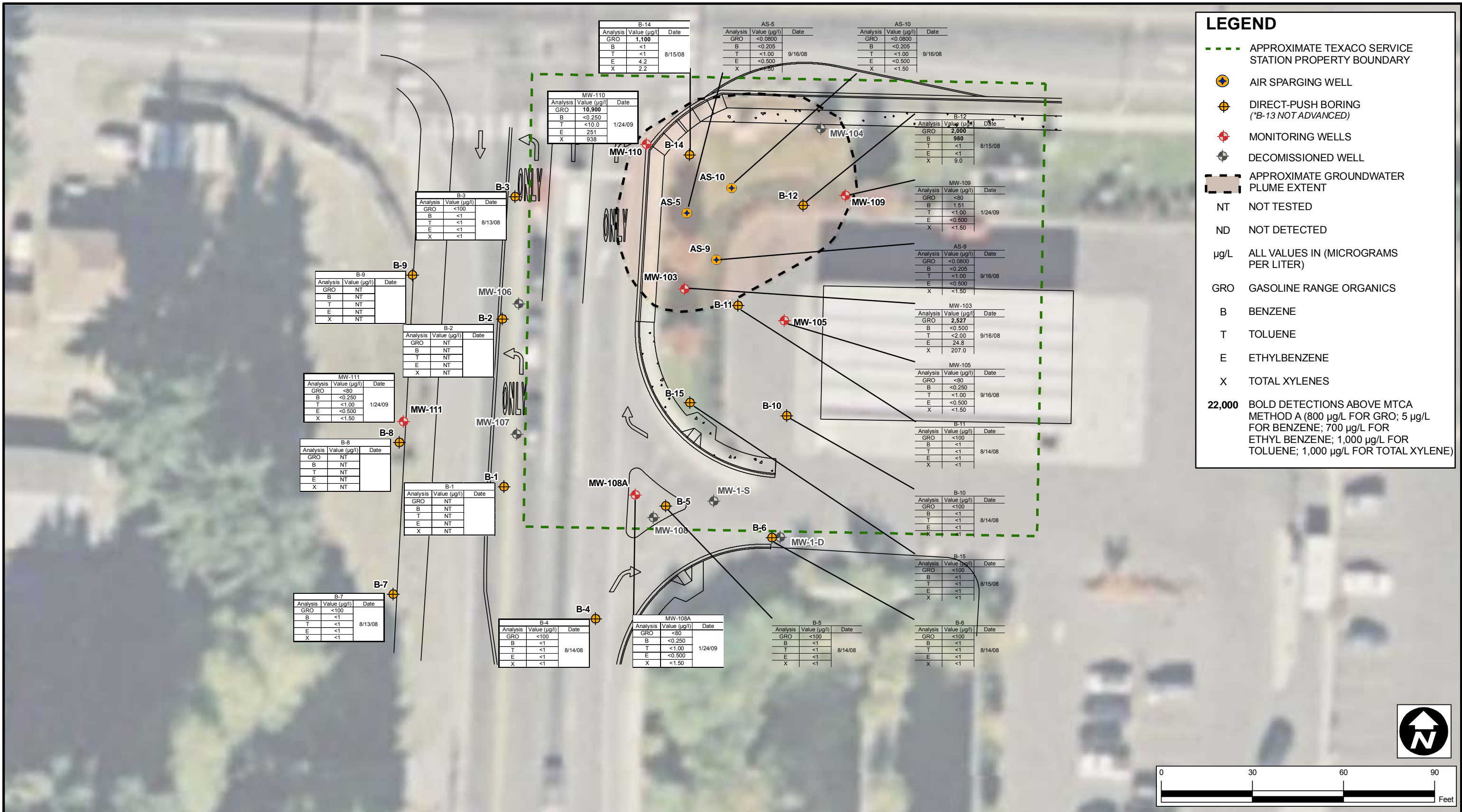
### LEGEND

-  APPROXIMATE TEXACO SERVICE STATION PROPERTY BOUNDARY
-  MONITORING WELLS
-  DIRECT-PUSH BORING
-  APPROXIMATE LATERAL EXTENT OF GRO AND BTEX IN SOIL (1999)
- NT NOT TESTED
- NS NOT SAMPLED
- mg/kg ALL VALUES IN (MILLIGRAMS PER KILOGRAM)
- 0.120U VALUE BELOW LABORATORY REPORTING LIMIT
- 700@15' 700 mg/kg AT 15 FEET BELOW GROUND SURFACE
- GRO GASOLINE RANGE ORGANICS
- B BENZENE
- T TOLUENE
- E ETHYLBENZENE
- X TOTAL XYLENES
- 30** BOLD DETECTIONS ABOVE MTCA METHOD A (30 mg/kg FOR GRO; 0.03 mg/kg FOR BENZENE; 6 mg/kg FOR ETHYLBENZENE; 7 mg/kg FOR TOLUENE; 9 mg/kg FOR TOTAL XYLENES)



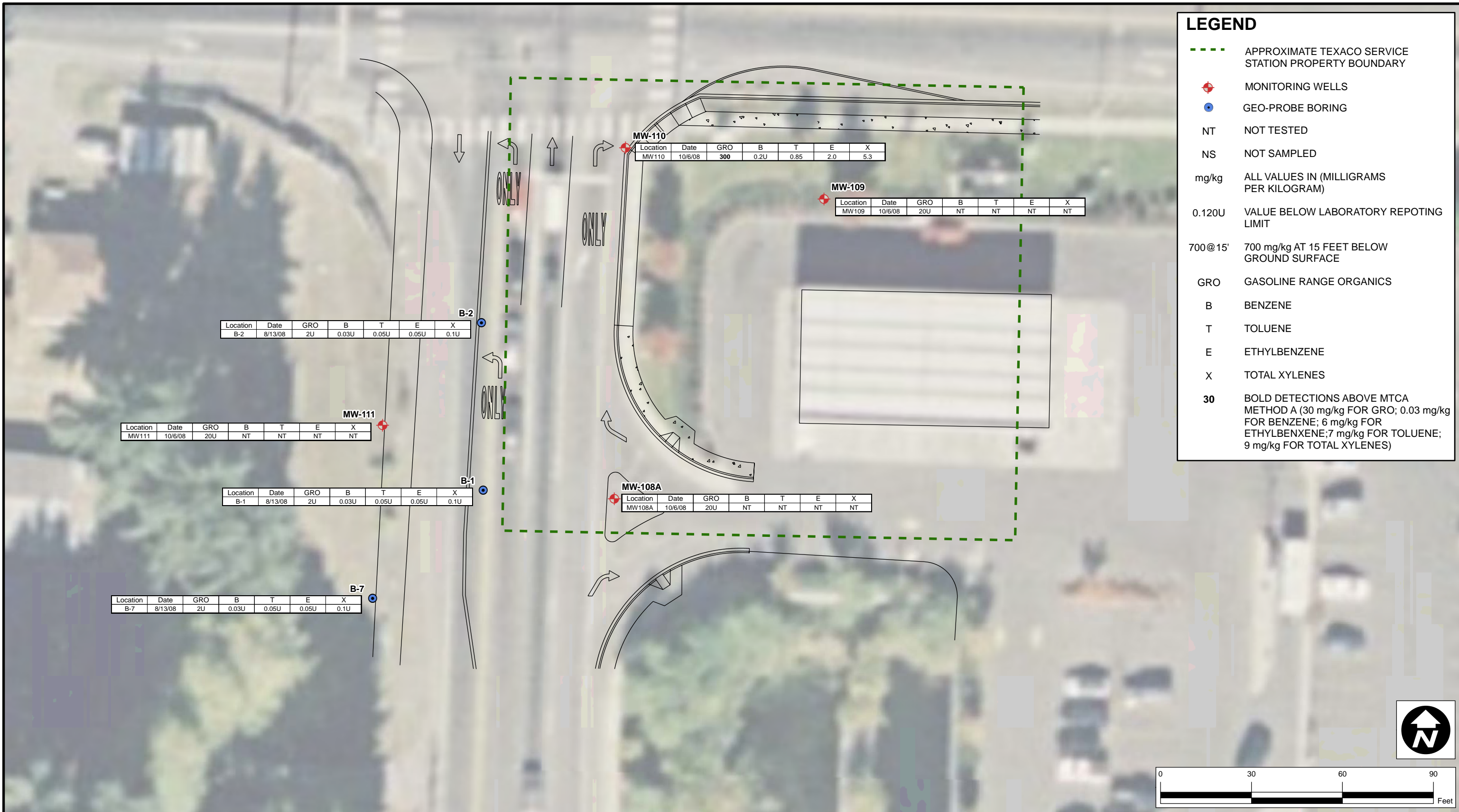
CLIENT LOGO	CLIENT: <b>FRED MEYER STORES, INC.</b>	DWN BY: PM	PROJECT: <b>PORT ORCHARD</b>	DATE: APRIL 2010
	<b>AMEC Earth &amp; Environmental</b> 7376 SW Durham Road Portland, OR, U.S.A. 97224 	CHKD BY: AC/BC	TITLE: <b>GRO AND BTEX CONCENTRATIONS IN SOIL 1999</b>	PROJECT NO.: 9-61M-10282-0
		DATUM: NAD83	PROJECTION: WA SP N. Ft.	REV. NO.: 1
		SCALE: 1 inch = 30 feet		FIGURE NO.: FIGURE 7





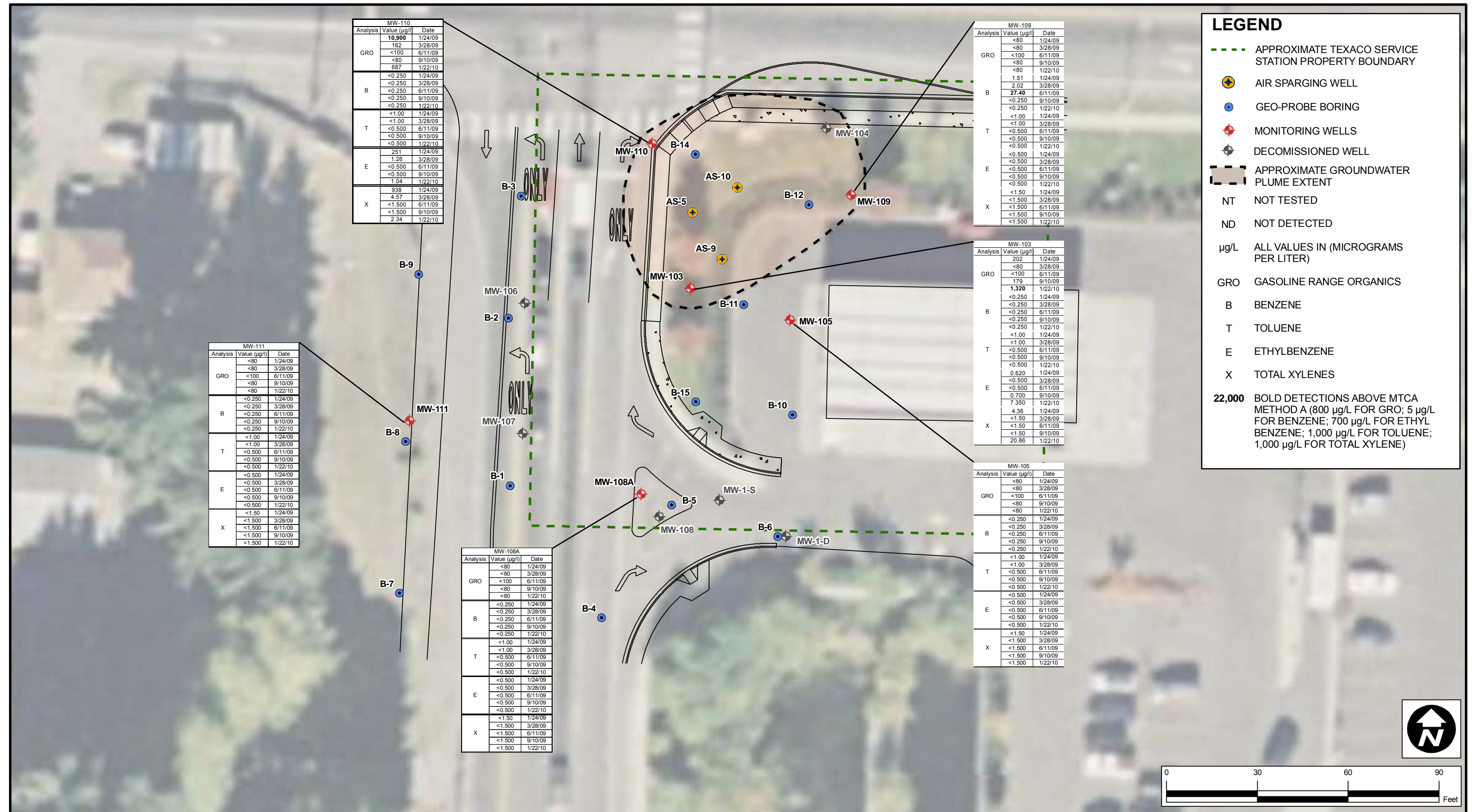
CLIENT LOGO	CLIENT:	FRED MEYER STORES, INC.	DWN BY:	PM	PROJECT:	PORT ORCHARD	DATE:	APRIL 2010
			CHK'D BY:	AC/BC			PROJECT NO.:	9-61M-10282-0
			DATUM:	NAD83	TITLE:	APPROXIMATE GROUNDWATER PLUME EXTENT 2008/2009 (GRO AND BTEX) SELECT VALUES	REV. NO.:	1
			PROJECTION:	WA SP N. Ft.			FIGURE NO.:	FIGURE 8
			SCALE:	1 inch = 30 feet				
AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224								





CLIENT LOGO	CLIENT:	FRED MEYER STORES, INC.	DWN BY:	PM	PROJECT:	PORT ORCHARD	DATE:	APRIL 2010
			CHK'D BY:	AC/BC			PROJECT NO.:	9-61M-10282-0
			DATUM:	NAD83	TITLE:	GRO AND BTEX CONCENTRATIONS IN SOIL	REV. NO.:	1
		AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224	PROJECTION:	WA SP N. Ft.		2008	FIGURE NO.:	FIGURE 9
			SCALE:	1 inch = 30 feet				





CLIENT LOGO	CLIENT:	FRED MEYER STORES, INC.	DWN BY:	PM	PROJECT:	PORT ORCHARD	DATE:	APRIL 2010
	AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224		CHKD BY:	AC/BC			PROJECT NO.:	9-61M-10282-0
			DATUM:	NAD83	TITLE:	APPROXIMATE GROUNDWATER PLUME EXTENT 2009/2010 (GRO AND BTEX)	REV. NO.:	1
			PROJECTION:	WA SP N. Ft.			FIGURE NO.:	FIGURE 10
			SCALE:	1 inch = 30 feet				

## **APPENDIX A**

### Well Logs

# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet 1 of 4

Job No.: **J5E03**    Logged by: **CPW**    Start Date: **10-12-90**    Completion Date: **10-15-90**    Boring No.: **MW-1-D**

Drilling Contractor: **Tacoma Pump & Drill**    Drilling Method: **Air Rotary**    Sampling Method: **SPT**

Ground Surface Elevation: **311.4**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				0		Sandy gravel, unpaved empty lot
				1	SM	Fill: Light brown silty SAND, some gravel. (contains abundant wood debris)
				2		
				3		
				4		
				5		
				6	SP	Gray SAND, fine to medium grained, with some silt and gravel.
				7		
				8		
				9		
	1	200 14"		10	SM	Gray SAND, very fine to fine grained, some silt and gravel.  no recovery
				11		
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		
		200 14"		20		



Proj. No. **J5E03**    Date **Aug 91**    Plate **4**

Subsurface conditions described represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington Sheet 2 of 4

Job No.: JSE03 Logged by: CPW Start Date: 10-12-90 Completion Date: 10-15-90 Boring No: **MW-1-D**

Drilling Contractor: Tacoma Pump & Drill Drilling Method: Air Rotary Sampling Method: SPT

Ground Surface Elevation: 311.4 Hole Completion:  Monitoring Well  Piezometer  Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USGS Symbol	Surface Conditions:
			[Dotted pattern]	21	sp	Brown SAND, fine to medium grained, with some gravel, moist.
				22		
				23		
				24		
			[Vertical line pattern]	25	sm	Brown silty SAND, fine grained, moist.
				26		
				27		
				28		
				29		
				30		
				31		
				32		
				33		
				34		
				35		
	2	100+ 6"		35		
				36		
				37		
				38		
				39		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

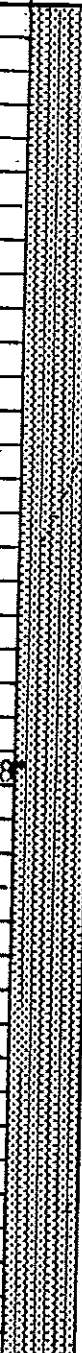
Proj. No. JFE03 Date 11/91 Plate 5

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative at other times and locations. We cannot accept responsibility for the use of information.



# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>				Sheet <b>3</b> of <b>4</b>	
Job No.: <b>J5E03</b>	Logged by: <b>CPW</b>	Start Date: <b>10-12-90</b>	Completion Date: <b>10-15-90</b>	Boring No.: <b>MW-1-D</b>	
Drilling Contractor: <b>Tacoma Pump &amp; Drill</b>		Drilling Method: <b>Air Rotary</b>		Sampling Method: <b>SPT</b>	
Ground Surface Elevation: <b>311.4'</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite			

Microtip Reading (ppm)	Sample ID.	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:	
				41	sm	<p>Silty SAND, fine grained.</p> <p>becomes medium grained.</p> <p>becomes fine to medium grained, saturated.</p> <p>becomes medium grained.</p>	
				42			
				43			
				44			
				45			
				46			
				47			
				48			
				49			
				50			
	3	37/18		51			X
				52			
				53			
				54			
				55			
				56			
				57			
				58			
				59			



Proj. No. <b>J5E03</b>	Date <b>Aug 91</b>	Plate <b>6</b>
------------------------	--------------------	----------------

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of information for purposes not intended by us.



# Monitor Well Completion Form

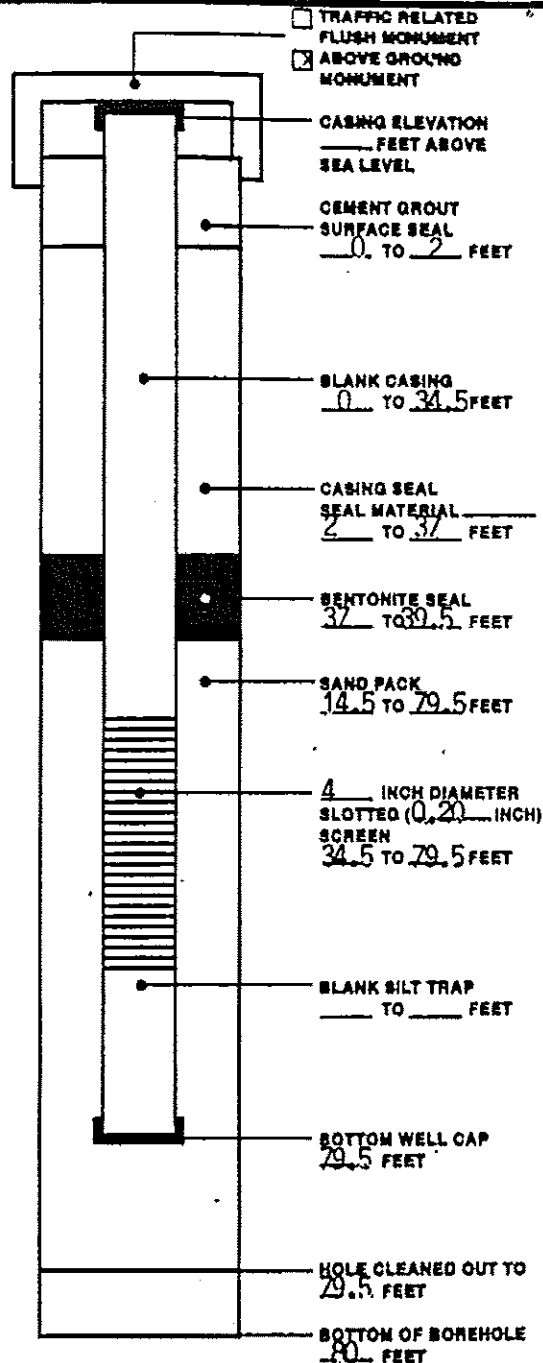
PROJECT NAME: <u>Bethel Wells, Port Orchard, WA</u>	
PROJECT NUMBER: <u>J5E03</u>	PROJECT MANAGER: <u>BSS</u>
LOGGED BY: <u>BSS</u>	REVIEWED BY: <u>BSS</u>
WELL I.D.: <u>MW-1-D</u>	DATE: <u>10-15-90</u>
DRILLING COMPANY: <u>Tacoma Pump &amp; Drill</u>	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: <u>steam clean</u>	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRUMS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

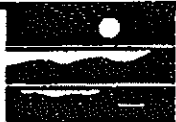
## MATERIALS USED

_____ SACKS OF _____ SAND
_____ SACKS OF _____ CEMENT
_____ SACKS OF GROUT:
_____ SACKS OF POWDERED BENTONITE:
_____ SACKS OF BENTONITE CHIPS:
_____ BUCKETS OF BENTONITE PELLETS:
_____ FEET OF _____ INCH BLANK CASING <input type="checkbox"/> PVC <input type="checkbox"/>
_____ FEET OF _____ INCH SCREEN                      _____ INCH SLOT SIZE <input type="checkbox"/> SLOTTED PVC <input type="checkbox"/>
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) ORDERED:
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) USED:
CONCRETE PUMPER USED? <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:



NOT TO SCALE

## ADDITIONAL INFORMATION

WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>				Sheet <b>1</b> of <b>2</b>
---	--	--	--	----------------------------

Job No.: <b>J5E03</b>	Logged by: <b>CPW</b>	Start Date: <b>10-15-90</b>	Completion Date: <b>10-15-90</b>	Boring No: <b>MW-1-S</b>
-----------------------	-----------------------	-----------------------------	----------------------------------	--------------------------

Drilling Contractor: <b>Tacoma Pump &amp; Drill</b>	Drilling Method: <b>Air Rotary</b>	Sampling Method:
---	------------------------------------	------------------

Ground Surface Elevation: <b>311.2</b>	Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite
--	---

Microbio Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: <b>sandy gravel, unpaved empty lot</b>
------------------------	-----------	------------	--------------	---------------	-------------	--

				1		<p>Fill: Light brown silty SAND, some gravel.  (contains abundant wood debris)</p>
				2	sm	
				3		
				4		
				5		
				6		<p>Gray SAND, fine to medium grained, with some gravel.</p>
				7	sp	
				8		
				9		
				10		<p>Gray SAND, very fine to fine grained, some silt and gravel.</p>
				11	sm	
				12		
				13		
				14		
				15		
				16		
				17		
				18		
				19		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. <b>J5E03</b>	Date <b>Aug 91</b>	Plate <b>9</b>
------------------------	--------------------	----------------

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet **2** of **2**

Job No.: **J5E03**      Logged by: **CPW**      Start Date: **10-15-90**      Completion Date: **10-15-90**      Boring No: **MW-1-S**

Drilling Contractor: **Tacoma Pump & Drill**      Drilling Method: **Air Rotary**      Sampling Method:

Ground Surface Elevation: **311.2**      Hole Completion:  Monitoring Well       Piezometer       Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
			[Dotted pattern]	21	SP	Brown SAND, fine to medium grained, with some gravel, moist.
				22		
				23		
				24		
			[Vertical line pattern]	25	SM	Brown silty SAND, fine grained, moist.
				26		
				27		
				28		
				29		
				30		
				31		
				32		
				33		
				34		
				35		
				36		
				37		
				38		
				39		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. **J5E03**      Date **Aug 91**      Plate **10**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analyses and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Monitor Well Completion Form

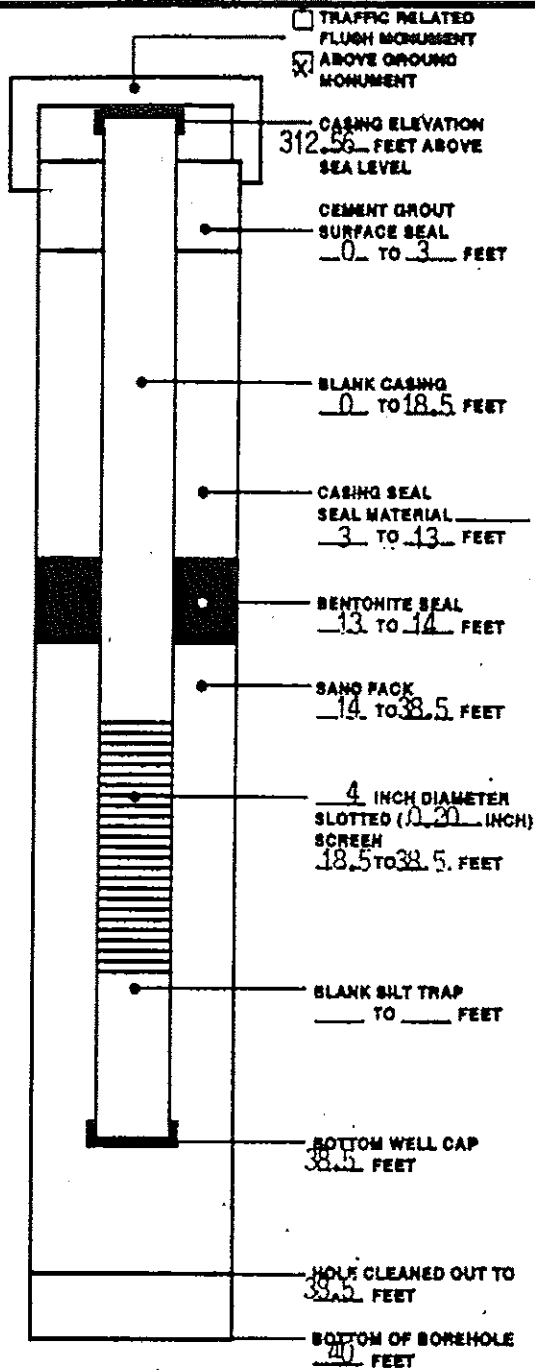
PROJECT NAME: <b>Bethel Wells, Port Orchard, WA</b>	
PROJECT NUMBER: <b>J5E03</b>	PROJECT MANAGER: <b>RSS</b>
LOGGED BY: <b>RSS</b>	REVIEWED BY: <b>RSS</b>
WELL I.D.: <b>MW-1-S</b>	DATE: <b>10-15-90</b>
DRILLING COMPANY: <b>Tacoma Pump and Drill</b>	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: <b>steam clean</b>	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRUMS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

## MATERIALS USED

_____ SACKS OF _____ SAND
_____ SACKS OF _____ CEMENT
_____ SACKS OF GROUT:
_____ SACKS OF POWDERED BENTONITE:
_____ SACKS OF BENTONITE CHIPS:
_____ BUCKETS OF BENTONITE PELLETS:
_____ FEET OF _____ INCH BLANK CASING <input type="checkbox"/> PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH SCREEN                      _____ INCH SLOT SIZE <input type="checkbox"/> SLOTTED PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING
_____ YARD <sup>3</sup> CEMENT-SAND (REDI-MIX) ORDERED:
_____ YARD <sup>3</sup> CEMENT-SAND (REDI-MIX) USED:
CONCRETE PUMPER USED? <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:



## ADDITIONAL INFORMATION


WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. J5E03

Drwn.

Date

Checked

Date Aug 91

Plate 11



# Environmental Boring Log

Project Name: <b>Rethel Wells, Port Orchard, Washington</b>					Sheet <b>1</b> of <b>4</b>	
Job No.: <b>J5E03</b>	Logged by: <b>BSS</b>	Start Date: <b>10-22-90</b>	Completion Date: <b>10-23-90</b>	Boring No.: <b>MW-2-D</b>		
Drilling Contractor: <b>Tacoma Pump &amp; Drill</b>		Drilling Method: <b>Air Rotary</b>		Sampling Method: <b>SPT</b>		
Ground Surface Elevation: <b>304.2</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite				
Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				1	SM	grass lawn  Brown silty SAND, fine grained, dry to moist.
				2		
				3		
				4		
				5	SM/SP	Brown SAND, fine grained, some silt, moist.
				6		
				7		
				8		
				9	SM/SP	Gray SAND, fine grained, trace silt and gravel, moist to wet.
				10		
	1	30 30		11		
				12		
				13		
				14		
				15	SM/ml	Tan sandy SILT, silty SAND, moist
	2	125 18"		16		
				17	SM/SP	Gray SAND, fine grained, some silt, moist.
				18		
				19		



Proj. No. **J5E03**    Date **AUG 91**    Plate **12**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet **2** of **4**

Job No.: **J5E03**    Logged by: **BSS**    Start Date: **10-22-90**    Completion Date: **10-23-90**    Boring No: **MW-2-D**

Drilling Contractor: **Tacoma Pump & Drill**    Drilling Method: **Air Rotary**    Sampling Method: **SPT**

Ground Surface Elevation: **304.2**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				21	SM/SP	Gray SAND, fine grained, trace silt, moist.
				22		
				23		
				24		
				25	SM	Dark gray silty SAND, fine grained, damp
				26		
				27		
				28		
				29	SP	Gray SAND, fine grained, trace silt, saturated.
				30		
				31		
				32		
				33	SP	Gray SAND, fine grained, trace silt, saturated.
				34		
				35		
				36		
	<b>3</b>	<b>102</b>	<b>12"</b>	<b>36</b>		
				37		
				38		
				39		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. **J5E03**

Date **AUG 91**

Plate **13**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analyses and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of information for purposes not intended by us.

# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>			Sheet of <b>3 4</b>	
--	--	--	------------------------	--

Job No.: <b>J5E03</b>	Logged by: <b>RSS</b>	Start Date: <b>10-22-90</b>	Completion Date: <b>10-23-90</b>	Boring No.: <b>MW-2-D</b>
--------------------------	--------------------------	--------------------------------	-------------------------------------	------------------------------

Drilling Contractor: <b>Tacoma Pump &amp; Drill</b>	Drilling Method: <b>Air Rotary</b>	Sampling Method: <b>SPT</b>
--	---------------------------------------	--------------------------------

Ground Surface Elevation: <b>304.2</b>	Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite
---	---

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
			41			Gray SAND, fine grained, trace silt, wet.
			42			
			43	sp		
			44			
			45			
			46			
			47			
			48			
			49			
			50			
			51			Gray clean SAND, fine grained, saturated.
			52			
			53			
			54	sp		
			55			
			56			
			57			
			58			
			59			
	4					



Proj. No. <b>J5E03</b>	Date <b>Aug 91</b>	Plate <b>14</b>
------------------------	--------------------	-----------------

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of information by others of information not intended for their use.

# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet **4** of **4**

Job No.: **JSE03**    Logged by: **BSS**    Start Date: **10-22-90**    Completion Date: **10-23-90**    Boring No: **MW-2-D**

Drilling Contractor: **Tacoma Pump & Drill**    Drilling Method: **Air Rotary**    Sampling Method: **SPT**

Ground Surface Elevation: **304.2**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				61	SP	Gray clean SAND, fine grained, saturated.
				62		
				63		
				64		
				65		
				66		
				67		
				68		
				69		
				70		
				71	SD	gravel noted while drilling at 68 ft Blue gray SAND, fine grained, trace silt, saturated.
				72		
				73		
				74		
				75		
				76		
				77		
	5			78		
				79	SM	Gray gravelly silty SAND, wet.
	6	100 6"		80		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. **JSE03**    Date **Aug 91**    Plate **15**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of information derived from this report for purposes not intended by the original user.

# Monitor Well Completion Form

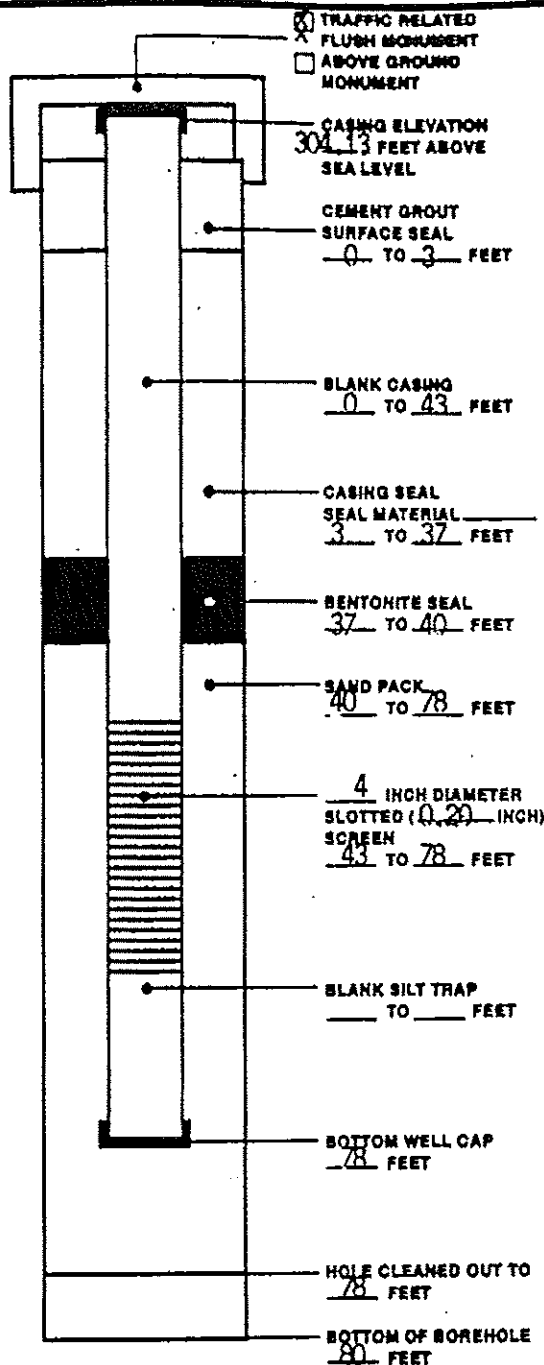
PROJECT NAME: <u>Bethel Wells, Port. Orchard, WA</u>	
PROJECT NUMBER: <u>J5E03</u>	PROJECT MANAGER: <u>BSS</u>
LOGGED BY: <u>BSS</u>	REVIEWED BY: <u>BSS</u>
WELL (I.D.): <u>MW-2-0</u>	DATE: <u>10-23-90</u>
DRILLING COMPANY: <u>Tacoma Pump and Drill</u>	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: <u>steam clean</u>	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRUMS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

## MATERIALS USED

_____ SACKS OF _____	SAND
_____ SACKS OF _____	CEMENT
_____ SACKS OF GROUT:	
_____ SACKS OF POWDERED BENTONITE:	
_____ SACKS OF BENTONITE CHIPS:	
_____ BUCKETS OF BENTONITE PELLETS:	
_____ FEET OF _____ INCH BLANK CASING	<input type="checkbox"/> PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
<input type="checkbox"/> SLOTTED PVC <input type="checkbox"/> _____	
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) ORDERED:	
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) USED:	
CONCRETE PUMPER USED?	<input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:	



## ADDITIONAL INFORMATION


# Environmental Boring Log

Project Name: **Rethel Wells, Port Orchard, Washington** Sheet 1 of 2

Job No.: **J5E03**    Logged by: **CPW**    Start Date: **10-23-90**    Completion Date: **10-23-90**    Boring No: **MW-2-S**

Drilling Contractor: **Tacoma Pump & Drill**    Drilling Method: **Air Rotary**    Sampling Method:

Ground Surface Elevation: **304.9**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microlit Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				1		grass lawn
				2		
				3		Brown SAND, fine grained, some silt, dry to moist.
				4		
				5	sm/sp	
				6		becomes gray
				7		
				8		
				9		
				10		gravels encountered at 11 ft
				11		
				12		
				13	sm/sp	
				14		Gray silty gravelly SAND, fine grained, moist.
				15		
				16		
				17		
				18		
				19		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. **J5E03**    Date **Aug 91**    Plate **17**

Subsurface conditions depicted represent our observations at the time and location of the exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of information for other than the purposes intended on this log.



# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet **2** of **2**

Job No.: **J5E03**    Logged by: **RSS**    Start Date: **10-23-90**    Completion Date: **10-23-90**    Boring No.: **MW-2-S**

Drilling Contractor: **Tacoma Pump & Drill**    Drilling Method: **Air Rotary**    Sampling Method:

Ground Surface Elevation: **304.9**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
			[Litho-graphy pattern]	21	SM/SP	Gray silty gravelly SAND, fine grained, moist.
			[Litho-graphy pattern]	22		
			[Litho-graphy pattern]	23		
			[Litho-graphy pattern]	24		
			[Litho-graphy pattern]	25		
			[Litho-graphy pattern]	26		
			[Litho-graphy pattern]	27		
			[Litho-graphy pattern]	28	SM/SP	Gray SAND, fine grained, some silt, moist.
			[Litho-graphy pattern]	29		
			[Litho-graphy pattern]	30		
			[Litho-graphy pattern]	31		
			[Litho-graphy pattern]	32		
			[Litho-graphy pattern]	33		
			[Litho-graphy pattern]	34		
			[Litho-graphy pattern]	35		
			[Litho-graphy pattern]	36		
			[Litho-graphy pattern]	37		
			[Litho-graphy pattern]	38		
			[Litho-graphy pattern]	39		



Proj. No. **J5E03**    Date **AUG 91**    Plate **18**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the accuracy of these conditions.

# Monitor Well Completion Form

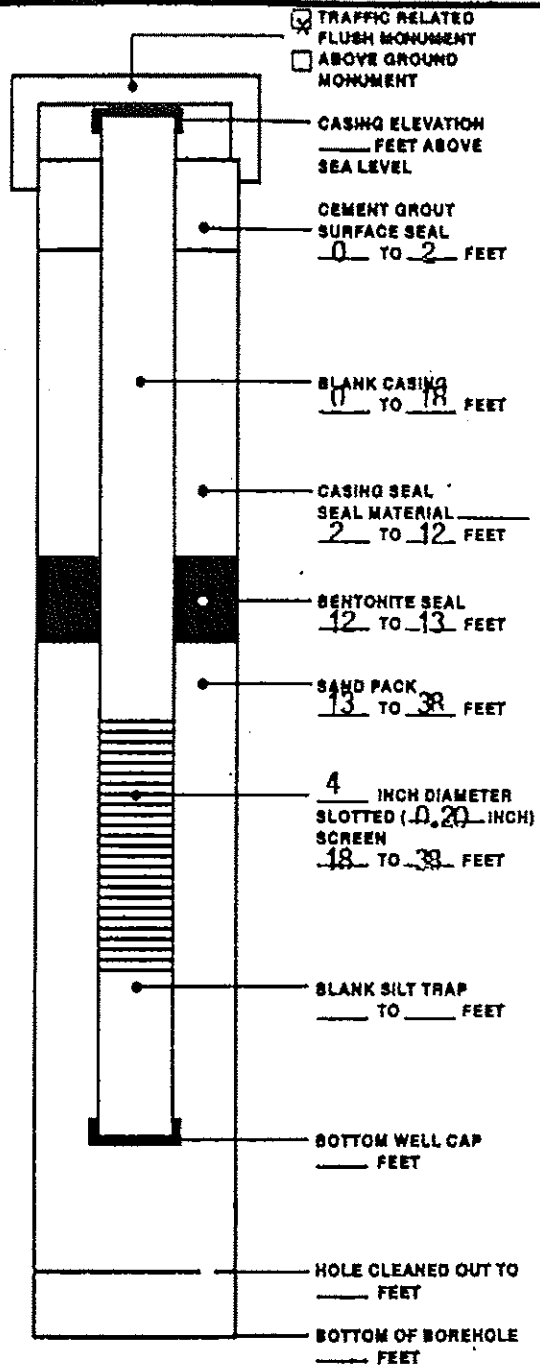
PROJECT NAME: Bethel Wells, Port Orchard, WA	
PROJECT NUMBER: J5E03	PROJECT MANAGER: BSS
LOGGED BY: BSS	REVIEWED BY: BSS
WELL I.D.: M4-2-S	DATE: 10-23-90
DRILLING COMPANY: Tacoma Pump and Drill	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: steam clean	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRUMS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

## MATERIALS USED

_____ SACKS OF _____ SAND
_____ SACKS OF _____ CEMENT
_____ SACKS OF GROUT:
_____ SACKS OF POWDERED BENTONITE:
_____ SACKS OF BENTONITE CHIPS:
_____ BUCKETS OF BENTONITE PELLETS:
_____ FEET OF _____ INCH BLANK CASING <input type="checkbox"/> PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH SCREEN      _____ INCH SLOT SIZE <input type="checkbox"/> SLOTTED PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) ORDERED:
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) USED:
CONCRETE PUMPER USED? <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:



## ADDITIONAL INFORMATION




WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. J5E03

Drwn.

Date


Checked

Date Aug 91

Plate 19

# Environmental Boring Log

Project Name: <b>Rethel Wells, Port Orchard, Washington</b>				Sheet <b>1</b> of <b>4</b>
Job No.: <b>J5E03</b>	Logged by: <b>BSS</b>	Start Date: <b>5-6-91</b>	Completion Date: <b>5-13-91</b>	Boring No: <b>MW-101</b>
Drilling Contractor: <b>R &amp; R Drilling</b>		Drilling Method: <b>Air Rotary</b>	Sampling Method: <b>SPT</b>	
Ground Surface Elevation: <b>NA</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite		


Microtip Reading (ppm)	Sample ID	Blow Count	Lithology	Depth in Feet	USCS Symbol	Surface Conditions:	
				1		dirt road  Gray brown mottled SAND with some silt, moist, dense.  more gravel, becomes very dense.  Brown SAND, fine grained, moist, dense.  becomes very dense.	
	1	15 33		2	SM		
				3			
				4			
				5			
				6			
				7			
	2	22 50.5"		8			
				9			
				10			
				11			
	3	14 25		12			SP
				13			
				14			
				15			
				16			
	4	27 48		17			
				18			
				19			



Proj. No. <b>J5E03</b>	Date <b>Aug 91</b>	Plate <b>20</b>
------------------------	--------------------	-----------------

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented in this log.

# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>						Sheet <b>2</b> of <b>4</b>
Job No.: <b>J5E03</b>	Logged by: <b>BSS</b>	Start Date: <b>5-6-91</b>	Completion Date: <b>5-13-91</b>	Boring No.: <b>MW-101</b>		
Drilling Contractor: <b>R &amp; R Drilling</b>		Drilling Method: <b>Air Rotary</b>		Sampling Method: <b>SPT</b>		
Ground Surface Elevation: <b>NA</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite				
Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39	SD	<p>Brown SAND, fine grained, moist, very dense.</p> <p>becomes wet.</p>
	5	28 23		23 24		
		28 38		28 29		
		34 28		33 34		
		38 28		38 39		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. **J5E03**    Date **Aug 91**    Plate **21**

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

Project Name: Bethel Wells, Port Orchard, Washington Sheet 3 of 4

Job No.: J5E03 Logged by: BSS Start Date: 5-6-91 Completion Date: 5-13-91 Boring No: **MW-101**

Drilling Contractor: R & R Drilling Drilling Method: Air Rotary Sampling Method: SPT

Ground Surface Elevation: NA Hole Completion:  Monitoring Well  Piezometer  Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
			[Dotted pattern]	41		Brown SAND, fine grained, wet to saturated, dense to very dense.
				42		
	6	21 23		43	X	
				44	X	
				45		
				46		
				47	SD	
				48		
		9 26		49	X	
				50		
			51			
			52			
	7	50/3" 50/3"	53	X		
			54	X		
			55			
			56			
			57			
	8	6 12	58	X		
			59	X		
					becomes medium dense.	



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. J5E03 Date Aug 91 Plate 22

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.


Project Name: Bethel Wells, Port Orchard, Washington Sheet 1 of 4

Job No.: J5E03      Logged by: BSS      Start Date: 5-6-91      Completion Date: 5-13-91      Boring No: **MW-101**

Drilling Contractor: R & R Drilling      Drilling Method: Air Rotary      Sampling Method: SPT

Ground Surface Elevation: NA      Hole Completion:  Monitoring Well       Piezometer       Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				61		Brown SAND, fine grained, saturated, medium dense to very dense.
				62		
		8		63	X	
		10		64	X	
				65		
				66		
				67	sp	
		29		68	X	
	9	50/5"		69	X	
				70		
			71			
			72			
			73			
		50/5"	74	X		
			75			
			76			
			77	sp		
			78	X		
	10	41	79	X		
		50/5"				



**WASHINGTON STATE DEPT. OF  
ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. J5E03      Date Aug 91      Plate 23

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Monitor Well Completion Form

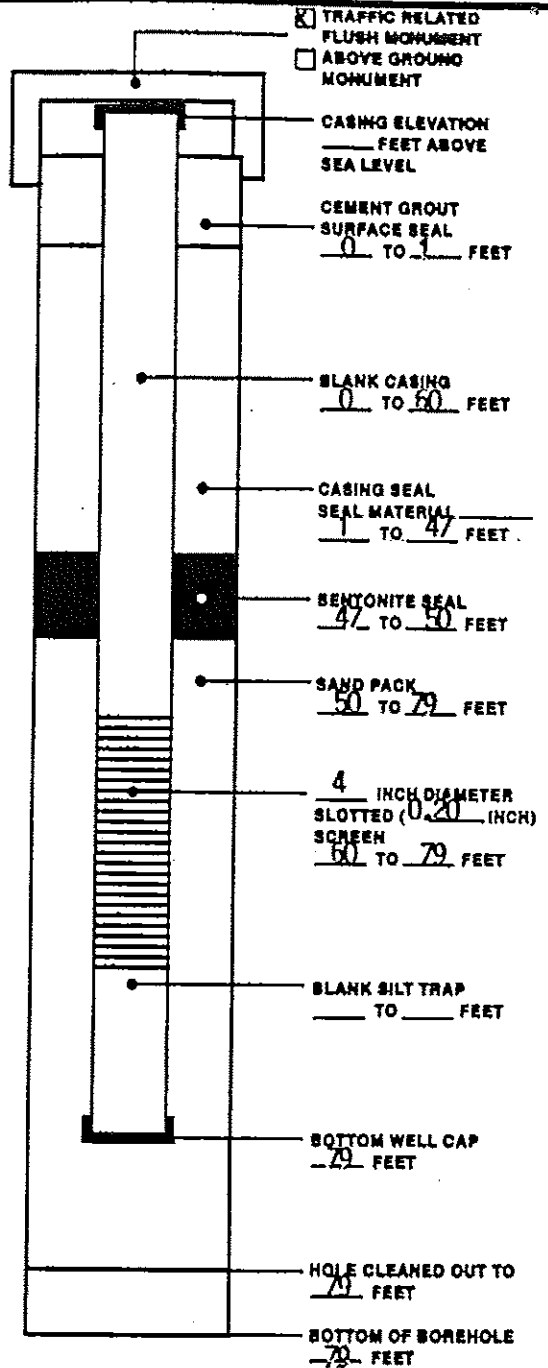
PROJECT NAME: <u>Bethel Wells, Port Orchard, WA</u>	
PROJECT NUMBER: <u>J5E03</u>	PROJECT MANAGER: <u>RSS</u>
LOGGED BY: <u>RSS</u>	REVIEWED BY: <u>RSS</u>
WELL I.D.: <u>MM-101</u>	DATE: <u>5-13-91</u>
DRILLING COMPANY: <u>R &amp; R Drilling</u>	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: <u>steam clean</u>	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRUMS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

## MATERIALS USED

_____ SACKS OF _____	SAND
_____ SACKS OF _____	CEMENT
_____ SACKS OF GROUT:	
_____ SACKS OF POWDERED BENTONITE:	
_____ SACKS OF BENTONITE CHIPS:	
_____ BUCKETS OF BENTONITE PELLETS:	
_____ FEET OF _____ INCH BLANK CASING	<input type="checkbox"/> PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
	<input type="checkbox"/> SLOTTED PVC <input type="checkbox"/> _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD <sup>3</sup> CEMENT-SAND (REDI-MIX) ORDERED:	
_____ YARD <sup>3</sup> CEMENT-SAND (REDI-MIX) USED:	
CONCRETE PUMPER USED?	<input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:	



NOT TO SCALE

## ADDITIONAL INFORMATION




Project Name: Bethel Wells, Port Orchard, Washington Sheet 1 of 5

Job No.: J5E03 Logged by: BSS Start Date: 5-10-91 Completion Date: 5-13-91 Boring No: **MW-102**

Drilling Contractor: R & R Drilling Drilling Method: HSA Sampling Method: SPT

Ground Surface Elevation: NA Hole Completion:  Monitoring Well  Piezometer  Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions: grass
------------------------	-----------	------------	-------------	---------------	-------------	---------------------------

			Lithography	1		Gray SAND, fine grained, some silt and gravel, moist, very dense.
				2		
				3		
	1	34 50/3*		4	SM	
				5		
				6		
				7		
				8		
				9		
				10		
				11		
				12		
				13		
	2	24 25		14		
				15		
				16		
				17		
				18		
				19		



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE


Proj. No. J5E03 Date Aug 91 Plate 25

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>				Sheet <b>3</b> of <b>5</b>	
Job No.: <b>JSE03</b>	Logged by: <b>BSS</b>	Start Date: <b>5-10-91</b>	Completion Date: <b>5-13-91</b>	Boring No: <b>MW-102</b>	
Drilling Contractor: <b>R &amp; R Drilling</b>		Drilling Method: <b>HSA</b>		Sampling Method: <b>SPT</b>	
Ground Surface Elevation: <b>NA</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite			

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
			●●●●	41		
				42	ml	Gray SILT with sand, moist, very dense
	5	26 50/4"		43		
				44		
			●●●●	45	sp	Brown clean SAND, fine grained, moist, very dense.
				46		
				47		
				48		
				49		
				50		
				51		
				52		
				53		
	6	29 50/4"		54		
				55		
				56		
				57		
				58		
				59		

 <p><b>WASHINGTON STATE DEPT. OF ECOLOGY NORTHWEST REGIONAL OFFICE</b></p>			
	Proj. No. <b>JSE03</b>	Date <b>Aug 91</b>	Plate <b>27</b>

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Environmental Boring Log

Project Name: <b>Bethel Wells, Port Orchard, Washington</b>				Sheet <b>A</b> of <b>5</b>	
Job No.: <b>J5E03</b>	Logged by: <b>BSS</b>	Start Date: <b>5-10-91</b>	Completion Date: <b>5-13-91</b>	Boring No.: <b>MW-102</b>	
Drilling Contractor: <b>R &amp; R Drilling</b>		Drilling Method: <b>HSA</b>		Sampling Method: <b>SPT</b>	
Ground Surface Elevation: <b>NA</b>		Hole Completion: <input checked="" type="checkbox"/> Monitoring Well <input type="checkbox"/> Piezometer <input type="checkbox"/> Abandoned, sealed with bentonite			

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				61		Brown clean SAND, fine grained, wei., very dense.
				62		
				63		
	7	15	50/4"	64		
				65		
				66		
				67		
				68		
	8	11	38	69	SP	
				70		
				71		
				72		
				73		
				74		
				75		
				76		
				77		
				78		
				79		



# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet 5 of 5

Job No.: **J5E03**    Logged by: **BSS**    Start Date: **5-10-91**    Completion Date: **5-13-91**    Boring No: **MW-102**

Drilling Contractor: **R & R Drilling**    Drilling Method: **HSA**    Sampling Method: **SPT**

Ground Surface Elevation: **NA**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
			●●●●	81	SP	Brown clean SAND, fine grained, wet, very dense.
				82		
				83		
				84		
				85		
				86		
				87		
				88		
				89		
				90		
				91		
				92		
				93		
				94		
				95		
				96		
				97		
				98		
				99		



# Monitor Well Completion Form

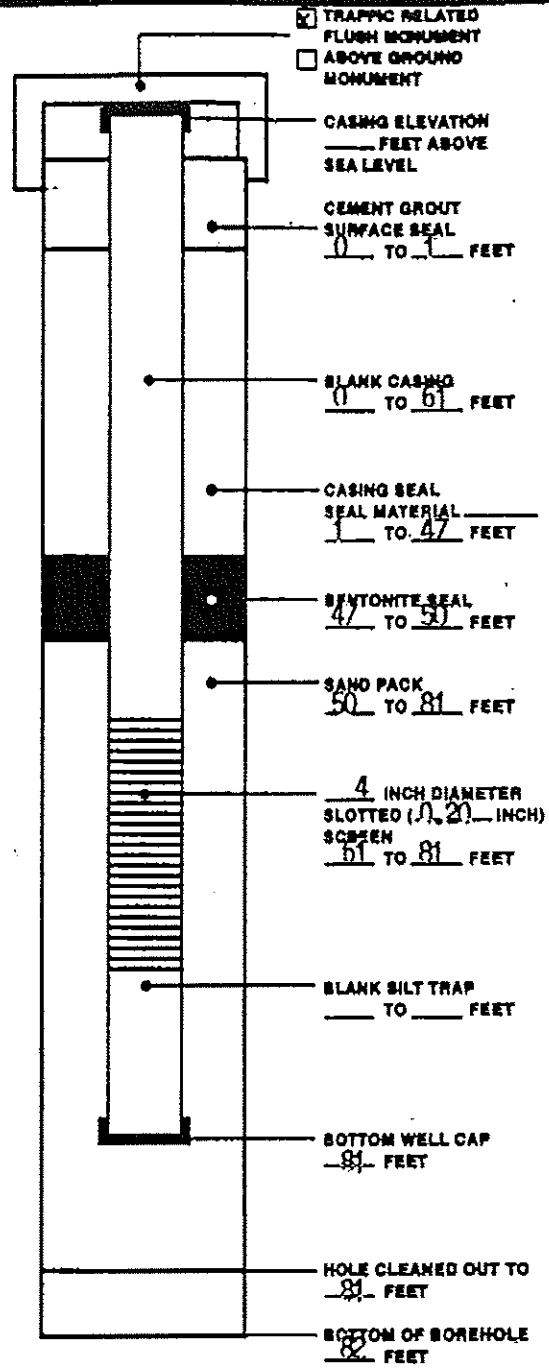
PROJECT NAME: Bethel Wells, Port Orchard, WA	
PROJECT NUMBER: J5E03	PROJECT MANAGER: BSS
LOGGED BY: BSS	REVIEWED BY: BSS
WELL I.D.: MW-102	DATE: 5-13-91
DRILLING COMPANY: R & R Drilling	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: steam clean	

## DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR	<input type="checkbox"/> SLIGHTLY CLOUDY
	<input type="checkbox"/> MOD. TURBID	<input type="checkbox"/> VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE	<input type="checkbox"/> TANK TRUCK
	<input type="checkbox"/> SANITARY SEWERS	<input type="checkbox"/> STORAGE TANK
	<input type="checkbox"/> DRUMS	<input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:	
RECOVERY TIME:		

## MATERIALS USED

_____	SACKS OF _____	SAND
_____	SACKS OF _____	CEMENT
_____	SACKS OF GROUT:	
_____	SACKS OF POWDERED BENTONITE:	
_____	SACKS OF BENTONITE CHIPS:	
_____	BUCKETS OF BENTONITE PELLETS:	
_____	FEET OF _____ INCH BLANK CASING	<input type="checkbox"/> PVC <input type="checkbox"/>
_____	FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
	<input type="checkbox"/> SLOTTED PVC	<input type="checkbox"/>
_____	FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____	YARD <sup>3</sup> CEMENT-SAND (RED-MIX) ORDERED:	
_____	YARD <sup>3</sup> CEMENT-SAND (RED-MIX) USED:	
CONCRETE PUMPER USED?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
NAME:		



NOT TO SCALE

## ADDITIONAL INFORMATION


WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Project Name: Bethel Wells, Port Orchard, Washington Sheet 2 of 2

Job No.: J5E03 Logged by: RSS Start Date: 5-6-91 Completion Date: 5-6-91 Boring No.: **MW-103**

Drilling Contractor: R & R Drilling Drilling Method: HSA Sampling Method: SPT

Ground Surface Elevation: 311± Hole Completion:  
 Monitoring Well  Piezometer  Abandoned, sealed with bentonite

Microtip Reading (pp: 1)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				21		
				22		
	3	17 24		23	sp	Brown SAND, some silt and gravel, moist to wet, medium dense.  slight gas odor
				24		
				25		
				26		
				27		
				28		
	4	24 41		29		
				30		
				31		
				32		
	5	27 50/6"	33	sp	Brown SAND, some silt and gravel, saturated, very dense.	
			34			
			35			
			36			
			37			
			38			
			39			



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. J5E03 Date Aug 91 Plate 32

Subsurface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily representative of other times and locations. We cannot accept responsibility for the use of interpretation by others of information presented on this log.

# Monitor Well Completion Form

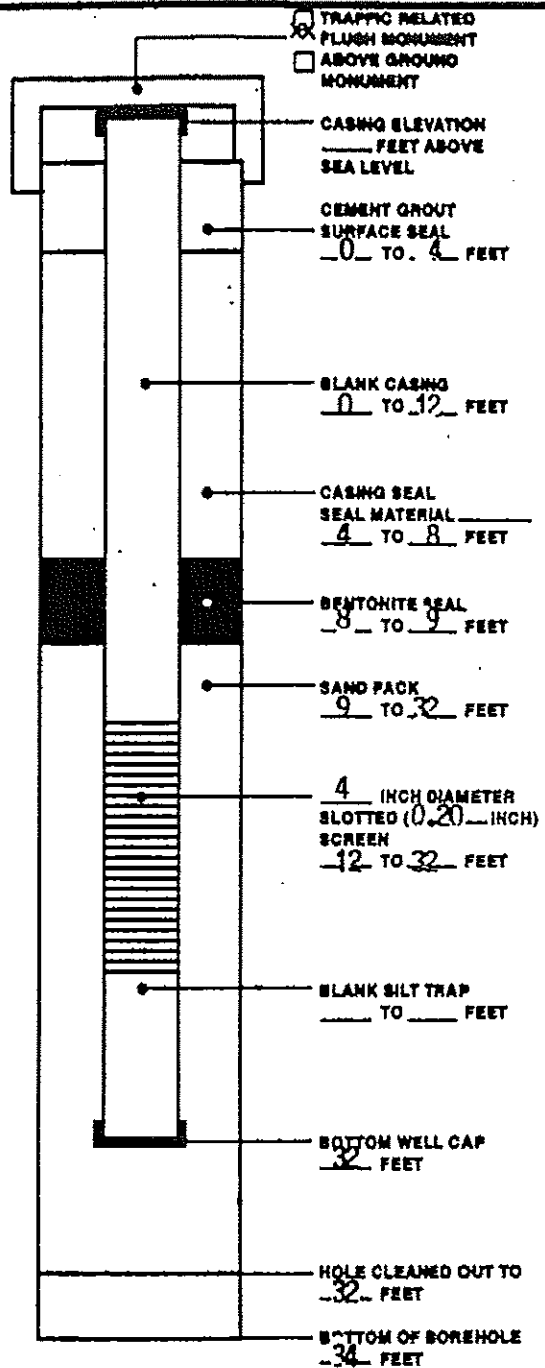
PROJECT NAME: <b>Rethel Wells, Port Orchard, WA</b>	
PROJECT NUMBER: <b>J5E03</b>	PROJECT MANAGER: <b>BSS</b>
LOGGED BY: <b>BSS</b>	REVIEWED BY: <b>BSS</b>
WELL I.D.: <b>MW-103</b>	DATE: <b>5-6-91</b>
DRILLING COMPANY: <b>R &amp; R Drilling</b>	
METHOD OF DECONTAMINATION PRIOR TO DRILLING: <b>steam clean</b>	

## DEVELOPMENT

METHOD OF DEVELOPMENT:	
DEVELOPMENT DATE:	
YIELD (GAL)	TIME: FROM TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	<input type="checkbox"/> CLEAR <input type="checkbox"/> SLIGHTLY CLOUDY <input type="checkbox"/> MOD. TURBID <input type="checkbox"/> VERY MUDDY
ODOR OF WATER:	
WATER DISCHARGED TO:	<input type="checkbox"/> GROUND SURFACE <input type="checkbox"/> TANK TRUCK <input type="checkbox"/> SANITARY SEWERS <input type="checkbox"/> STORAGE TANK <input type="checkbox"/> DRAINS <input type="checkbox"/> OTHER
DEPTH TO WATER AT START OF DEVELOPMENT:	DEPTH TO WATER AFTER DEVELOPMENT:
RECOVERY TIME:	

## MATERIALS USED

_____ SACKS OF _____ SAND
_____ SACKS OF _____ CEMENT
_____ SACKS OF GROUT:
_____ SACKS OF POWDERED BENTONITE:
_____ SACKS OF BENTONITE CHIPS:
_____ BUCKETS OF BENTONITE PELLETS:
_____ FEET OF _____ INCH BLANK CASING <input type="checkbox"/> PVC <input type="checkbox"/>
_____ FEET OF _____ INCH SCREEN      _____ INCH SLOT SIZE <input type="checkbox"/> SLOTTED PVC <input type="checkbox"/>
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) ORDERED:
_____ YARD <sup>3</sup> CEMENT-SAND (RED-MIX) USED:
CONCRETE PUMPER USED? <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME:



## ADDITIONAL INFORMATION




WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
 NORTHWEST REGIONAL OFFICE

Proj. No. J5E03

Drwn.

Date

Checked

Date **Aug 91**

Plate 33



# Environmental Boring Log

Project Name: **Bethel Wells, Port Orchard, Washington** Sheet 1 of 2

Boring No.: **J5E03**    Logged by: **BSS**    Start Date: **5-6-91**    Completion Date: **5-6-91**    Boring No.: **MW-104**

Drilling Contractor: **R & R Drilling**    Drilling Method: **HSA**    Sampling Method: **SPT**

Ground Surface Elevation: **311±**    Hole Completion:  Monitoring Well     Piezometer     Abandoned, sealed with bentonite

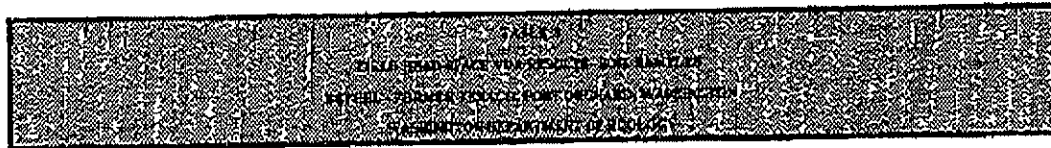
Alcotrip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions
				1		sandy gravel, unpaved empty lot
				2		
		7		3		
		12		4	SP	
				5		
				6		
				7		
				8		
	1	14		9		gas odor
		14		10		
				11		
				12		
	2			13		Gray silty SAND, moist to wet, medium dense to very dense.
				14		
				15		gas odor
				16		
				17		
	3	50/5"		18		contains gravel
				19		gas odor



WASHINGTON STATE DEPT. OF  
**ECOLOGY**  
NORTHWEST REGIONAL OFFICE

Proj. No. **J5E03**    Date **Aug 91**    Plate **34**

Surface conditions depicted represent our observations at the time and location of this exploratory hole, modified by engineering tests, analysis and judgment. They are not necessarily



**SPARGING WELL SP-1**

SAMPLING DATE	DEPTH INTERVAL (FT)	PID READING PPM	TIME	SOIL CHARACTERISTICS	MOISTURE	BLOW COUNT
6/13/95	2.5-5.0	86	15:33	SM	DRY	89,13
6/13/95	8.5-10.0	83	15:45	SM	MOIST	5,21,16
6/13/95	13.5-15.0	105	15:57	SM, CL	MOIST	1435,28
6/13/95	18.5-20.0	1605*	16:05	SM, CL	MOIST	1428,27
6/13/95	23.5-25.0	1880*	16:15	SM	WET	1734,29
6/13/95	28.5-30.0	1076*	16:40	SM	WET	1730,24
6/13/95	33.5-35.0	1230*	16:50	SM	WET	5,11,13

**SPARGING WELL SP-2**

SAMPLING DATE	DEPTH INTERVAL (FT)	PID READING PPM	TIME	SOIL CHARACTERISTICS	MOISTURE	BLOW COUNT
6/13/95	1.5-5.0	16	6:30	SM	DRY	3,4,5
6/13/95	8.5-10.0	0	6:40	SM	MOIST	12,21,26
6/13/95	13.5-15.0	0	6:55	SM	MOIST	50,50
6/13/95	18.5-20.0	3	7:10	SM	WET	9,25,15
6/13/95	23.5-25.0	0	7:24	SM	WET	14,8,14
6/13/95	28.5-30.0	0	7:40	SM, CL	WET	15,50,5
6/13/95	33.5-35.0	0	7:55	SM, CL	WET	8,40,5

FIELD HEADSPACE VDA RESULTS - SOIL SAMPLES (CONT)

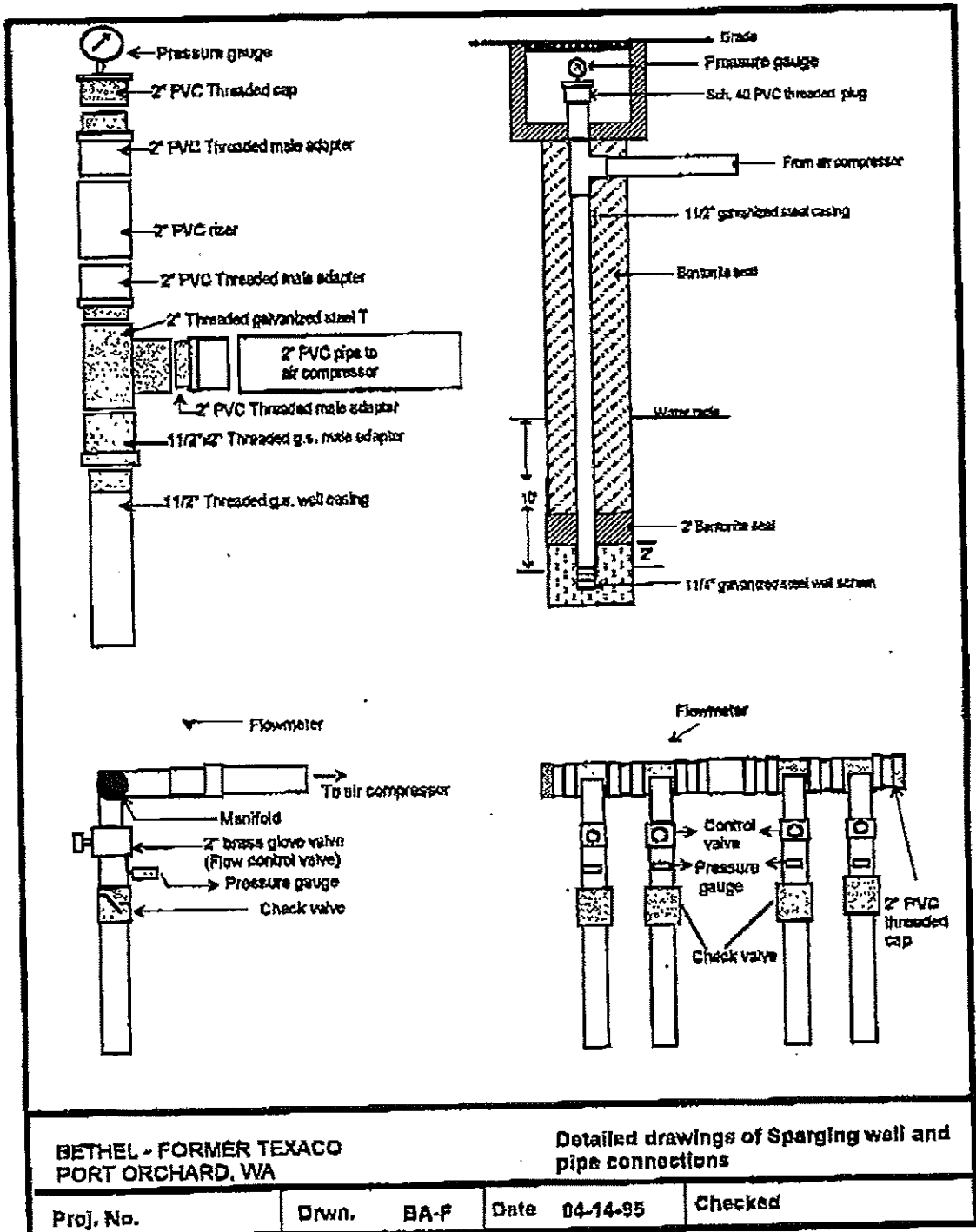
SPARGING WELL SP-3

SAMPLING DATE	DEPTH INTERVAL (FT)	PID READING PPM	TIME	SOIL CHARACTERISTICS	MOISTURE	BLOW COUNT
6/13/95	3.5-5.0	0	12:05	SM	DRY	4,5,11
6/13/95	8.5-10.0	112	12:20	SM	MOIST	13,21,23
6/13/95	13.5-15.0	52	12:55	SM, CL	MOIST	16,50,4
6/13/95	18.5-20.0	1836*	13:06	SM	MOIST	15,21,27
6/13/95	23.5-25.0	623*	13:15	SM	WET	14,27,23
6/13/95	28.5-30.0	348*	13:25	SM	WET	4,28,29
6/13/95	33.5-35.0	245	13:40	SM	WET	10,13,33

SPARGING WELL SP-4

SAMPLING DATE	DEPTH INTERVAL (FT)	PID READING PPM	TIME	SOIL CHARACTERISTICS	MOISTURE	BLOW COUNT
6/13/95	3.5-5.0	0	9:20	SM	DRY	3,11,14
6/13/95	8.5-10.0	111	9:31	SM	DRY	5,21,16
6/13/95	13.5-15.0	219	9:40	SM, CL	MOIST	14,35,28
6/13/95	18.5-20.0	1720*	9:50	SM	MOIST	14,28,27
6/13/95	23.5-25.0	838*	10:03	SM	MOIST	17,34,20
6/13/95	28.5-30.0	154*	10:20	SM	WET	17,30,24
6/13/95	33.5-35.0	646*	10:28	SM	WET	5,11,13

\* Sample submitted to laboratory for analyzing volatile EPA, MCL and WTRLC



BETHEL - FORMER TEXACO  
PORT ORCHARD, WA

Detailed drawings of Sparging wall and  
pipe connections

Proj. No.	Drawn.	BA-F	Date	04-14-95	Checked
-----------	--------	------	------	----------	---------

# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

**PROJECT:** FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
**JOB NO.:** 198-801      **TEST PIT NO.:** ETP-1      **PAGE:** 1 of 1  
**LOCATION:** SEE FIGURE NO. 2  
**EXCAV. EQ. TYPE:** JOHN DEERE 310D      **SOIL:** BACKHOE      **ROCK:** N/A  
**EXCAVATED BY:** BRUCE MCDONALD, TACOMA, WA      **LOGGED BY:** J. BOLLES  
**ELEVATION:**      **CASING -** N/A      **GROUNDWATER -** NOT ENCOUNTERED  
**DATE:**      **STARTED -** 1-6-99      **COMPLETED -** 1-6-99  
**CASING:**      **DIAMETER -** N/A      **SLOT SIZE -** N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 3.0	<p><u>SILTY SAND</u>; slightly moist to wet, loose, non-plastic, brown. Organics.</p> <p>No odor or hydrocarbon staining. Scrap metal observed in excavation.</p> <p>Base of test pit at about 3.0 ft. BGS.</p>	SM		ETP-1@ 3 ft. BGS (PID=23.1 ppm) (NWTPH-HCID)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
 JOB NO.: 198-801 TEST PIT NO: ETP-2 PAGE: 1 of 1  
 LOCATION: SEE FIGURE NO. 2  
 EXCAV. EQ. TYPE: JOHN DEERE 310D SOIL: BACKHOE ROCK: N/A  
 EXCAVATED BY: BRUCE MCDONALD, TACOMA, WA LOGGED BY: J. BOLLES  
 ELEVATION: CASING - N/A GROUNDWATER - NOT ENCOUNTERED  
 DATE: STARTED - 1-6-99 COMPLETED - 1-6-99  
 CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6'			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 2.0	<p><b>SILTY SAND</b>; slightly moist to moist, loose, non-plastic, brown.</p> <p>No odor or hydrocarbon staining. Tires and I-CO<sub>2</sub> canister observed in excavation.</p> <p>Base of test pit at about 2.0 ft. BGS.</p>	SM		ETP-2@ 2 ft. BGS (PID=42.0 ppm) (NWTPH-HCID)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

**PROJECT:** FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
**JOB NO.:** 198-801      **TEST PIT NO.:** ETP-3      **PAGE:** 1 of 1  
**LOCATION:** SEE FIGURE NO. 2  
**EXCAV. EQ. TYPE:** JOHN DEERE 310D      **SOIL:** BACKHOE      **ROCK:** N/A  
**EXCAVATED BY:** BRUCE MCDONALD, TACOMA, WA      **LOGGED BY:** J. BOLLES  
**ELEVATION:**      **CASING -** N/A      **GROUNDWATER -** NOT ENCOUNTERED  
**DATE:**      **STARTED -** 1-6-99      **COMPLETED -** 1-6-99  
**CASING:**      **DIAMETER -** N/A      **SLOT SIZE -** N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 2.5	<p><u>SILTY SAND</u>; slightly moist to moist, loose, non-plastic, brown.</p> <p>No odor or hydrocarbon staining. Scrap metal, tires, and rusted paint cans observed in excavation.</p> <p>Base of test pit at about 2.5 ft. BGS.</p>	SM		ETP-3@ 2.5 ft. BGS (PID=25.3 ppm) (NWTPH-HCID, EPA 8021B)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface



# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: ETP-4 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

EXCAV. EQ. TYPE: JOHN DEERE 310D SOIL: BACKHOE ROCK: N/A

EXCAVATED BY: BRUCE MCDONALD, TACOMA, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - NOT ENCOUNTERED

DATE: STARTED - 1-6-99 COMPLETED - 1-6-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 2.5	<p><u>SILTY SAND</u>; slightly moist to moist, loose, non-plastic, brown.</p> <p>No odor or hydrocarbon staining. Tires and wood debris observed in excavation.</p> <p>Base of test pit at about 2.5 ft. BGS.</p>	SM		ETP-4@ 2.5 ft. BGS (PID=26.1 ppm) (NWTPH-HCID)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-301 TEST PIT NO.: ETP-5 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

EXCAV. EQ. TYPE: JOHN DEERE 310D SOIL: BACKHOE ROCK: N/A

EXCAVATED BY: BRUCE MCDONALD, TACOMA, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - NOT ENCOUNTERED

DATE: STARTED - 1-6-99 COMPLETED - 1-6-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 3.0	<p><u>SILTY SAND</u>; slightly moist to moist, loose, non-plastic, brown.</p> <p>No odor or hydrocarbon staining. Charcoal and burned wood debris from 0.0 to 0.5 ft. BGS. Scrap metal and one 55-gallon drum observed near excavation area.</p> <p>Base of test pit at about 3.0 ft. BGS.</p>	SM		ETP-5@ 3.0 ft. BGS (PID=25.1 ppm) (NWTPH-HCID, EPA 8021B)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF TEST PIT EXPLORATION

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
 JOB NO.: 198-801 TEST PIT NO.: ETP-6 PAGE: 1 of 1  
 LOCATION: SEE FIGURE NO. 2  
 EXCAV. EQ. TYPE: JOHN DEERE 310D SOIL: BACKHOE ROCK: N/A  
 EXCAVATED BY: BRUCE MCDONALD, TACOMA, WA LOGGED BY: J. BOLLES  
 ELEVATION: CASING - N/A GROUNDWATER - NOT ENCOUNTERED  
 DATE: STARTED - 1-6-99 COMPLETED - 1-6-99  
 CASINO: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 3.0	<u>SILTY SAND</u> ; moist, loose, non-plastic, brown.  No odor or hydrocarbon staining. Scrap metal and wood debris observed in excavation.  Base of test pit at about 3.0 ft. BGS.	SM		ETP-6@ 3.0 ft. BGS (PID=23.0 ppm) (NWTIPH-HCID)					

Notes: This explanation applies only at the location of this test pit and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

**PROJECT:** FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
**JOB NO.:** 198-801      **TEST PIT NO.:** BH-1      **PAGE:** 1 of 1  
**LOCATION:** SEE FIGURE NO. 2  
**DRILLING EQ. TYPE:** STRATAPROBE      **SOIL:** DRIVE SAMPLER      **ROCK:** N/A  
**DRILLED BY:** TEG, LACEY, WA      **LOGGED BY:** J. BOLLES  
**ELEVATION:**      **CASING -** N/A      **GROUNDWATER -** 12.0 FEET BGS  
**DATE:**      **STARTED -** 1-5-99      **COMPLETED -** 1-5-99  
**CASING:**      **DIAMETER -** N/A      **SLOT SIZE -** N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL</u>								
0.5 - 6.0	<u>SAND with SILT and GRAVEL; moist, loose, brown</u>	SP-SM							
6.0 - 12.0	<u>CLAYEY SAND with GRAVEL; dry to saturated, hard, gray to brown.</u>  Groundwater encountered at about 12.0 ft. BGS.   Base of boring at about 12.0 ft. BGS.	SC		BH-1-S@9.0 ft. BGS   BH-1-W@12.0 ft. BGS (EPA 8021B)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-2 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 3.0 FEET BGS

DATE: STARTED - 1-5-99 COMPLETED - 1-5-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 3.0	<u>SILTY SAND with GRAVEL</u> ; moist, medium dense, brown.  Groundwater encountered at about 3.0 ft. BGS.	SM							
3.0 - 8.0	<u>CLAYEY SAND with GRAVEL</u> ; dry to saturated, hard, gray to brownish gray.  Base of boring at about 8.0 ft. BGS.	SC		BH-2-W@3.0 ft. BGS (EPA 8021B)  BH-2-S@6.0 ft. BGS					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
 JOB NO.: 198-801 TEST PIT NO.: BH-3 PAGE: 1 of 1  
 LOCATION: SEE FIGURE NO. 2  
 DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A  
 DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES  
 ELEVATION: CASING - N/A GROUNDWATER - 5.0 FEET BGS  
 DATE: STARTED - 1-5-99 COMPLETED - 1-5-99  
 CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 1.0	<u>TOPSOIL.</u>								
1.0 - 2.0	<u>SILTY SAND with GRAVEL; moist to very moist, medium dense, brown.</u>	SM							
2.0 - 10.0	<u>CLAYEY SAND with GRAVEL; moist, hard, gray.</u>	SC							
	Groundwater encountered at about 5.0 ft. BGS.			BH-3-S@4.0 ft. BGS BH-3-W@5.0 ft. BGS (EPA 8021B) Grab 6.0 -7.0 ft. BGS (PID = 10.6 ppm)					
	Base of boring at about 10.0 ft. BGS.								

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface



# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-4 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 5.0 FEET BGS

DATE: STARTED - 1-5-99 COMPLETED - 1-5-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL</u>								
0.5 - 6.0	<u>SAND with SILT</u> ; slightly moist to moist, loose, brown to gray brown.	SP-SM		Grab 2.0 - 3.0 ft. BGS (PID = 9.5 ppm)					
	Groundwater encountered at about 5.0 ft. BGS.			BH-5-W@5.0 ft. BGS (EPA 8021B)					
6.0 - 10.0	<u>SILTY SAND</u> ; moist, loose to medium dense, gray to brown.	SM		BH-4-S@6.5 ft. BGS  Grab 7.0 - 8.0 ft. BGS (PID = 8.5 ppm)					
10.0 - 12.0	<u>CLAYEY SAND</u> ; slightly moist, hard, gray.	SC							
	Base of boring at about 12.0 ft. BGS.								

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-5 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 6.5 FEET BGS

DATE: STARTED - 1-5-99 COMPLETED - 1-5-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.6	<u>TOPSOIL.</u>								
0.6 - 6.5	<u>SILTY SAND</u> ; moist to saturated, loose to medium dense, brown to gray.	SM		BH-5-S@4.5 ft. BGS BH-5-W@5.0 ft. BGS (EPA 8021B)					
6.5 - 10.0	<u>CLAYEY SAND with GRAVEL</u> ; slightly moist, hard, gray.  Groundwater encountered at about 6.5 ft. BGS.  Base of boring at about 10.0 ft. BGS.	SC		Grab 5.0-6.0 ft. BGS (PID = 7.7 ppm)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-6 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 1.5 FEET BGS

DATE: STARTED - 1-5-99 COMPLETED - 1-5-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 1.0	<u>TOPSOIL.</u>								
1.0 - 5.5	<u>SILTY SAND</u> ; moist to saturated, loose, brown.  Groundwater encountered at about 1.5 ft. BGS.	SM		BH-6-W@1.5 ft. BGS (EPA 8021B)  Grab 1.5 - 2.0 ft. BGS (PID=7.0 ppm)  BH-6-S@2.5 ft. BGS					
5.5 - 7.0	<u>SILTY CLAYEY SAND</u> ; moist, medium dense, gray to brownish gray.  Base of boring at about 7.0 ft. BGS.	SC - SM							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

**PROJECT:** FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
**JOB NO.:** 198-801      **TEST PIT NO.:** BH-7      **PAGE:** 1 of 1  
**LOCATION:** SEE FIGURE NO. 2  
**DRILLING EQ. TYPE:** STRATAPROBE      **SOIL:** DRIVE SAMPLER      **ROCK:** N/A  
**DRILLED BY:** TEG, LACEY, WA      **LOGGED BY:** J. BOLLES  
**ELEVATION:**      **CASING -** N/A      **GROUNDWATER -** 1.5 FEET BGS  
**DATE:**      **STARTED -** 1-5-99      **COMPLETED -** 1-5-99  
**CASING:**      **DIAMETER -** N/A      **SLOT SIZE -** N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL.</u>								
0.5 - 3.5	<u>SILTY SAND</u> , saturated, loose, brown.  Groundwater encountered at about 1.5 ft. BGS.     Base of boring at about 3.5 ft. BGS.	SM		BH-7-S@1.0 ft. BGS  BH-7-W@1.5 ft. BGS (EPA 8021B)  Grab 1.0-2.0 ft. BGS (PID = 23.1ppm)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-8 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 2.5 FEET BGS

DATE: STARTED - 1-5-99 COMPLETED - 1-5-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 1.0	<u>TOPSOIL.</u>								
1.0 - 2.5	<u>SILTY SAND with GRAVEL;</u> saturated, loose, dark brown.  Groundwater encountered at about 2.5 ft. BGS.	SM		Grab 1.5-2.5 ft. BGS (PID = 24.6ppm)  BH-8-W@2.5 ft. BGS (EPA 8021B)					
2.5 - 5.0	<u>SILTY CLAYEY SAND;</u> moist, loose to medium dense, brown.	SC - SM							
5.0 - 7.0	<u>SILTY CLAY;</u> slightly moist, firm, gray to brown.  Base of boring at about 7.0 ft. BGS.	CL - ML							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: <u>FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA</u>	
JOB NO.: <u>198-801</u>	TEST PIT NO: <u>BH-9</u> PAGE: <u>1</u> of <u>1</u>
LOCATION: <u>SEE FIGURE NO. 2</u>	
DRILLING EQ. TYPE: <u>STRATAPROBE</u>	SOIL: <u>DRIVE SAMPLER</u> ROCK: <u>N/A</u>
DRILLED BY: <u>TEG, LACEY, WA</u>	LOGGED BY: <u>J. BOLLES</u>
ELEVATION: CASING - <u>N/A</u>	GROUNDWATER - <u>4.5 FEET BGS</u>
DATE: STARTED - <u>1-5-99</u>	COMPLETED - <u>1-5-99</u>
CASING: DIAMETER - <u>N/A</u>	SLOT SIZE - <u>N/A</u>

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL</u>								
0.5 - 4.0	<u>SILTY CLAYEY SAND</u> ; moist, firm, gray brown to light brown.	SC - SM		BH-9-S@3.0 ft. BGS BH-9-W@3.0 ft. BGS (EPA 8021B) Grab 3.0-3.5 ft. BGS (PID = 0.0ppm)					
4.0 - 5.0	<u>SILTY SAND</u> ; saturated, medium dense, gray brown. Groundwater encountered at about 4.5 ft. BGS.	SM							
5.0 - 7.0	<u>SILTY CLAY</u> ; slightly moist to moist, firm to hard, gray brown.  Base of boring at about 7.0 ft. BGS.	CL - ML							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface



# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-10 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 3.5 FEET BGS

DATE: STARTED - 1-6-99 COMPLETED - 1-6-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL</u>								
0.5 - 8.0	<p><u>SAND with SILT</u>; moist, loose to medium dense, brown to gray.</p> <p>Groundwater encountered at about 3.5 ft. BGS.</p> <p>Base of boring at about 8.0 ft. BGS.</p>	SW - SM		<p>Grab 3.0-4.0 ft. BGS (PID = 10.1 ppm)</p> <p>BH-10-W@3.5 ft. BGS (EPA 8021B)</p> <p>BH-10-S@6.0 ft. BGS</p>					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: <u>FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA</u>			
JOB NO.: <u>198-801</u>	TEST PIT NO.: <u>BH-11</u>	PAGE: <u>1</u> of <u>1</u>	
LOCATION: <u>SEE FIGURE NO. 2</u>			
DRILLING EQ. TYPE: <u>STRATAPROBE</u>	SOIL: <u>DRIVE SAMPLER</u>	ROCK: <u>N/A</u>	
DRILLED BY: <u>TEG, LACEY, WA</u>	LOGGED BY: <u>J. BOLLES</u>		
ELEVATION: CASING - <u>N/A</u>	GROUNDWATER - <u>9.5 FEET BGS</u>		
DATE: STARTED - <u>1-6-99</u>	COMPLETED - <u>1-6-99</u>		
CASING: DIAMETER - <u>N/A</u>	SLOT SIZE - <u>N/A</u>		

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 1.5	<u>TOPSOIL</u>								
1.5 - 2.0	<u>SAND</u> ; slightly moist, loose, gray brown, coarse grained sand.	SP							
2.0 - 3.0	<u>SILTY SAND</u> ; moist, medium dense, gray brown.	SM							
3.0 - 4.5	<u>SAND with SILT and GRAVEL</u> ; slightly moist, medium dense, gray brown.	SP - SM							
4.5 - 7.0	<u>SANDY SILT with CLAY</u> ; slightly moist to moist, firm, light brownish gray.	ML							
7.0 - 11.0	<u>SILTY SAND with GRAVEL</u> ; moist to saturated, medium dense, brown.  Groundwater encountered at about 9.5 ft. BGS.  Base of boring at about 11.0 ft. BGS.	SM		BH-11-S@6.0 ft. BGS  Grab 6.0-7.0 ft. BGS (PID = 10,8 ppm)  BH-11-W@9.5 ft. BGS (EPA 8021B)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-12 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A GROUNDWATER - 7.5 FEET BGS

DATE: STARTED - 1-6-99 COMPLETED - 1-6-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 1.0	<u>TOPSOIL</u>								
1.0 - 5.5	<u>SANDY SILT with CLAY</u> ; moist to very moist, soft to firm, light brown.	ML		BH-12-S@5.0 ft. BGS					
5.5 - 7.0	<u>SAND with SILT</u> ; moist to saturated, medium dense, gray.	SP - SM		Grab 5.0-6.0 ft. BGS (PID = 12.9 ppm)					
7.0 - 10.0	<u>SILTY CLAY</u> ; moist, firm, light brown to gray.  Groundwater encountered at about 7.5 ft. BGS.  Base of boring at about 10.0 ft. BGS.	CL - ML		BH-12-W@7.0 ft. BGS (EPA 8021B)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801

TEST PIT NO.: BH-13

PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE

SOIL: DRIVE SAMPLER

ROCK: N/A

DRILLED BY: TEG, LACEY, WA

LOGGED BY: J. BOLLES

ELEVATION: CASING - N/A

GROUNDWATER - 21.5 FEET BGS

DATE: STARTED - 1-6-99

COMPLETED - 1-6-99

CASING: DIAMETER - N/A

SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.25	<u>TOPSOIL.</u>								
0.25 - 5.0	<u>SANDY SILT</u> ; moist to very moist, soft to firm, brown to gray brown.	ML							
5.0 - 8.0	<u>SAND with SILT</u> ; moist to very moist, medium dense, gray.	SP - SM		Grab 4.0-5.0 ft. BGS (PID = 15.6 ppm)  BH-13-S@5.0 ft. BGS					
8.0 - 10.0	<u>SANDY SILT with CLAY</u> ; moist, firm, gray.	ML							
10.0 - 11.0	<u>SANDY SILTY CLAY</u> ; dry, hard, gray.	CL - ML							
11.0 - 23.0	<u>SAND with GRAVEL and SILT</u> ; dry to saturated, dense, gray.  Groundwater encountered at about 21.5 ft. BGS.  Base of boring at about 23.0 ft. BGS.	SP - SM		BH-13-W@21.5 ft. BGS (EPA 8021B)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
 JOB NO.: 198-801 TEST PIT NO.: BH-14-UST PAGE: 1 of 1  
 LOCATION: SEE FIGURE NO. 2  
 DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A  
 DRILLED BY: TEG, LACEY, WA LOGGED BY: J. BOLLES  
 ELEVATION: CASING - N/A GROUNDWATER - 10.5 FEET BGS  
 DATE: STARTED - 1-6-99 COMPLETED - 1-6-99  
 CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.33	<u>TOPSOIL.</u>								
0.33 - 14.5	<u>SILTY SAND</u> ; moist to saturated, loose to medium dense, brown to gray brown.  Groundwater encountered at about 10.5 ft. BGS.	SM		Grab 7.0-8.0 ft. BGS (PID = 21.8 ppm)  BH-14-UST-W@ 10.5 ft. BGS  Grab 11.0-12.0 ft. BGS (PID = 17.4 ppm)  BH-14-UST-1@ 12.0 ft. BGS					
14.5 - 15.0	<u>SILT with CLAY and SAND</u> ; slightly moist, hard, gray to oxidized gray brown. No hydrocarbon odor.  Base of boring at about 15.0 ft. BGS.	ML							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: <u>FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA</u>	
JOB NO.: <u>198-801</u>	TEST PIT NO: <u>BH-15</u> PAGE: <u>1</u> of <u>1</u>
LOCATION: <u>SEE FIGURE NO. 2</u>	
DRILLING EQ. TYPE: <u>STRATAPROBE</u>	SOIL: <u>DRIVE SAMPLER</u> ROCK: <u>N/A</u>
DRILLED BY: <u>TEG, LACEY, WA</u>	LOGGED BY: <u>G. HARPER</u>
ELEVATION: CASING - <u>N/A</u>	GROUNDWATER - <u>6.0 FEET BGS</u>
DATE: STARTED - <u>1-22-99</u>	COMPLETED - <u>1-22-99</u>
CASING: DIAMETER - <u>N/A</u>	SLOT SIZE - <u>N/A</u>

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>ASPHALT and TOP COARSE</u>								
0.5 - 4.5	<u>SILTY SAND</u> ; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	<u>SAND with GRAVEL</u> ; moist to saturated, medium dense, non-plastic, brown.  Groundwater encountered at about 6.0 feet BGS.	SW		Grab 5.5 ft. BGS					
9.0 - 10.0	<u>SILTY SAND</u> ; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 18.0	<u>SILTY SAND with GRAVEL</u> ; dry to slightly moist, dense, gray.  Strataprobe refusal at about 18.0 feet BGS.	SM		BH-15-15@15.0 ft. BGS (NWTPH-Gx and EPA 8020)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
 JOB NO.: 198-801 TEST PIT NO.: BH-15A PAGE: 1 of 1  
 LOCATION: SEE FIGURE NO. 2  
 DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A  
 DRILLED BY: TEG, LACEY, WA LOGGED BY: G. HARPER  
 ELEVATION: CASING - N/A GROUNDWATER - 22.0 FEET BGS  
 DATE: STARTED - 1-22-99 COMPLETED - 1-22-99  
 CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>ASPHALT and TOP COARSE</u>								
0.5 - 4.5	<u>SILTY SAND</u> ; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	<u>SAND with GRAVEL</u> ; moist to saturated, medium dense, non-plastic, brown.  Groundwater encountered at about 6.0 feet BGS.	SW							
9.0 - 10.0	<u>SILTY SAND</u> ; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 20.0	<u>SILTY SAND with GRAVEL</u> ; dry to slightly moist, dense, gray.	SM							
20.0 - 23.0	<u>SILTY SAND</u> ; moist to saturated, medium dense, gray. Strong hydrocarbon odor.  Groundwater encountered at about 22.0 feet BGS  Base of boring at about 23.0 ft. BGS.	SM		BH-15A-21@21.0 ft. BGS (NWTPH-Gx and EPA 8020)  BH-15A-W@22.0 ft. BGS (NWTPH-Gx and EPA 8020)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface



# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801

TEST PIT NO.: BH-15A

PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE

SOIL: DRIVE SAMPLER

ROCK: N/A

DRILLED BY: TEG, LACEY, WA

LOGGED BY: G. HARPER

ELEVATION: CASING - N/A

GROUNDWATER - 22.0 FEET BGS

DATE: STARTED - 1-22-99

COMPLETED - 1-22-99

CASING: DIAMETER - N/A

SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>ASPHALT and TOP COARSE.</u>								
0.5 - 4.5	<u>SILTY SAND</u> ; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	<u>SAND with GRAVEL</u> ; moist to saturated, medium dense, non-plastic, brown.  Groundwater encountered at about 6.0 feet BGS.	SW							
9.0 - 10.0	<u>SILTY SAND</u> ; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 20.0	<u>SILTY SAND with GRAVEL</u> ; dry to slightly moist, dense, gray.	SM							
20.0 - 23.0	<u>SILTY SAND</u> ; moist to saturated, medium dense, gray. Strong hydrocarbon odor.  Groundwater encountered at about 22.0 feet BGS  Base of boring at about 23.0 ft. BGS.	SM		BH-15A-21@21.0 ft. BGS (NWTPH-Gx and EPA 8020)  BH-15A-W@22.0 ft. BGS (NWTPH-Gx and EPA 8020)					

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: -198-801

TEST PIT NO.: BH-16

PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE

SOIL: DRIVE SAMPLER

ROCK: N/A

DRILLED BY: TBG, LACEY, WA

LOGGED BY: G. HARPER

ELEVATION: CASING - N/A

GROUNDWATER - 3.5 FEET BGS

DATE: STARTED - 1-22-99

COMPLETED - 1-22-99

CASING: DIAMETER - N/A

SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL.</u>								
0.5 - 1.5	<u>SILTY SAND</u> ; moist, medium dense, non-plastic, reddish-brown.	SM							
1.5 - 3.0	<u>SANDY SILT</u> ; moist, soft, non-plastic, brown.	ML							
3.0 - 7.0	<u>SAND with SILT</u> ; moist to saturated, medium dense, non-plastic, gray brown. Becomes coarser with depth.	SM							
	Groundwater encountered at about 3.5 feet BGS.			BH-16-W@3.5 ft. BGS (EPA 8020)					
7.0 - 8.0	<u>SANDY SILT</u> ; moist, firm, non-plastic, brownish-gray.	SM							
	Base of boring at about 8.0 ft. BGS.								

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO.: BH-17 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: G. HARPER

ELEVATION: CASING - N/A GROUNDWATER - 3.0 FEET BGS

DATE: STARTED - 1-22-99 COMPLETED - 1-22-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6'			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL</u>								
0.5 - 5.5	<u>SILTY SAND</u> ; moist, medium dense, non-plastic, brown.  Groundwater encountered at about 3.0 feet BGS.	SM		BH-17-S@2.0-3.0 ft. BGS  BH-17-W@3.0 ft. BGS (EPA 8020)					
5.5 - 8.0	<u>SANDY SILT with CLAY</u> ; slightly moist, firm, non-plastic, gray brown.  Base of boring at about 8.0 ft. BGS.	ML							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

**PROJECT:** FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA  
**JOB NO.:** 198-801      **TEST PIT NO.:** BH-18      **PAGE:** 1 of 1  
**LOCATION:** SEE FIGURE NO. 2  
**DRILLING EQ. TYPE:** STRATAPROBE      **SOIL:** DRIVE SAMPLER      **ROCK:** N/A  
**DRILLED BY:** TEG, LACEY, WA      **LOGGED BY:** G. HARPER  
**ELEVATION:**      **CASING -** N/A      **GROUNDWATER -** 3.5 FEET BGS  
**DATE:**      **STARTED -** 1-22-99      **COMPLETED -** 1-22-99  
**CASING:**      **DIAMETER -** N/A      **SLOT SIZE -** N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.1	<u>ASPHALT.</u>								
0.1 - 0.5	<u>TOP COARSE GRAVEL.</u>								
0.5 - 4.5	<u>SILTY SAND</u> ; slightly moist to saturated, medium dense, non-plastic, brown. Iron oxide staining to about 1.5 ft. BGS  Groundwater encountered at about 3.5 feet BGS.	SM		BH-18-W@3.5 ft. BGS (EPA 8020)					
4.5 - 6.0	<u>SILT with CLAY</u> ; slightly moist, firm, non-plastic, reddish-brown.	ML							
6.0 - 7.0	<u>SILTY SAND with GRAVEL</u> ; moist, medium dense, non-plastic, gray brown.	SM							
7.0 - 8.0	<u>SANDY SILT</u> ; moist, soft to firm, non-plastic, brownish-gray to gray.  Base of boring at about 8.0 ft. BGS.	ML							

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
 BGS = Below ground surface

# LOG OF EXPLORATION BORING

GN Northern, Inc.

PROJECT: FRED MEYER PHASE II ENVIRONMENTAL SITE ASSESSMENT, PORT ORCHARD, WA

JOB NO.: 198-801 TEST PIT NO: BH-19 PAGE: 1 of 1

LOCATION: SEE FIGURE NO. 2

DRILLING EQ. TYPE: STRATAPROBE SOIL: DRIVE SAMPLER ROCK: N/A

DRILLED BY: TEG, LACEY, WA LOGGED BY: G. HARPER

ELEVATION: CASING - N/A GROUNDWATER - 3.0 FEET BGS

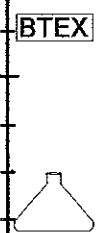
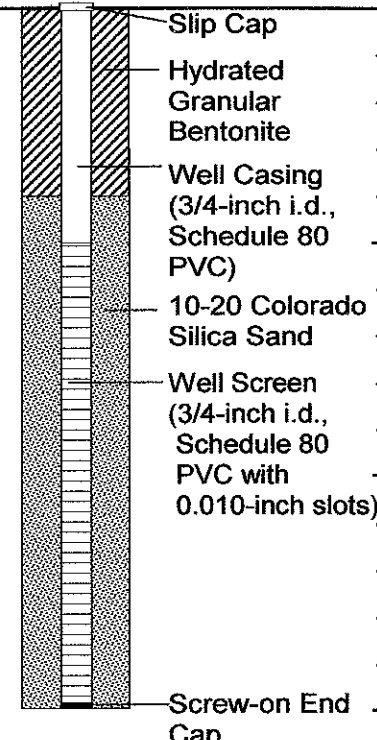
DATE: STARTED - 1-22-99 COMPLETED - 1-22-99

CASING: DIAMETER - N/A SLOT SIZE - N/A

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6"			N or CR	PERCENT Gravel / Sand / Silt
					1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>		
0.0 - 0.5	<u>TOPSOIL.</u>								
0.5 - 6.0	<u>SILTY SAND</u> ; moist to saturated, medium dense, non-plastic, brown to reddish brown.  Groundwater encountered at about 3.0 feet BGS.	SM		BH-19-W@3.0 ft. BGS (EPA 8020)					
6.0 - 7.0	<u>SANDY SILT with CLAY</u> ; moist, firm, non-plastic, brown to reddish brown.	ML							
7.0 - 8.0	<u>SILTY SAND with GRAVEL</u> ; moist, medium dense, non-plastic, gray brown.	SM							
Base of boring at about 8.0 ft. BGS.									

Notes: This explanation applies only at the location of this boring and at the time of completion. Subsurface conditions may differ at other locations and may change at this location with passage of time.  
BGS = Below ground surface

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt over moist, grayish brown, gravelly SAND.						Slip Cap
			VP1-1				Hydrated Granular Bentonite
5	Loose, moist, grayish brown, silty SAND FILL with some gravel.						Well Casing (3/4-inch i.d., Schedule 80 PVC)
			VP1-2				10-20 Colorado Silica Sand
	Black, asphalt-like, gravelly layer with heavy oil over gray, fine- to medium-grained SAND.						Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)
10	Medium dense, moist, light olive-brown, silty, fine-grained SAND with occasional fine gravel.						
			VP1-3		650		
	Saturated, gray, silty, fine-grained SAND. Strong gasoline odor.						
			VP1-4		950		
15	Dense, moist, light olive-brown, silty, fine-grained SAND. Strong gasoline odor.						
			VP1-5				
	Very dense, saturated, light olive-brown, silty, fine-grained SAND with occasional rocks to 1.5-inch diameter (till-like).						
			VP1-6				
20	Loose to medium dense, wet, brown, fine- to medium-grained SAND. Gasoline odor.					TS	
	Collected groundwater sample VP1-23W from screened interval at 21.0-23.0 feet.						
	Strong gasoline odor in water bearing SAND at 21.0-23.0 feet.						
25	Total depth = 24.0 feet.						
	Installed temporary vapor extraction test well which was removed on 7/29/99.						
30							



LEGEND

2.0-inch O.D. Strataprobe soil core sample with % recovered

Groundwater Analysis (BTEX, TPH-D)

Groundwater level at time of drilling

8015 8240 Soil Analysis (Test Method Shown)

Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0


Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington


AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt over minor gravel.						Slip Cap
0-5	Loose, brown, slightly silty to silty, fine- to medium-grained SAND.		VP2-1				Hydrated Granular Bentonite
5	Loose, light gray, slightly silty, fine- to medium-grained SAND with some orange banding. No odor.		VP2-2		67		Well Casing (3/4-inch i.d., Schedule 80 PVC)
10	Saturated, brown, silty, fine- to medium-grained SAND below 10.0 feet.		VP2-3				10-20 Colorado Silica Sand
11.5	Gasoline odor at 11.5 feet.				60		Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)
15	Dense, moist, gray, silty SAND with occasional 1.0-inch gravel (till-like). Gasoline odor.		VP2-4		884		Screw-on End Cap
15	Dense, saturated, gray to greenish gray, silty, fine-grained SAND with occasional 1.0-inch gravel (till-like) Gasoline odor.		VP2-5		1,160		
20	Wet, silty, fine- to medium-grained SAND. Gasoline odor decreases.						BTEX
20-22.0	Collected groundwater sample VP2-22W from screened interval at 20.0-22.0 feet.		VP2-6		880		
25	Total depth = 24.0 feet.						
25	Installed temporary vapor extraction test well which was removed on 7/29/99.						
30							

LEGEND

 2.0-inch O.D. Strataprobe soil core sample with % recovered

 Groundwater Analysis (BTEX, TPH-D)

 WD Groundwater level at time of drilling

 8015 8240 Soil Analysis (Test Method Shown)

 TS Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.




7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892





Elevation Reference: NA Well Completed: NA Boring Method: Strataprobe  
 Relative Ground Surface Elevation: NA Relative Casing Elevation: NA Borehole Diameter (in.): 2.0

Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
0	Asphalt over loose, dark olive-gray, gravelly SAND.		VP3-1				Slip Cap	
5	Olive mottled orange-brown SILT. Saturated at 4.3-6.5 feet. Slight gasoline odor.		VP3-2		61		Hydrated Granular Bentonite	
	Moist, gray, sandy GRAVEL.					WD	Well Casing (3/4-inch i.d., Schedule 80 PVC)	BTEX
	Perched groundwater at 8.0 feet.						10-20 Colorado Silica Sand	
10	Moist, gray, silty, fine-grained SAND with occasional gravel.		VP3-3		0.0		Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)	
	Rock - no recovery at 12.0-16.0 feet.			NR			Screw-on End Cap	
15	Saturated, olive, silty, fine-grained SAND with occasional gravel.		VP3-4		0.0	TS		
20	Wet, brown, silty to slightly silty, fine- to medium-grained SAND. Collected groundwater sample VP3-23W from screened interval at 21.0-23.0 feet.		VP3-5		0.0			
25	Dense, saturated, silty, fine- to medium-grained SAND. Dense, moist, brown, silty SAND. Liner became jammed inside rods.		VP3-6					
30	Total depth = 24.0 feet. Installed temporary vapor extraction test well which was removed on 7/29/99.							

LEGEND

-  2.0-inch O.D. Strataprobe soil core sample with % recovered
- NR No recovery
-  Groundwater level at time of drilling
-  Groundwater level at time of sampling

-  Groundwater Analysis (BTEX, TPH-D)
-  8015 Soil Analysis (Test Method Shown) 8240

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**  
 7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA Well Completed: NA Boring Method: Strataprobe  
 Relative Ground Surface Elevation: NA Relative Casing Elevation: NA Borehole Diameter (in.): 2.0

Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
0	Asphalt over 6.0-inch layer of dark brown, gravelly SAND.						Slip Cap	
0 - 2.5	Loose, moist, brown, slightly silty, fine- to medium-grained SAND. Decomposed root (wood) at 2.5 feet.		VP4-1				Hydrated Granular Bentonite	
2.5 - 10	Gray, silty, fine- to medium-grained SAND. Loose, gray, slightly silty SAND.		VP4-2				Well Casing (3/4-inch i.d., Schedule 80 PVC)	
10 - 12	Dense, silty, gray, fine- to medium-grained SAND with occasional gravel (some angular) to 1.0-inch diameter (till-like)		VP4-3				10-20 Colorado Silica Sand	
12 - 16	Denser at 12.0-16.0 feet.		VP4-4				Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)	
16 - 20	Medium dense, wet to saturated, olive, silty, fine- to medium-grained SAND.		VP4-5				Screw-on End Cap	
20 - 21	Hard, moist, olive, layered, disturbed SILT.		VP4-6					
21 - 23	Very dense, moist, olive with some orange-brown staining, silty, fine- to medium-grained SAND with occasional angular gravel to 1.0-inch diameter (till). Collected groundwater sample VP4-21W from screened interval at 21.0-23.0 feet.							
23 - 24	Total depth = 24.0 feet.							
24 - 30	Installed temporary vapor extraction test well which was removed on 7/29/99.							

LEGEND

2.0-inch O.D. Strataprobe soil core sample with % recovered

Groundwater Analysis (BTEX, TPH-D)

WD Groundwater level at time of drilling

8015 8240 Soil Analysis (Test Method Shown)

TS Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892



Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt over loose, moist, brown, fine- to medium-grained SAND.		VP6-1				Slip Cap
5	Medium dense, moist, gray, fine- to medium-grained SAND.		VP6-2				Hydrated Granular Bentonite
	Dense, moist, silty, fine- to medium-grained SAND with scattered angular gravel (glacial moraine till?).		VP6-3			WD	Well Casing (3/4-inch i.d., Schedule 80 PVC)
10			VP6-4		0.0		10-20 Colorado Silica Sand
	Dense, saturated, silty, fine- to medium-grained SAND with scattered angular gravel (glacial moraine till?).		VP6-5				Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)
15			VP6-6				Screw-on End Cap
20	Collected groundwater sample VP6-18W from screened interval at 18.0-20.0 feet.					TS	
	Very dense, moist, dark grayish brown, silty SAND grading to sandy SILT (till) with scattered gravel.						
25	Total depth = 23.5 feet.						
	Installed temporary vapor extraction test well which was removed on 7/29/99.						
30							

LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (BTEX, TPH-D)



Groundwater level at time of drilling



Groundwater level at time of sampling

8015  
8240

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0




Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington



AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt.						
0 - 3.0	Damp, brown to brown-gray at 3.0 feet, slightly silty, fine- to medium-grained SAND.		BH20-1				Hydrated Granular Bentonite
3.0 - 5.0	Moist, gray, fine- to medium-grained SAND with slight to some silt.		BH20-2				
5.0 - 10.0	Dense, moist, gray, silty SAND with occasional gravel (till-like). Gravel increases (20%).		BH20-3				
10.0 - 15.0	Moist, slightly silty fine- to medium-grained SAND.		BH20-4				
15.0 - 20.0			BH20-5				
20.0 - 25.0	Strong gasoline odor.		BH20-6				
25.0 - 30.0			BH20-7				
30.0			BH20-8				

LEGEND

-  2.0-inch O.D. Strataprobe soil core sample with % recovered
-  SW Static groundwater level
-  TS Groundwater level at time of sampling

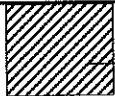
-  Groundwater Analysis (Test Method Shown)
-  8015 Soil Analysis (Test Method Shown)  
8240

PROJECT NUMBER: 9-61M-10282-0


Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**  
7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892


Elevation Reference: NA Well Completed: NA Boring Method: Strataprobe  
 Relative Ground Surface Elevation: NA Relative Casing Elevation: NA Borehole Diameter (in.): 2.0

Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
30	Saturated, brown, fine- to medium-grained SAND. Gasoline odor (less than zone at 22.0-23.0 feet). Collected groundwater sample BH20-32W from screened interval at 31.0-32.0 feet.  Total depth = 32.0 feet.  PID was not functioning properly.						 Hydrated Granular Bentonite	
35								
40								
45								
50								
55								
60								

LEGEND

 2.0-inch O.D. Strataprobe soil core sample with % recovered

 SW Static groundwater level

 TS Groundwater level at time of sampling

 Groundwater Analysis (Test Method Shown)

 8015 8240 Soil Analysis (Test Method Shown)


PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA Well Completed: NA Boring Method: Strataprobe  
 Relative Ground Surface Elevation: NA Relative Casing Elevation: NA Borehole Diameter (in.): 2.0

Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
0	BH-20A was drilled with no soil sampling to collect a groundwater sample.						 <p>Hydrated Granular Bentonite</p>	
5								
10								
15								
20	Collected groundwater sample BH20A-24W from screened interval at 22.0-24.0 feet.							
25	Total depth = 24.0 feet.							
30								

LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (Test Method Shown)



Static groundwater level



Soil Analysis (Test Method Shown)



Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892



Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt. Damp, brown with some mottling at 3.0-4.0 feet, silty SAND with trace gravel.		BH21-1				Hydrated Granular Bentonite
5	Siltier at 4.0-5.0 feet. SAND and GRAVEL at 5.5-5.7 feet. Moist, gray, silty SAND with some gravel.		BH21-2				
10	Grades to denser with more gravel (till). (Glacial Marine Till)		BH21-3				
15			BH21-4				
20			BH21-5				
25	Collected groundwater sample BH21-25W from screened interval at 23.0-25.0 feet. Saturated, brown, silty SAND.		BH21-6				
30	Saturated, brown, silty to slightly silty SAND (heave). Total depth = 28.0 feet. No PID reading above 0.0 at this boring.		BH21-7				

LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (Test Method Shown)



Static groundwater level



8015 Soil Analysis (Test Method Shown)  
8240



Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0




Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington



AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt over 8.0-inch layer of gravel. Dense, damp, gray-brown, silty SAND.		BH22-1				Hydrated Granular Bentonite
5	Grades to moist to saturated and mottled.		BH22-2				
10	Moist, gray, sandy GRAVEL. SILT.		BH22-3				
15	Silty SAND with some gravel. Density increases (till-like).		BH22-4				
20	Saturated, gray-brown, silty fine-grained SAND to sandy SILT.		BH22-5			SW	
25	Saturated, silty fine- to medium-grained SAND with occasional gravel.		BH22-6				
28.0	Wet, brown, fine- to medium-grained SAND. Collected groundwater sample BH22-28W from screened interval at 26.0-28.0 feet.		BH22-7				
Total depth = 28.0 feet.							

LEGEND

-  2.0-inch O.D. Strataprobe soil core sample with % recovered
-  SW Static groundwater level
-  TS Groundwater level at time of sampling

-  Groundwater Analysis (Test Method Shown)
-  8015 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**  
7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Forest duff, grass.						Hydrated Granular Bentonite
	Moist, orange-brown, silty, fine-grained SAND.		BH23-1		0.0		
	Saturated, olive, mottled with rust stains SILT with fine-grained SAND.						
	Saturated, silty, fine-grained SAND.						
5	Medium dense, saturated, gray, fine- to medium-grained SAND.		BH23-2		0.0		
	Dense, moist, silty, fine-grained SAND with occasional gravel.		BH23-3		0.0		
	Dense, moist, gray, silty, fine-grained SAND with occasional gravel.		BH23-4		0.0		
	Dense, moist to wet, gray, silty, fine-grained SAND with gravel (10%).		BH23-5		0.0		
20	Moist to wet, olive, silty, fine- to medium-grained SAND.						
	Hard SILT with fine-grained sand.		BH23-6		0.0		
	Dense to medium dense, moist, olive-brown, silty, fine- to medium-grained SAND.		BH23-7		0.0		
30			BH23-8		0.0		

LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (BTEX, TPH-D)



Groundwater level at time of drilling



Groundwater level at time of sampling

8015  
8240




Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (In.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
30	Dense to medium dense, moist, olive-brown, silty, fine- to medium- grained SAND.						 Hydrated Granular Bentonite
35	Dense to medium dense, saturated, olive-brown, fine- to medium-grained SAND with less silt. Collected groundwater sample BH23-36W from screened interval at 34.0-36.0 feet.		BH23-9		0.0		
Total depth = 36.0 feet.							 BTEX
40							
45							
50							
55							
60							

LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (BTEX, TPH-D)



Groundwater level at time of drilling



8015  
8240  
Soil Analysis (Test Method Shown)



Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Forest duff.						
	Medium dense, orange-brown, silty, fine-grained SAND.		BH24-1				Hydrated Granular Bentonite
5	Medium dense, moist, silty, fine- to medium-grained SAND with occasional gravel to 1.0-inch diameter.		BH24-2				
10	Dense, moist, grayish brown, silty, fine-grained SAND with occasional gravel.		BH24-3				
15	Collected groundwater sample BH24-16W from screened interval at 14.0-16.0 feet.		BH24-4				
	Gray, slightly silty, medium-grained SAND.		BH24-5				
	Total depth = 18.0 feet.						

BTEX



LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (BTEX, TPH-HCID)



Groundwater level at time of drilling



Groundwater level at time of sampling

8015  
8240

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: NA		Well Completed: NA		Boring Method: Strataprobe		ANALYSES	
Relative Ground Surface Elevation: NA		Relative Casing Elevation: NA		Borehole Diameter (in.): 2.0			
Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt over moist, dark brown, silty SAND with scattered gravel.						
	Moist, olive to olive-gray, silty, fine-grained SAND. No gravel.		BH25-1				Hydrated Granular Bentonite
5			BH25-2				
	Gray, fine- to medium-grained SAND with scattered to 50% gravel (at 9.0 feet).		BH25-3				
10			BH25-4				
15			BH25-5				
20	Collected groundwater sample BH25-22W from screened interval at 20.0-22.0 feet. SAND.		BH25-6				
	Total depth = 22.0 feet.						
25							
30							

BTEX



LEGEND



2.0-inch O.D. Strataprobe soil core sample with % recovered



Groundwater Analysis (BTEX, TPH-HCID)



Groundwater level at time of drilling

8015  
8240

Soil Analysis (Test Method Shown)



Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/10/99				Boring Method: Hollow Stem Auger		ANALYSES
Relative Ground Surface Elevation:		Relative Casing Elevation:				Borehole Diameter: 10.25"		
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	
0	Asphalt and subgrade.							
5	Medium dense, moist, brownish gray, fine-grained SAND.	S-SP1		27	0.0			
10	Very dense, moist, fine- to coarse-grained SAND with some silt and trace 1.0-inch minus subangular gravel. Becoming sandier with depth.	S-SP2		65	0.0			
15	Very dense, moist, brownish gray, fine-grained SAND with trace 1.0-inch minus subangular gravel.	S-SP3		80	0.0			
20	Dense, moist to wet, brown, silty SAND with trace 1.0-inch minus subrounded gravel.	S-SP4		44	0.0			
25			NR	100/6				
30								

LEGEND

2-inch OD split-spoon sample with % recovered

NR No recovery

Groundwater level at time of drilling

Groundwater Analysis (Test Method Shown)

Soil Analysis (Test Method Shown)


PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892



Elevation Reference:		Well Completed: 11/10/99				Boring Method: Hollow Stem Auger		ANALYSES
Relative Ground Surface Elevation:		Relative Casing Elevation:				Borehole Diameter: 10.25"		
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	
30	Total depth = 31.5 feet.		NR	100/6			 <ul style="list-style-type: none"> <li>10-20 Colorado Silica Sand</li> <li>Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)</li> <li>Threaded End Cap</li> </ul>	
35								
40								
45								
50								
55								
60								

**LEGEND**

 2-inch OD split-spoon sample with % recovered

NR No recovery

 Groundwater level at time of drilling

 Groundwater Analysis (Test Method Shown)

 Soil Analysis (Test Method Shown)

8015  
8240

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/10/99		Boring Method: Hollow Stem Auger		ANALYSES	
Relative Ground Surface Elevation:		Relative Casing Elevation:		Borehole Diameter: 10.25"			
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt and subgrade.						
5	Medium dense, moist, brown and gray, fine- to coarse-grained SAND.	S-SP1		34	0.0		
10	Dense, moist, brownish gray, fine- to coarse-grained SAND with 2.0-inch minus subangular gravel.	S-SP2		46	0.0		
15	Dense, moist, brown, fine-grained SAND.	S-SP3		45	0.0		
20	Dense, moist, brown, fine-grained SAND with trace silt.	S-SP4		48	0.0		
25	Dense, wet, brown, fine- to medium-grained SAND with trace silt.	S-SP5		45	0.0	WD	
30							

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater Analysis (Test Method Shown)

Groundwater level at time of drilling

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/10/99				Boring Method: Hollow Stem Auger		ANALYSES
Relative Ground Surface Elevation:		Relative Casing Elevation:				Borehole Diameter: 10.25"		
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	
30	Total depth = 32.0 feet.	S-SP6		44	0.0		<p>10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots) Threaded End Cap</p>	
35								
40								
45								
50								
55								
60								

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater Analysis (Test Method Shown)

Groundwater level at time of drilling

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/9/99		Boring Method: Hollow Stem Auger		ANALYSES	
Relative Ground Surface Elevation:		Relative Casing Elevation:		Borehole Diameter: 10.25"			
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN
0	Asphalt and subgrade.						
5	Medium dense, moist, brownish gray, fine- to coarse-grained SAND.	S-SP1		14	0.0		
10	Medium dense, moist, brownish gray, fine- to medium-grained SAND with some silt and trace 1.0-inch minus subrounded gravel.	S-SP2		22	0.0		
15	Dense, moist, brown, silty fine-grained SAND with trace 1.0-inch minus subrounded gravel. Grading to fine-grained SAND.	S-SP3		31	0.0		
20	Very dense, moist, brownish gray, fine-grained SAND.	S-SP4		55	0.0		
25	Dense, wet, brown, fine-grained SAND with trace silt.	S-SP5		43	0.0	WD	
30							

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater Analysis (Test Method Shown)

Groundwater level at time of drilling

8015 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/9/99				Boring Method: Hollow Stem Auger		ANALYSES
Relative Ground Surface Elevation:		Relative Casing Elevation:				Borehole Diameter: 10.25"		
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	
30	Dense, moist, brown, fine-grained SAND with some silt. Total depth = 31.5 feet.	S-SP6		43	0.0		<p>10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots) Threaded End Cap</p>	
35								
40								
45								
50								
55								
60								

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater level at time of drilling

Groundwater Analysis (Test Method Shown)

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference: Well Completed: 11/9/99 Boring Method: Hollow Stem Auger  
 Relative Ground Surface Elevation: Relative Casing Elevation: Borehole Diameter: 10.25"

Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
0	Asphalt and subgrade.						Flush Mounted Monument Concrete Surface Seal Locking Cap Bentonite Chips	
5	Loose, moist, brown, fine- to coarse-grained SAND with trace silt.						Casing (2-inch ID, Schedule 40 PVC)	
10	Loose, brown, fine- to coarse-grained SAND with some wood debris (at bottom of the sampling spoon).						10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
15	Very dense, moist, gray, fine- to medium-grained SAND with trace silt.	S-SP3		70	0.0			
20	Very dense, moist, brown, fine-grained SAND with trace silt.							
25	Medium dense to dense, wet, brown, fine- to medium-grained SAND.	S-SP5		35	0.0	WD		
30								

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater Analysis (Test Method Shown)

Groundwater level at time of drilling

8015 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
 Intersection of Bethel and Sedgwick  
 Port Orchard, Washington

AGRA EARTH & ENVIRONMENTAL, INC.

7477 SW Tech Center Drive  
 Portland, Oregon 97223-8025  
 Phone (503) 639-3400 FAX (503) 620-7892

Elevation Reference:		Well Completed: 11/9/99				Boring Method: Hollow Stem Auger		ANALYSES
Relative Ground Surface Elevation:		Relative Casing Elevation:				Borehole Diameter: 10.25"		
Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	
30	Medium dense, wet, brown, fine- to medium-grained SAND. Total depth = 31.5 feet.	S-SP6		32	0.0		<p>10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots) Threaded End Cap</p>	
35								
40								
45								
50								
55								
60								

LEGEND

2-inch OD split-spoon sample with % recovered

Groundwater level at time of drilling

Groundwater Analysis (Test Method Shown)

Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard  
Intersection of Bethel and Sedgwick  
Port Orchard, Washington

**AGRA EARTH & ENVIRONMENTAL, INC.**

7477 SW Tech Center Drive  
Portland, Oregon 97223-8025  
Phone (503) 639-3400 FAX (503) 620-7892



DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0		SM	Asphalt and GRAVEL at surface.						
		SP	Red, fine to coarse SAND with gravel; dry. Gray SAND with gravel; dry.		0.0				
		SM	Gray, fine to medium to coarse SAND.						
5		SM	Gray, silty SAND (small lense).						
		SM	Brown, fine to medium SAND with silt.		0.0				
		SM	Gray with red mottling SILT with fine to medium sand, trace gravel.		0.0				
		SM	Light brown to gray SAND with silt, occasional gravel; moist.		0.0				
		SM	Dark brown to gray, fine to medium SAND with silt, medium to coarse gravel; moist.		0.0				
		SM	Light brown and gray with red mottling, fine to medium SAND with silt. Trace silt.		0.0				
15		SM	Brown, fine SAND with silt, trace gravel; moist.						
		ML	Gray SILT lense.		0.0	▽			
		SM	Wet. Brown, fine to medium SAND with silt, trace gravel; moist.		0.0				B1-20-22'
20			End of boring at 22 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement.						
25									
30									
35									
40									

**BORING METHOD:** Direct Push                      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 2.0 (in)  
**DRILL RIG:** Geoprobe                                **GROUND SURFACE ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/Frank S.      **START CARD/TAG ID:** NA  
**LOGGED BY:** L. Vigoren                            **DRILLING DATES:** 08/13/2008 - 08/13/2008

REMARKS:

Fred Meyer Port Orchard

9-61M-102820

AMEC  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



LOG OF BORING  
B1

PAGE 1 OF 1

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0		GP SP	Asphalt and GRAVEL (6-inch layer). Red, medium to coarse SAND with gravel.						
		SM	Gray, fine to medium SAND.		0.0				
		SM	Light brown, fine to medium SAND.						
		SM	Gray-brown, fine to medium SAND with occasional gravel.						
		SM	Gray, fine to medium SAND with gravel; moist.						
5		SM GM	Light brown SAND with silt. GRAVEL with fine to medium sand.		0.0				
		SM SM	Gray-brown, fine to medium SAND with silt. Light brown, fine to medium SAND with silt and gravel; moist.		0.0				
10		SM	White, angular rock; dry.		0.0				
		SM	Brown, fine to medium SAND with silt, trace gravel; moist.						
		SM	Light brown to gray, fine to medium SAND, trace gravel.						
15		SM	Light brown, fine to medium SAND with silt; moist.		0.0				
		SM	Brown, fine to medium SAND with gravel; moist.		0.0				
20		SM	Brown, fine to medium SAND with gravel; moist.		0.0				
25		SM	End of boring at 24 ft bgs. No groundwater encountered. Backfilled boring with bentonite chips which were hydrated after placement.		0.0				B2-22-24'
30		SM							
35		SM							
40		SM							

BORING METHOD: Direct Push      ELEVATION REFERENCE: NA  
BOREHOLE DIAMETER: 2.0 (in)  
DRILL RIG: Geoprobe      GROUND SURFACE ELEVATION: NA  
CONTRACTOR: Cascade Drilling/Frank S.      START CARD/TAG ID: NA  
LOGGED BY: L. Vigoren      DRILLING DATES: 08/13/2008 - 08/13/2008

REMARKS:

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

Fred Meyer Port Orchard  
9-61M-102820

AMEC  
7376 SW Durham Road  
Portland, Oregon  
USA 97224  
Tel (503) 639-3400  
Fax (503) 620-7892




LOG OF BORING  
B2

PAGE 1 OF 1

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA								
0			No lithologic descriptions obtained. No field parameters obtained.														
5																	
10																	
15																	
20																	
25																	
30						▽	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> <tr><td> </td></tr> </table>										
35									△ B3-W								
40			End of boring at 36 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.														

<b>BORING METHOD:</b> Direct Push	<b>ELEVATION REFERENCE:</b> NA	<b>REMARKS:</b> Tubing placed at approximately 33 ft bgs.
<b>BOREHOLE DIAMETER:</b> 2.0 (in)		
<b>DRILL RIG:</b> Geoprobe	<b>GROUND SURFACE ELEVATION:</b> NA	
<b>CONTRACTOR:</b> Cascade Drilling/Frank S.	<b>START CARD/TAG ID:</b> NA	
<b>LOGGED BY:</b> L. Vigoren	<b>DRILLING DATES:</b> 08/13/2008 - 08/13/2008	

<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B3</b>  PAGE 1 OF 1
---	---	--	--

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25						▽			
30							<div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div> <div style="border: 1px solid black; width: 20px; height: 10px; margin-bottom: 2px;"></div>		△ B4-W
35									
40			End of boring at 36 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						

<b>BORING METHOD:</b> Direct Push	<b>ELEVATION REFERENCE:</b> NA
<b>BOREHOLE DIAMETER:</b> 2.0 (in)	
<b>DRILL RIG:</b> Geoprobe	<b>GROUND SURFACE ELEVATION:</b> NA
<b>CONTRACTOR:</b> Cascade Drilling/Frank S.	<b>START CARD/TAG ID:</b> NA
<b>LOGGED BY:</b> L. Vigoren	<b>DRILLING DATES:</b> 08/14/2008 - 08/14/2008

**REMARKS:**  
Tubing placed at approximately 29 ft bgs.

**Fred Meyer Port Orchard**  
  
**9-61M-102820**


**AMEC**  
7376 SW Durham Road  
Portland, Oregon  
USA 97224  
Tel (503) 639-3400  
Fax (503) 620-7892



**LOG OF BORING**  
**B4**

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25						▽			
30							□ □ □ □ □ □ □		△ B5-W
35			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						
40									
<b>BORING METHOD:</b> Direct Push <b>ELEVATION REFERENCE:</b> NA <b>BOREHOLE DIAMETER:</b> 2.0 (in) <b>DRILL RIG:</b> Geoprobe <b>GROUND SURFACE ELEVATION:</b> NA <b>CONTRACTOR:</b> Cascade Drilling/Frank S. <b>START CARD/TAG ID:</b> NA <b>LOGGED BY:</b> L. Vigoren <b>DRILLING DATES:</b> 08/14/2008 - 08/14/2008						<b>REMARKS:</b> Tubing placed at approximately 29 ft bgs.			


<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B5</b>  PAGE 1 OF 1
---	---	--	--

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25						▽			△ B6-W
30			End of boring at 28.5 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						
35									
40									

BORING METHOD: Direct Push	ELEVATION REFERENCE: NA
BOREHOLE DIAMETER: 2.0 (in)	
DRILL RIG: Geoprobe	GROUND SURFACE ELEVATION: NA
CONTRACTOR: Cascade Drilling/Frank S.	START CARD/TAG ID: NA
LOGGED BY: L. Vigoren	DRILLING DATES: 08/14/2008 - 08/14/2008

**REMARKS:**  
Tubing placed at approximately 25.5 ft bgs.

<p><b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b></p>	<p><b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892</p>	 <p><b>LOG OF BORING</b> <b>B6</b>  PAGE 1 OF 1</p>
--	---	---

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0		GP	GRAVEL (6-inch layer).						
		SM	Light brown, fine to medium SAND; dry to moist.		0.0				
5		SM	Brown with red (iron-oxide) staining, fine to medium SAND with silt; moist.		0.0				
			Slough from 8-10 ft bgs.						
10		SM	Reddish brown, fine to medium SAND with silt (2-inch lense).		0.0				
		SM	Light brown, fine to medium SAND with silt.		0.0				
			Slough from 12-14 ft bgs.						
15		SM	Brown, fine to medium SAND with trace gravel.						
		SM	Light brown, fine to medium SAND with silt and trace gravel.						
		SM	Light brown SILT with fine to medium sand, trace gravel.						
20			No recovery from 20-21 ft bgs.						
		SM	Brown, fine to medium SAND with silt; moist.		0.0				
25		SM	Brown, fine to medium SAND; moist.		0.0				B7-24-26'
30									B7-W
35									
40			End of boring at 36 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						

**BORING METHOD:** Direct Push                      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 2.0 (in)  
**DRILL RIG:** Geoprobe                                **GROUND SURFACE ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/Frank S.      **START CARD/TAG ID:** NA  
**LOGGED BY:** L. Vigoren                            **DRILLING DATES:** 08/14/2008 - 08/14/2008

REMARKS:

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

Fred Meyer Port Orchard

9-61M-102820

AMEC  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



LOG OF BORING  
B7

PAGE 1 OF 1

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25									
30									
35			End of boring at 32.5 ft bgs. No groundwater encountered. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						
40									
<b>BORING METHOD:</b> Direct Push <b>ELEVATION REFERENCE:</b> NA <b>BOREHOLE DIAMETER:</b> 2.0 (in) <b>DRILL RIG:</b> Geoprobe <b>GROUND SURFACE ELEVATION:</b> NA <b>CONTRACTOR:</b> Cascade Drilling/Frank S. <b>START CARD/TAG ID:</b> NA <b>LOGGED BY:</b> L. Vigoren <b>DRILLING DATES:</b> 08/14/2008 - 08/14/2008						<b>REMARKS:</b>			


<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B8</b>  PAGE 1 OF 1
---	---	--	--



DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25									
30									
35						▽			
40			End of boring at 36 ft bgs. Did not collect groundwater sample due to depth of water and measured amount. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						


<b>BORING METHOD:</b> Direct Push <b>BOREHOLE DIAMETER:</b> 2.0 (in) <b>DRILL RIG:</b> Geoprobe <b>CONTRACTOR:</b> Cascade Drilling/Frank S. <b>LOGGED BY:</b> L. Vigoren	<b>ELEVATION REFERENCE:</b> NA <b>GROUND SURFACE ELEVATION:</b> NA <b>START CARD/TAG ID:</b> NA <b>DRILLING DATES:</b> 08/14/2008 - 08/14/2008	<b>REMARKS:</b>
---	---	-----------------

<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B9</b>  PAGE 1 OF 1
---	---	--	--



DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25						▽	□□□□□□		
30									△ B11-W
35			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						
40									
BORING METHOD: Direct Push BOREHOLE DIAMETER: 2.0 (in) DRILL RIG: Geoprobe CONTRACTOR: Cascade Drilling/Frank S. LOGGED BY: L. Vigoren				ELEVATION REFERENCE: NA GROUND SURFACE ELEVATION: NA START CARD/TAG ID: NA DRILLING DATES: 08/14/2008 - 08/14/2008		REMARKS: Tubing placed at approximately 26 ft bgs.			

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

Fred Meyer Port Orchard  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B11</b>  PAGE 1 OF 1
--	---	--	---

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0       5       10       15       20       25       30       35       40			No lithologic descriptions obtained. No field parameters obtained.						
			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed six inches of gravel on top to support cement patch.						

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

BORING METHOD: Direct Push	ELEVATION REFERENCE: NA
BOREHOLE DIAMETER: 2.0 (in)	
DRILL RIG: Geoprobe	GROUND SURFACE ELEVATION: NA
CONTRACTOR: Cascade Drilling/Frank S.	START CARD/TAG ID: NA
LOGGED BY: L. Vigoren	DRILLING DATES: 08/15/2008 - 08/15/2008

REMARKS:  
Tubing placed at approximately 24 ft bgs.

Fred Meyer Port Orchard  
9-61M-102820


**AMEC**  
7376 SW Durham Road  
Portland, Oregon  
USA 97224  
Tel (503) 639-3400  
Fax (503) 620-7892




**LOG OF BORING**  
**B12**  
**PAGE 1 OF 1**

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			Borehole was not drilled because it was directly over communication lines.						
5									
10									
15									
20									
25									
30									
35									
40									
BORING METHOD: Direct Push                              ELEVATION REFERENCE: NA BOREHOLE DIAMETER: 2.0 (in) DRILL RIG: Geoprobe    GROUND SURFACE ELEVATION: NA CONTRACTOR: Cascade Drilling/Frank S.              START CARD/TAG ID: NA LOGGED BY: L. Vigoren    DRILLING DATES: 08/15/2008 - 08/15/2008				<b>REMARKS:</b> Did not drill due to location of underground utilities.					

<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B13</b>  PAGE 1 OF 1
---	---	--	---

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0  5  10  15  20  25  30			No lithologic descriptions obtained. No field parameters obtained.			▽			△ B14-W
35  40			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed grass patch on top.						
BORING METHOD: Direct Push                      ELEVATION REFERENCE: NA BOREHOLE DIAMETER: 2.0 (in) DRILL RIG: Geoprobe                                      GROUND SURFACE ELEVATION: NA CONTRACTOR: Cascade Drilling/Frank S.              START CARD/TAG ID: NA LOGGED BY: L. Vigoren                                      DRILLING DATES: 08/15/2008 - 08/15/2008						REMARKS: Tubing placed at approximately 28 ft bgs.			

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

**Fred Meyer Port Orchard**  
  
9-61M-102820


AMEC  
7376 SW Durham Road  
Portland, Oregon  
USA 97224  
Tel (503) 639-3400  
Fax (503) 620-7892



**LOG OF BORING  
B14**  
  
PAGE 1 OF 1

DIRECT PUSH BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 9/19/08

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	VOLATILE READING (ppm)	GROUNDWATER	GW SCREENED INTERVAL	FIELD TESTING	TESTING AND LABORATORY DATA
0			No lithologic descriptions obtained. No field parameters obtained.						
5									
10									
15									
20									
25						▽	□ □ □ □ □ □ □		
30									△ B15-W
35			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed cavity cover on top.						
40									
<b>BORING METHOD:</b> Direct Push <b>ELEVATION REFERENCE:</b> NA <b>BOREHOLE DIAMETER:</b> 2.0 (in) <b>DRILL RIG:</b> Geoprobe <b>GROUND SURFACE ELEVATION:</b> NA <b>CONTRACTOR:</b> Cascade Drilling/Frank S. <b>START CARD/TAG ID:</b> NA <b>LOGGED BY:</b> L. Vigoren <b>DRILLING DATES:</b> 08/15/2008 - 08/15/2008						<b>REMARKS:</b> Tubing placed at approximately 28 ft bgs.			

<b>Fred Meyer Port Orchard</b>  <b>9-61M-102820</b>	<b>AMEC</b> 7376 SW Durham Road Portland, Oregon USA 97224 Tel (503) 639-3400 Fax (503) 620-7892		<b>LOG OF BORING</b> <b>B15</b>  PAGE 1 OF 1
---	---	--	---

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppm)	GROUNDWATER	FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Asphalt (3-inch elevated isle). Brown, silty SAND with gravel. (Fill)						Flush-mount Monument with Locking Cap
5		ML	Medium dense, yellow to gray to brown SILT with orange-brown, fine to coarse sand, iron-oxide staining, laminated, organics (fine roots, fresh wood chips); moist to very moist.		15	0.0			Concrete
10		SP	Very dense, olive-brown, fine to medium SAND with silt, some coarse sand and subangular to subrounded, coarse gravel; moist.		63	0.0			Bentonite Chips
15		SM	Very dense, olive-brown, silty, fine to medium SAND with some coarse sand and subrounded, fine to coarse gravel; very moist.		50/6"	0.0			Casing (Schedule 40 PVC, 2.0-inch I.D.)
20		SM	Very dense, olive-gray, silty, fine to medium SAND with coarse sand and subangular to subrounded, fine to coarse gravel, slightly compacted; moist to wet (last 6 inches).		50/6"	0.0			10/20 Colorado Silica Sand
25		SP	Very dense, brown, fine to coarse SAND with trace silt, uniform; wet.		50/6"	0.0			Well Casing (Schedule 40 PVC, 2.0-inch I.D. with 0.010-inch slot size)
30			End of boring at 30 ft bgs.						Threaded End Cap
35									
40									
45									

**BORING METHOD:** Hollow Stem Auger      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 8.0 (in)      **GROUND SURFACE ELEVATION:** NA  
**DRILL RIG:** Hollow Stem Auger      **CASING ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/HS      **START CARD/TAG ID:** APE951  
**LOGGED BY:** A. Speransky      **DRILLING DATES:** 10/01/2008 - 10/01/2008

REMARKS:

ENVR+WELL-BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 4/29/09

**Fred Meyer Port Orchard**  
**9-61M-102820**

**AMEC**  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



**LOG OF BORING**  
**MW-108A**  
 PAGE 1 OF 1



DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppm)	GROUNDWATER	FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Asphalt (4-inch layer). Brown, silty SAND with gravel. (Fill)						Flush-mount Monument with Locking Cap
5		SP	Medium dense, olive to medium olive-gray, fine SAND with silt, fine organics (roots), iron-oxide banding, micaceous; moist to very moist.		19	0.0			Concrete
10			Very dense, olive-gray, fine SAND with some silt and medium sand, trace subrounded, fine to coarse gravel; very dense.		75	0.0			Bentonite Chips
15		SM	Becomes fine to coarse, some gravel. Dense, olive-gray, silty, fine to coarse SAND with some fine decayed dark brown organics, iron-oxide banding; moist to very moist.		48				Casing (Schedule 40 PVC, 2.0-inch I.D.)
20		SM-SP	Very dense, olive to olive-brown and red-yellow-brown, silty, fine SAND to SAND, slightly cemented, iron-oxide staining; moist to wet.		50/6"	0.0	▽	■ MW109-20'	10/20 Colorado Silica Sand
25		SP	Very dense, olive-gray, fine SAND with silt, trace subrounded, fine to coarse gravel; wet.		74	0.0			Well Casing (Schedule 40 PVC, 2.0-inch I.D. with 0.010-inch slot size)
30			Very dense, olive-brown, fine to medium SAND, uniform; wet.		57	0.0			Threaded End Cap
31.5			End of boring at 31.5 ft bgs.						

**BORING METHOD:** Hollow Stem Auger      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 8.0 (in)      **GROUND SURFACE ELEVATION:** NA  
**DRILL RIG:** Hollow Stem Auger      **CASING ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/HS      **START CARD/TAG ID:** APE950  
**LOGGED BY:** A. Speransky      **DRILLING DATES:** 10/02/2008 - 10/02/2008

REMARKS:

ENVR+WELL-BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 4/29/09

Fred Meyer Port Orchard

9-61M-102820

**AMEC**  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



**LOG OF BORING  
MW-109**

PAGE 1 OF 1

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppm)	GROUNDWATER	FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0			Grass. Brown, silty SAND. (Topsoil).						Flush-mount Monument with Locking Cap
5		SP	Loose, gray-brown, fine SAND with some silt, trace coarse sand and subrounded, fine gravel, micaceous; slightly moist.		9	0.0			Concrete
10			Dense, olive-brown, fine SAND with silt, micaceous, uniform; wet.		48	0.0			Bentonite Chips
15		SP-SM	Very dense, olive-brown, silty, fine to medium SAND to SAND with some subrounded to rounded, fine to coarse gravel, iron-oxide staining, slightly cemented; very moist to moist.		58	0.0			Casing (Schedule 40 PVC, 2.0-inch I.D.)
20		SM	Very dense, blue-gray to gray, silty, fine to coarse SAND with trace subrounded, fine gravel. Strong petroleum hydrocarbon-like odor.		50/5"	2,000		MW110-20' TPH-G, BTEX by 8021B, HCID	10/20 Colorado Silica Sand
25		SP	Dense, gray, fine to coarse SAND with silt, trace fine gravel. Moderate petroleum hydrocarbon-like odor.		46	395		MW110-25'	Well Casing (Schedule 40 PVC, 2.0-inch I.D. with 0.010-inch slot size)
30			End of boring at 30 ft bgs.						Threaded End Cap

**BORING METHOD:** Hollow Stem Auger      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 8.0 (in)      **GROUND SURFACE ELEVATION:** NA  
**DRILL RIG:** Hollow Stem Auger      **CASING ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/HS      **START CARD/TAG ID:** APE949  
**LOGGED BY:** A. Speransky      **DRILLING DATES:** 10/01/2008 - 10/01/2008

REMARKS:

ENVR+WELL-BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 4/29/09

Fred Meyer Port Orchard

9-61M-102820

AMEC  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



LOG OF BORING  
MW-110

PAGE 1 OF 1

DEPTH (ft bgs)	GRAPHIC LOG	USCS SYMBOL	SOIL DESCRIPTION	SAMPLE	BLOW COUNT SPT N VALUE	VOLATILE READING (ppm)	GROUNDWATER	FIELD AND LABORATORY TESTING	WELL SCHEMATIC
0		SM	Asphalt (3-inch layer). Brown, silty SAND. (Road Fill) Brown, silty, fine to medium SAND. (Fill)						Flush-mount Monument with Locking Cap
		SM	Olive-brown, fine to medium, silty SAND with trace rounded, fine gravel; moist. (Native)						Concrete
5		SP	Very dense, olive-brown, fine SAND with silt, trace gravel; moist. Fine to coarse SAND with rounded gravel, some silt (last 6 inches).		53	0.0			Bentonite Chips
10			Dense, olive-brown, fine SAND with some silt, trace to some subrounded to rounded, fine gravel, micaceous; moist.		44	0.0			Casing (Schedule 40 PVC, 2.0-inch I.D.)
15			Becomes fine to medium with coarse sand.		48	0.0			
20					49	0.0			
25			Becomes very dense, no gravel, little to no fines.		50/6"	0.0			10/20 Colorado Silica Sand
30		SM	Very dense, olive, silty, fine SAND, iron-oxide staining, micaceous; moist to wet.  Becomes wet (last 3 inches).		50/6"	0.0		MW111-30' HCID	Well Casing (Schedule 40 PVC, 2.0-inch I.D. with 0.010-inch slot size)
35		ML	Very dense, olive-brown, fine SAND, iron-oxide bands, laminated; wet. Olive-gray SILT with fine sand, iron-oxide, micaceous, laminated; moist.		66	0.0		MW111-35'	
40			End of boring at 40 ft bgs.						Threaded End Cap

**BORING METHOD:** Hollow Stem Auger      **ELEVATION REFERENCE:** NA  
**BOREHOLE DIAMETER:** 8.0 (in)      **GROUND SURFACE ELEVATION:** NA  
**DRILL RIG:** Hollow Stem Auger      **CASING ELEVATION:** NA  
**CONTRACTOR:** Cascade Drilling/HS      **START CARD/TAG ID:** APE948  
**LOGGED BY:** A. Speransky      **DRILLING DATES:** 10/01/2008 - 10/01/2008

REMARKS:

ENVR+WELL-BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 4/29/09

Fred Meyer Port Orchard

9-61M-102820

**AMEC**  
 7376 SW Durham Road  
 Portland, Oregon  
 USA 97224  
 Tel (503) 639-3400  
 Fax (503) 620-7892



**LOG OF BORING  
MW-111**

PAGE 1 OF 1

## **APPENDIX B**

### Soil Analytical Results

Table III  
 Laboratory Analysis  
 Monitoring Well Soil Sampling  
 Bethel Wells, Port Orchard, Washington  
 J5E03

	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Total Petroleum Fuel Hydrocarbon
10/15/90					
MW-1 @ 9.5'	53u	53u	53u	110u	
MW-1 @ 35'	62u	62u	62u	120u	
MW-1 @ 47'	61u	61u	61u	120u	
MW-1 @ 75'	1.9u	1.1u	1.1u	3.4	
10/22/90					
MW-2 @ 10'	56u	56u	56u	110u	
MW-2 @ 15'	56u	56u	56u	110u	
MW-2 @ 36'	63u	63u	63u	130u	
MW-2 @ 57.5'	63u	63u	63u	130u	
MW-2 @ 78'	61u	61u	61u	120u	
MW-2 @ 80'	57u	57u	57u	110u	
5/8/91					
MW-101 @ 67.5'	50u	50u	50u	50u	100u
MW-103 @ 15'	70u	1,200	4,000	29,000	700,000
MW-103 @ 17.5'	210u	19,000	33,000	200,000	3,700,000
MW-103 @ 22.5'	50u	70	60	290	100u
MW-103 @ 27.5'	50u	60	50	160	100u
MW-103 @ 32.5	50u	50u	50u	60	100u
5/8/91					
MW-104 @ 7.5'	50u	1,190	13,000	45,000	2,200,000
MW-104 @ 12.5'	50u	7,800	11,000	40,000	3,100,000
MW-104 @ 17.5'	50u	2,000	11,000	44,000	3,200,00
MW-104 @ 22.5'	50u	70	1,000	3,100	260,000
MW-104 @ 27.5'	50u	50	810	3,200	190,000
MW-104 @ 37.5'	50u	50u	60u	380	30,000

\* u - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit: this means that the compound is not present in the sample at or above the reported level.

All values in parts per billion (ppb).

TABLE 1  
ANALYTICAL TESTS RESULTS - SUPERFUND SITE  
ARTIFICIAL ISLANDS AND TRENCHES, WASHINGTON  
WASHINGTON DEPARTMENT OF ECOLOGY

SAMPLE NO.	SAMPLING DATE	APPROXIMATE SAMPLE DEPTH (FT)	TOTAL PETROLEUM HYDROCARBON GASOLINE RANGE (ATFH-G) (mg/kg)	TOTAL LEAD (EPA 6010) (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	TOTAL XYLENE (mg/kg)
SP-1-20	6/13/95	20	7,800		ND	2.5	11	55
SP-1-25	6/13/95	25	5,300		ND	140	73	350
SP-1-30	6/13/95	30	2,500		ND	70	35	169
SP-1-35	6/13/95	35	130		ND	3.1	1.3	8.2
SP-3-20	6/13/95	20	750		ND	ND	4.6	14.3
SP-3-25	6/13/95	25	9		ND	ND	ND	0.59
SP-3-30	6/13/95	30	16		ND	0.12	0.18	0.97
SP-4-20	6/13/95	20	3,000		ND	25	30	196
SP-4-25	6/13/95	25	310		0.56	4.5	4.1	22.5
SP-4-30	6/13/95	30	20		0.39	0.76	0.52	2.69
SP-4-35	6/13/95	35	11		0.26	0.37	0.29	1.38
			16	11	4.1	3.1	3.1	20

NOTES:  
 NA - Samples not analyzed  
 All results reported in parts per million (mg/kg)  
 \* < \* denotes that the results are below the indicated reporting limits

August 16, 1999

AGRA Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8025

**Attention: John Kuiper**

Dear Mr. Kuiper:

RE: Analytical Results For Project 9-61M-10282-0

Attached are the results for the samples submitted on August 3, 1999 from the above referenced project. For your reference, our project number associated with these samples is OR990753.

The samples were analyzed at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**



Sean Gormley  
Laboratory Manager

Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Soil

Service Request No.: OR990753  
 Report Date: 08/13/1999  
 Report No.: 99075301a  
 C.O.C. No.: 03720-03726

**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B and WDOE/ODEQ Method NWTPH-Gx**  
 mg/kg(ppm)  
 Dry Weight Basis

	(a)			(b)			Method Reporting Limit
Sample Name:	BH20-6	BH21-5	BH22-5	VP3-2	VP6-3	VP1-4	
Lab Code:	0753-6	0753-14	0753-21	0753-25	0753-31	0753-38	
Gasoline:	6500(c)	ND	24	46	ND	2100	5.0
Benzene:	<0.50	ND	ND	ND	ND	<1.25	0.05
Toluene:	65	ND	ND	ND	ND	<1.25	0.05
Ethylbenzene:	65	ND	ND	0.09(d)	ND	3.9(d)	0.05
Total Xylenes:	390(c)	ND	ND	0.17(d)	ND	8.8(d)	0.15
<b>Sample Date:</b>	07/27/99	07/27/99	07/27/99	07/27/99	07/28/99	07/28/99	
<b>Extraction Date:</b>	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	
<b>Analysis Date:</b>	08/11/99	08/12/99	08/11/99	08/12/99	08/12/99	08/12/99	

							Control Limits
<b>Surrogate Recovery: (a,a,a-Trifluorotoluene):</b>							
Gasoline Analysis(FID):	(e)	85%	98%	83%	87%	(f)	57%-143%
BTEX Analysis(PID):	(e)	66%	65%	61%	68%	(f)	47%-136%
	(1:50 Dilution)						
Gasoline Analysis(FID):	(f)					(f)	57%-143%
BTEX Analysis(PID):	(f)					(f)	47%-136%

ND Not Detected

- (a) Results are from a 1:10 dilution. Note elevated reporting limit for benzene.
- (b) Results are from a 1:25 dilution. Note elevated reporting limits.
- (c) Result is from a 1:50 dilution analyzed on 8/12/99.
- (d) Results are not confirmed by GC/MS analysis.
- (e) Not applicable due to the presence of chromatographic peaks from target and non-target compounds which prevented determination of the surrogate.
- (f) Not applicable because the analysis of the sample required a dilution that reduced the surrogate concentration below the analytical detection limit.

  
 Signature of Chemist

  
 QA/QC Review





Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Soil

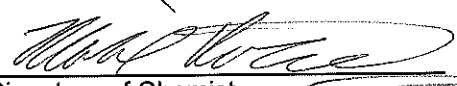
Service Request No.: OR990753  
 Report Date: 08/13/1999  
 Report No.: 99075301b  
 C.O.C. No.: 03720-03726

**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B and WDOE/ODEQ Method NWTPH-Gx**  
 mg/kg(ppm)  
 Dry Weight Basis

Sample Name: Lab Code:	(a)					Method Reporting Limit
	VP2-4 0753-43	BH23-9 0753-56	BH24-4 0753-61	BH25-5 0753-67	Lab Blank 0753-MB	
Gasoline:	2200	5.9	6.5	ND	ND	5.0
Benzene:	<1.25	ND	ND	ND	ND	0.05
Toluene:	<1.25	ND	ND	ND	ND	0.05
Ethylbenzene:	4.4(b)	ND	ND	ND	ND	0.05
Total Xylenes:	9.7(b)	ND	ND	ND	ND	0.15
<b>Sample Date:</b>	07/28/1999	07/29/1999	07/29/1999	07/29/1999	08/10/1999	
<b>Extraction Date:</b>	08/10/1999	08/10/1999	08/10/1999	08/10/1999	08/10/1999	
<b>Analysis Date:</b>	08/12/1999	08/12/1999	08/12/1999	08/12/1999	08/11/1999	
<b>Surrogate Recovery: (a,a,a-Trifluorotoluene):</b>						<b>Control Limits</b>
Gasoline Analysis(FID):	(c)	79%	85%	83%	95%	57%-143%
BTEX Analysis(PID):	(c)	62%	61%	62%	73%	47%-136%

ND Not Detected

- (a) Results are from a 1:25 dilution. Note elevated reporting limits.
- (b) Results are not confirmed by GC/MS analysis.
- (c) Not applicable because the analysis of the sample required a dilution that reduced the surrogate concentration below the analytical detection limit.

  
 Signature of Chemist

  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Soil

Service Request No.: OR990753  
 Report Date: 8/13/99  
 Report No.: 99075302  
 C.O.C. No.: 03720-03726

**QC Data Report**  
**Blank Spike Recoveries**  
**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B & WDOE/ODEQ Method NWTPH-Gx**  
**mg/kg(ppm)**  
**As Received Basis**

Sample Name:	Lab Blank	Spike Level (mg/kg)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference	Control Limits
Gasoline:	<5.0	25	24	96	23	92	4	66%-119%
Benzene:	<0.05	1.0	0.89	89	0.85	85	5	63%-130%
Toluene:	<0.05	1.0	0.92	92	0.88	88	4	67%-122%
Ethylbenzene:	<0.05	1.0	0.90	90	0.86	86	5	67%-121%
Total Xylenes:	<0.15	3.0	2.9	97	2.8	93	4	71%-124%

Sample Date:	8/10/99	~	8/10/99	~	8/10/99	~	~
Extraction Date:	8/10/99	~	8/10/99	~	8/10/99	~	~
Analysis Date:	8/11/99	~	8/11/99	~	8/11/99	~	~

**Surrogate Recovery (a,a,a-Trifluorotoluene):**

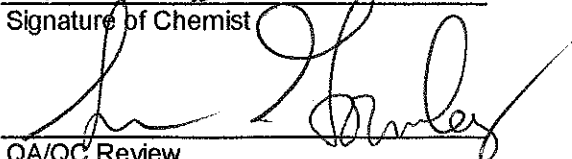
						Control Limits
Gasoline Analysis(FID):	95%	~	105%	~	103%	57% - 143%
BTEX Analysis(PID):	73%	~	80%	~	78%	47% - 136%

ND Not Detected

Spike Source: Ultra Scientific RGO-601, Lot # M-0910

Spike Source: Accustandard WA-VPH Lot # A7060438

  
 Signature of Chemist

  
 QA/QC Review



Project: Port Orchard Fred Meyer  
Project No.: 9-61M-10282-0  
Project Manager: John Kuiper  
Sample Matrix: Soil

Service Request No.: OR990753  
Report Date: 8/13/99  
Report No.: 99075303  
C.O.C. No.: 03720-03726

**QC Data Report**  
**Duplicate Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**mg/kg(ppm)**  
**As Received Basis**

Sample Name:	Batch QC	Duplicate Sample	Relative Percent Difference
Lab Code:	0777-2	(mg/kg)	
Gasoline:	5.7	6.3	10

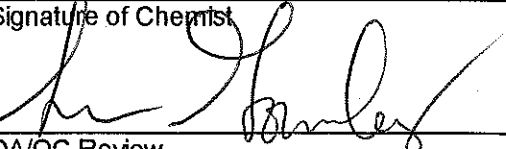
Acceptance Limits: ~ ~ <25

Sample Date:	8/5/99	8/5/99	~
Extraction Date:	8/10/99	8/10/99	~
Analysis Date:	8/12/99	8/12/99	

Surrogate Recovery:			Control Limits
a,a,a-Trifluorotoluene:	105%	105%	57%-143%

ND Not Detected

  
\_\_\_\_\_  
Signature of Chemist

  
\_\_\_\_\_  
QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Soil

Service Request No.: OR990753  
 Report Date: 8/13/99  
 Report No.: 99075304  
 C.O.C. No.: 03720-0372

**QC Data Report**  
**Matrix Spike Recoveries**  
**BTEX Compounds**  
**EPA Methods 5030/8021B**  
**mg/kg(ppm)**  
**As Received Basis**

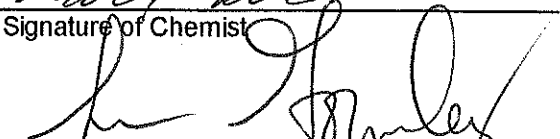
Sample Name:	Lab Code:	Spike Level (mg/kg)	Matrix Spike (MS)	Percent Recovery (MS)	Matrix Spike Duplicate (DMS)	Percent Recovery (DMS)	% Recovery Control Limits	Relative Percent Difference (RPD)
Benzene	BH22-5 0753-21	<0.05	1.0	75	0.73	73	59%-124%	3
Toluene		<0.05	1.0	84	0.83	83	62%-120%	1
Ethylbenzene		<0.05	1.0	82	0.81	81	54%-125%	1
Total Xylenes		<0.15	3.0	87	2.6	87	56%-130%	<1
<b>Sample Date:</b>	7/27/99	~	7/27/99	~	7/27/99	~	~	
<b>Extraction Date:</b>	8/10/99	~	8/10/99	~	8/10/99	~	~	
<b>Analysis Date:</b>	8/11/99	~	8/11/99	~	8/11/99	~	~	

Surrogate Recovery:							Control Limits
a,a,a-Trifluorotoluene:	65%	~	73%	~	70%	~	47% - 136%
4-Bromofluorobenzene:	83%	~	82%	~	82%	~	66% - 120%

ND Not Detected

Spike Source: Accustandard WA-VPH Lot #A7060438

  
 Signature of Chemist

  
 QA/QC Review



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

September 3, 2008

Leah Vigoren, Project Manager  
AMEC  
11335 NE 122<sup>nd</sup> Way, Suite 100  
Kirkland, WA 98034

Dear Ms. Vigoren:

Included are the results from the testing of material submitted on August 15, 2008 from the Fred Meyer, Port Orchard 961M102821, F&BI 808162 project. There are 35 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
AMC0903R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on August 15, 2008 by Friedman & Bruya, Inc. from the AMEC Fred Meyer, Port Orchard 961M102821, F&BI 808162 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AMEC</u>
808162-01	Trip Blank
808162-02	B1:20-22
808162-03	B2:22-24
808162-04	B7:24-26
808162-05	B7-W
808162-06	B3-W
808162-07	B4-W
808162-08	B5-W
808162-09	B6-W
808162-10	B10-W
808162-11	B11-W
808162-12	B12-W
808162-13	B14-W
808162-14	B15-W
808162-15	B0-W

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/03/08

Date Received: 08/15/08

Project: Fred Meyer, Port Orchard 961M102821, F&BI 808162

Date Extracted: 08/18/08 and 08/25/08

Date Analyzed: 08/18/08, 08/19/08 and 08/26/08

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 51-134)
B0-W 808162-15	<100	99
Method Blank	<100	87
Method Blank	<100	111

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/03/08

Date Received: 08/15/08

Project: Fred Meyer, Port Orchard 961M102821, F&BI 808162

Date Extracted: 08/19/08

Date Analyzed: 08/19/08

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
USING METHOD NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
B1:20-22 808162-02	<2	88
B2:22-24 808162-03	<2	87
B7:24-26 808162-04	<2	98
Method Blank	<2	76



FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Charlene Morrow, M.S.  
Yelena Aravkina, M.S.  
Bradley T. Benson, B.S.  
Kurt Johnson, B.S.

3012 16th Avenue West  
Seattle, WA 98119-2029  
TEL: (206) 285-8282  
FAX: (206) 283-5044  
e-mail: fbi@isomedia.com

April 8, 2009

Leah Vigoren, Project Manager  
AMEC  
One Union Square  
600 University Street, Suite 1020  
Seattle, WA 98101

Dear Ms. Vigoren:

Included is the amended report from the testing of material submitted on October 2, 2008 from the Fred Meyer-Port Orchard 9-61M-10282, F&BI 810034 project. Per your request, the sample IDs have been updated.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures

c: Kurt Harrington, AMEC  
AMC1007R.DOC

FRIEDMAN & BRUYA, INC.

---

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on October 2, 2008 by Friedman & Bruya, Inc. from the AMEC Fred Meyer-Port Orchard 9-61M-10282, F&BI 810034 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>AMEC</u>
810034-01	MW111-30
810034-02	MW111-35
810034-03	MW110-10
810034-04	MW110-20
810034-05	MW110-25
810034-06	MW108A-20
810034-07	MW108A-25
810034-08	MW109-20
810034-09	Trip Blank

All quality control requirements were acceptable.

Date of Report: 10/07/08

Date Received: 10/02/08

Project: Fred Meyer-Port Orchard 9-61M-10282, F&BI 810034

Date Extracted: 10/06/08

Date Analyzed: 10/06/08

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR GASOLINE, DIESEL AND HEAVY OIL BY NWTPH-HCID  
Results Reported as Not Detected (ND) or Detected (D)**

**THE DATA PROVIDED BELOW WAS PERFORMED PER THE GUIDELINES ESTABLISHED BY THE  
WASHINGTON DEPARTMENT OF ECOLOGY AND WERE NOT DESIGNED TO PROVIDE INFORMATION  
WITH REGARDS TO THE ACTUAL IDENTIFICATION OF ANY MATERIAL PRESENT**

<u>Sample ID</u> Laboratory ID	<u>Gasoline</u>	<u>Diesel</u>	<u>Heavy Oil</u>	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 50-150)
MW111-30 810034-01	ND	ND	ND	58
MW110-20 810034-04	D	ND	ND	60
MW108A-20 810034-06	ND	ND	ND	59
MW109-20 810034-08	ND	ND	ND	59
Method Blank	ND	ND	ND	59

ND - Material not detected at or above 20 mg/kg gas, 50 mg/kg diesel and 250 mg/kg heavy oil.

Date of Report: 10/07/08

Date Received: 10/02/08

Project: Fred Meyer-Port Orchard 9-61M-10282, F&BI 810034

Date Extracted: 10/06/08

Date Analyzed: 10/06/08

**RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES AND TPH AS GASOLINE  
USING EPA METHOD 8021B AND NWTPH-Gx**

Results Reported on a Dry Weight Basis

Results Reported as mg/kg (ppm)

<u>Sample ID</u> Laboratory ID	<u>Benzene</u>	<u>Toluene</u>	<u>Ethyl Benzene</u>	<u>Total Xylenes</u>	<u>Gasoline Range</u>	<u>Surrogate (% Recovery)</u> (Limit 50-150)
MW110-20 d 810034-04 1/10	<0.2	0.85	2.0	5.3	300	ip
Method Blank	<0.02	<0.02	<0.02	<0.06	<2	113

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 10/07/08

Date Received: 10/02/08

Project: Fred Meyer-Port Orchard 9-61M-10282, F&BI 810034

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES  
FOR BENZENE, TOLUENE, ETHYLBENZENE,  
XYLENES, AND TPH AS GASOLINE  
USING EPA METHOD 8021B AND NWTPH-Gx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benzene	mg/kg (ppm)	0.5	96	86	70-130	11
Toluene	mg/kg (ppm)	0.5	92	86	70-130	7
Ethylbenzene	mg/kg (ppm)	0.5	94	88	70-130	7
Xylenes	mg/kg (ppm)	1.5	95	87	70-130	9
Gasoline	mg/kg (ppm)	20	106	113	70-130	6

**Data Qualifiers & Definitions**

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

A1 - More than one compound of similar molecule structure was identified with equal probability.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for this range fell outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte indicated may be due to carryover from previous sample injections.

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - The analyte indicated was found in the method blank. The result should be considered an estimate.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. The variability is attributed to sample inhomogeneity.

ht - The sample was extracted outside of holding time. Results should be considered estimates.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The result is below normal reporting limits. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the compound indicated is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received in a container not approved by the method. The value reported should be considered an estimate.

pr - The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - The value reported exceeded the calibration range established for the analyte. The reported concentration should be considered an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The pattern of peaks present is not indicative of diesel.

y - The pattern of peaks present is not indicative of motor oil.

A. Spencian → will be on vacation till 10/27/08 → don't send me anything  
 SAMPLE CHAIN OF CUSTODY NE 10/2/08

810034

Send Report To HARRINGTON KURT / Leah Vepore

Company Geomatrix Consultants, Inc. (AMEC)

Address 600 University St., Suite 1020

City, State, ZIP Seattle, WA 98101

Phone # (206) 342-1760 Fax # (206) 342-1761

SAMPLERS (signature) [Signature]

PROJECT NAME/NO. Fred Meyer - Port Orchard PO#

9-614-10282

REMARKS MW HClD: if diesel is detected → NWTPK-Dx & PAHs analyses

Page # 1 of 2

TURNAROUND TIME

Standard (2 Weeks)

RUSH

Rush charges authorized by:

SAMPLE DISPOSAL

Dispose after 30 days

Return samples

Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	ANALYSES REQUESTED										Notes	
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HClD					
→ <del>NW107A</del> <sup>115</sup> - 30	01A-E	10/1/08	1000	soil	5								X				if PHC detected, analyse for specific chemical
<del>NW107A</del> <sup>115</sup> - 35	02A-E		1005														held
<del>NW106A</del> <sup>110</sup> - 10	03A-E		1210														held
→ <del>NW106A</del> <sup>110</sup> - 20	04A-E		1220				XX						X				if D-detect, E-DX & PAHs
<del>NW106A</del> <sup>110</sup> - 25	05A-E		1225														held
NW108A - 20	06A-E		1410										X				if detected → follow up
NW108A - 25	07A-E		1415														held
<del>NW108A</del> <sup>109</sup> - 20	08A-E	10/2/08	830	✓	✓								X				if detected → follow up
TRIP BLANK	09A-B			H <sub>2</sub> O	2												

Friedman & Bruya, Inc.  
 3012 16th Avenue West  
 Seattle, WA 98119-2029  
 Ph. (206) 285-8282  
 Fax (206) 283-5044  
 FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	A. Spencian	AMEC	10/2/08	1400
<u>[Signature]</u>	Friedman	F&B	10/2/08	1400

Samples received at 4 °C

## **APPENDIX C**

### Groundwater Analytical Results



Table II  
 Laboratory Analysis  
 Domestic Water Wells  
 Bethel Wells, Port Orchard, Washington  
 J5E03

DATE	Sommers	Beatty	Warrington	Peterson	Tripp	Beck	Evans
6/5/90 Benzene Total Xylene					200 170	ND ND	
6/27/90 Benzene Total Xylene	ND ND		ND ND	31 13.4	166 120	ND ND	
8/1/90 Benzene Total Xylene		ND ND	ND ND	ND ND	21 54	ND ND	
8/31/90 Benzene Total Xylene				ND ND	130 120		
10/11/90 Benzene Total Xylene							ND ND
10/23/90 Benzene Total Xylene					320 270		
12/17/90 Benzene Total Xylene	ND ND	ND ND	ND ND	9.6 3.2	21 41	ND ND	
3/5/91 Benzene Total Xylene TVPH	ND ND	ND ND	ND ND	38 16 93	15 25 130	ND ND	

ND- Not Detected  
 TVPH - Total Volatile Petroleum Hydrocarbon  
 All values in parts per billion (ppb)

Table IV  
 Laboratory Analysis Monitoring Well Water Samples  
 Bethel Wells, Port Orchard, Washington  
 J5E03

	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Total Volatile Petroleum Hydrocarbon
11/20/91					
MW-1-D	280	4.9	1.0u	200	2,400
MW-1-S	1.0u	1.0u	1.0u	2.0u	20u
MW-2-D	1.0u	1.0u	1.0u	2.0u	20u
MW-2-S	1.0u	1.0u	1.0u	2.0u	20u
3/5/91					
MW-1-D	2,200	36	5	400	17,000
MW-1-S	1.0u	1.0u	1.0u	1.0u	20u
MW-2-D	1.0u	1.0u	1.0u	1.0u	20u
MW-2-S	1.0u	1.0u	1.0u	1.0u	20u
5/22/91					
MW-101	1.0u	5.0u	1.0u	1.0u	1,000u
MW-103	860	3,900	11	6,800	22,000
MW-104	1.0u	20.0u	1.0u	1.0u	1,000u

\* u - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

All values in parts per billion (ppb).

BETHEL - FORMER TEXACO  
 PORT ORCHARD, WASHINGTON  
 GROUNDWATER MONITORING RESULTS

MONITORING WELL	DATE	DTW	WATER LEVEL ELEVATION	CHEMICAL ANALYSIS IN ug/l				
				TPH-G	B	T	E	K
MW-104 (well head Elevation= 311	5/22/91			<1000	<1	<20	<1	<1
	3/25/93	24.04	287.68	<250	<5	<3	<5	<15
	5/28/97	17.14	284.58	<250	<1	<1	<1	<3
	2/18/98			120	2.8	1	0.88	1
103 MW-103 (well head Elevation= 311.7	5/22/91			22000	880	3300	11	8800
	3/25/93	28.04	283.66	3' FP	3' FP	3' FP	3' FP	3' FP
	5/28/97	17.2	284.5	42000	12	1100	58	8800
	2/18/98			48000	22	850	360	7800
MW-13 (well head Elevation= 312.58	3/5/91			<20	<1	<1	<1	<1
	3/25/93	28.43	283.27	<250	<1	<1	<1	<3
	5/28/97	22.08	290.49	<250	<1	<1	<1	<3
	2/18/98			120	<1	<1	<1	<3
MW-10 (well head Elevation= 313	3/5/91			17000	2380	38	5	400
	3/25/93	30	281.7	2800	2300	<50	<50	320
	5/28/97	25.71	287.29	<250	<1	<1	<1	<3
	2/18/98			570	12	1.9	0.92	8.6
25 MW-26 (well head Elevation= 304.63	3/5/91			<20	<1	<1	<1	<1
	3/25/93	28.33	285.37	<50	<1	<1	<1	<3
	5/28/97	19.6	284.93	<250	<1	<1	<1	<3
	2/18/98			120				
TRPP (well head Elevation= 319.42	1/7/92			450	140			119
	4/14/92			240	110			80
	3/25/93			360	110	<1	<1	91
	5/28/97	27.8	291.82	<250	68	<5	<5	47
	2/18/98			120	2.1	1	1	15

DATE	TIME	PRESSURE IN PSI				TEMP DEG. F	VACUUM IN. H2O	HRS AFT. LST ROND	PID PPMV	FLOW SCFM	AVE PPMV	LBS/DAY RMVD	LBS RMVD	TOT. DAYS RUN	LBS TO DATE RMVD
	HR:MIN	8P-1	8P-2	8P-3	8P-4										
1/15/97	13:00	X	X	X	X	644	35	264	340	35	51.5	373	40.78	423.9	354.12
2/5/97	13:00	X	X	X	X	645	35	480	133	35	30.5	172	24.35	443.9	378.47
2/23/97	13:00	X	X	X	X	640	35	288	57	35	36	0.69	4.27	455.9	382.74
3/13/97	13:00	12	12	12	12	640	35	456	59	35	35.3	0.59	12.17	462.9	384.91
4/2/97	13:00	X	X	X	X	628	35	336	15	35	36.5	0.26	3.71	476.9	390.33
4/15/97	13:00	X	X	X	X	635	30	288	10	35	12.5	0.14	2.43	488.9	392.55
5/2/97	12:00	X	X	X	X	658	30	2	40	35	45	0.35	0.50	489.0	392.55
5/29/97	12:00	X	X	X	X	628	28	648	10	30	25	0.16	10.75	516.0	392.73
6/4/97	12:00	X	X	X	X	624	26	144	10	30	10	0.06	3.92	522.0	394.75
6/10/97	3:00	X	X	X	X	615	25	2	64.5	30	37.25	0.23	0.46	522.0	397.21
6/16/97	3:00	X	X	X	X	620	28	120	11	45	37.75	0.25	32.27	527.0	397.40
7/9/97	3:00	X	X	X	X	578	25	1	55	45	33	0.21	0.41	527.1	397.50
7/18/97	11:00	X	X	X	X	683	25	160	310	45	162.5	1.70	272.47	533.8	398.25
8/11/97	11:00	X	X	X	X	684	25	168	10	45	150	1.59	25.62	540.8	399.00
9/8/97	10:00	X	X	X	X	652	25	168	50	45	30	0.26	47.03	547.8	400.10
10/8/97	9:00	X	X	X	X	625	25	187	49	45	46.5	0.26	27.43	554.7	402.52
11/3/97	10:00	X	X	X	X	625	25	168	20	45	24.5	0.32	14.08	561.7	404.50
12/8/97	12:00	X	X	X	X	630	25	170	10	45	15.2	0.14	21.95	568.8	405.15
1/12/98	9:30	X	X	X	X	624	25	168	8	45	14	0.10	19.04	575.7	406.07
2/17/98	10:00	X	X	X	X	643	25	192	5	45	15	0.07	4.33	583.7	406.40
3/16/98	12:00	X	X	X	X	635	25	170	5	45	13.5	0.06	19.31	590.5	406.72
4/20/98	10:00	X	X	X	X	630	25	168	5	45	13	0.05	19.45	597.8	406.55

BETHEL - FORMER TEXACO  
 REMEDIAL SYSTEM PERFORMANCE DATA

DATE	TIME HR:MIN	PRESSURE IN PSI				TEMP DEG. F	VACUUM IN. H2O	HRS AFT. LST RDNQ	PID PPMV	FLOW GCFM	AVE PPMV	LBS/DAY RMVD	LBS RMVD	TOT. DAYS RUN	LBS TO DATE RMVD
		SP-1	SP-2	SP-3	SP-4										
7/27/95	13:30	x	x	x	x	814	25	26	997	51	150.5	35.0	17.22	1.1	17.22
7/31/95	12:30	x	x	x	x	734	25	86	1736	51	138.0	34.45	57.30	5.1	76.0
8/7/95	16:30	x	x	x	x	689	28	172	1947	50	184.5	39.06	136.83	12.3	211.83
8/14/95	10:30	x	x	x	x	659	28.5	162	1810	48	197.5	40.70	120.21	18.0	318.07
8/22/95	9:30	x	x	x	x	684	28.5	192	1919	47	194.5	40.17	145.38	27.0	493.94
8/28/95	9:30	x	x	x	x	879	29	144	1523	48.5	176.1	37.51	104.95	33.0	697.27
9/11/95	10:30	11	10	12	12	701	28.5	337	1822	49	187.5	38.59	230.52	47.0	826.90
9/12/95	13:30	10	9	10	10	701	26	27	1922	45	189.2	37.47	18.62	48.2	845.57
8/20/95	13:00	8	8	9	9	724	25	24	3000	45	300.0	27.00	27.00	49.2	873.53
9/22/95	14:00	7	6	8	8	701	25	25	2925	45	292.5	27.64	27.64	50.2	907.95
9/25/95	10:00	8	5	7	8	723	25	68	2789	45	235.7	39.66	79.53	53.0	977.89
9/27/95	10:00	6	5	7	8	723	25	48	2772	45	228.0	25.95	51.99	55.0	1029.77
10/2/95	10:00	8	6	9	9	687	25	120	2760	45	276.0	25.87	126.05	60.0	1459.92
10/4/95	11:15	8	6	9	9	745	28	48	2550	45	255.0	24.77	49.55	62.0	1709.97
10/9/95	10:00	10	9	9	10	739	28	120	2485	45	248.5	23.49	112.49	67.0	1829.13
10/20/95	11:30	9	7	10	10	680	30	264	2448	40	244.8	30.40	125.04	78.0	1954.01
10/25/95	14:00	9	7	10	10	658	35	125	2215	35	221.5	18.92	85.15	83.3	1633.06
10/31/95	11:00	9	7	10	10	658	37	139	2209	35	220.9	18.05	82.59	89.0	1722.04
11/3/95	14:00	9	7	10	10	685	35	72	1550	30	155.0	17.40	39.08	92.0	1767.32
11/18/95	10:00	x	x	x	x	628	35	312	1520	30	152.0	3.25	124.14	105.0	1891.26
11/19/95	15:00	x	x	x	x	658	35	5	2245	30	224.5	13.87	2.91	105.3	1993.16
11/21/95	10:00	x	x	x	x	712	35	43	1640	30	164.0	12.00	27.88	107.0	1975.81
11/30/95	16:00	x	x	x	x	690	35	222	1583	30	158.3	10.02	92.73	116.3	2009.14

DATE	TIME HR:MIN	PRESSURE IN PSI				TEMP DEG. F	VACUUM IN. H2O	HRS AFT. LST RDNG	PID PPMv	FLOW SCFM	AVE PPMv	LBS/DAY RMVD	LBS RMVD	TOT. DAYS RUN	LBS TO DATE RMVD
		SP-1	SP-2	SP-3	SP-4										
12/13/85	12:00	X	X	X	X	623	37	312	898	28	2287	7.71	83.58	129.3	2152.10
1/3/86	14:00	X	X	X	X	608	35	506	890	34	842	8.03	132.74	150.4	2294.84
1/10/86	13:00	X	X	X	X	608	35	168	819	34	2312	8.02	132.41	157.4	2272.01
1/25/86	13:00	X	X	X	X	612	35	380	800	35	809	8.42	133.35	172.4	2390.41
2/1/86	13:00	X	X	X	X	620	35	4	820	35	820	8.67	133.0	172.5	2500.40
2/28/86	13:00	X	X	X	X	615	35	698	740	35	780	8.86	134.17	201.5	2605.55
3/22/86	9:00	X	X	X	X	590	35	513	430	35	885	8.25	97.75	222.8	2844.30
3/31/86	9:00	X	X	X	X	628	35	216	400	35	1152	8.01	127.1	231.8	3021.54
4/10/86	11:00	X	X	X	X	558	28	0	407	45	197	3.88	3.80	231.8	3221.45
4/21/86	13:00	X	X	X	X	605	28	266	540	47	1735	8.51	117.35	243.0	3473.50
4/30/86	13:00	X	X	X	X	624	28	216	510	47	527	5.12	16.29	252.0	3725.50
5/20/86	8:00	X	X	X	X	852	37	1	680	51	585	8.29	12.28	252.0	3718.90
5/24/86	12:00	X	X	X	X	687	37	28	640	51	660	8.88	13.84	253.2	3772.05
5/31/86	12:00	X	X	X	X	585	37	168	630	51	635	6.73	47.01	260.2	3774.06
6/15/86	12:00	X	X	X	X	625	37	360	383	51	503.5	4.36	30.36	275.2	3854.49
7/25/86	12:00	X	X	X	X	687	30	1	540	40	540	4.32	15.39	275.3	3854.98
7/31/86	12:00	X	X	X	X	668	30	144	890	40	718	5.88	37.58	281.3	3904.17
9/15/86	16:00	X	X	X	X	647	30	1108	503	40	603.7	5.78	28.71	327.4	3155.47
9/25/86	10:00	12	12	12	12	660	35	3	1303	35	1043	1.48	1.18	327.5	3185.06
10/9/86	17:00	8	8	8	8	725	35	343	890	35	1895	7.80	113.72	341.8	3471.70
10/15/86	17:00	8	8	8	8	675	35	144	682	35	788	5.70	54.23	347.8	3304.01
10/31/86	12:00	18	18	18	18	680	30	1	1280	40	1280	5.18	10.17	347.9	3304.35
11/18/86	13:00	18	19	18	18	832	30	432	680	40	880	8.18	140.21	365.9	3452.63
11/26/86	13:00	15	15	15	15	635	30	192	682	40	681	5.85	45.18	373.9	3497.55
1/4/87	11:00	X	X	X	X	635	35	838	100	35	581	5.84	119.87	412.9	3810.53

BETHEL - FORMER TEXACO  
PORT ORCHARD, WASHINGTON  
GROUNDWATER MONITORING RESULTS

MONITORING WELL	DATE	DTW	WATER LEVEL ELEVATION	CHEMICAL ANALYSIS IN ug/l				
				TPH-G	B	T	E	X
MW-104 (well head Elevation= 311	5/22/91			<1000	<1	<20	<1	<1
	3/25/93	24.04	287.66	<250	<5	<5	<5	<15
	5/28/97	17.14	294.56	<250	<1	<1	<1	<3
	2/18/98			120	2.6	1	0.88	1
MW-103 (well head Elevation= 311.7	5/22/91			22000	860	3900	11	6800
	3/25/93	28.04	283.66	3' FP	3' FP	3' FP	3' FP	3' FP
	5/28/97	17.2	294.5	42000	12	1100	56	9500
	2/18/98			48000	22	630	350	7800
MW-1S (well head Elevation= 312.56	3/5/91			<20	<1	<1	<1	<1
	3/25/93	28.43	283.27	<250	<1	<1	<1	<3
	5/28/97	22.08	290.48	<250	<1	<1	<1	<3
	2/18/98			120	<1	<1	<1	<3
MW-1D (well head Elevation= 313	3/5/91			17000	2200	36	5	400
	3/25/93	30	281.7	2600	2300	<50	<50	320
	5/28/97	25.71	287.29	<250	<1	<1	<1	<3
	2/18/98			570	12	1.9	0.92	8.6
MW-2S (well head Elevation= 304.53	3/5/91			<20	<1	<1	<1	<1
	3/25/93	26.33	285.37	<50	<1	<1	<1	<3
	5/28/97	19.6	284.93	<250	<1	<1	<1	<3
	2/18/98			120				
TRIPP (well head Elevation= 319.42	1/7/92			450	140			110
	4/14/92			240	110			80
	3/25/93			360	110	<1	<1	91
	5/28/97	27.8	291.62	<250	68	<5	<5	47
	2/18/98			120	2.1	1	1	15





**Table 2 - Continued**

Sample No.	SW-1	SW-2	SW-3	BH-1-W	BH-2-W	BH-3-W	BH-4-W	BH-5-W	BH-6-W	BH-7-W	BH-8-W	BH-9-W
Analyte												
1,2Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinylchloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gasoline	ND	ND	ND									
Diesel Fuel	ND	ND	ND									
Heavy Oil	ND	ND	ND									

Notes: 1) Sample locations are characterized by area from which sample was obtained and the depth (in feet) below ground surface.

2) Soil sample results are reported in micrograms per liter (ug/l), which is equivalent to parts per billion (ppb).

ND indicates analyte not detected at the listed method detection limit.

Method Detection Limits: EPA Method 8021B [Benzene (1.0 ug/l), Toluene (1.0 ug/l), Ethylbenzene (1.0 ug/l), Total-Xylene (1.0 ug/l), and Halogenated Hydrocarbons (1.0 ug/l)]. NWTPH-HCID [Gasoline (200.0 ug/l), Diesel Fuel (500.0 ug/l), and Heavy Oil (500.0 ug/l)].

Applicable Model Toxics Control Act (MTCA) Method A cleanup levels: Benzene (5.0 ug/l), Toluene (40.0 ug/l), and Total-Xylene (20.0 ug/l).

Samples analyzed by EPA Method 8021B and NWTPH-HCID.

**Table 2**  
*Summary of EPA Method 8021B and NWTPH-HCID Analysis in Water*

Date	1-6-99	1-6-99	1-6-99	1-6-99	1-6-99
Sample No. Location <sup>1</sup> Concentration <sup>2</sup>	BH-10-W 3.5 ft. (ug/l)	BH-11-W 9.5 ft. (ug/l)	BH-12-W 7.0 ft. (ug/l)	BH-13-W 21.5 ft. (ug/l)	BH-14-UST-W 10.5 ft. (ug/l)
Analyte					
Benzene	ND	3.7	2.0	ND	
Toluene	ND	9.9	8.0	ND	
Ethylbenzene	ND	ND	ND	ND	
Total Xylene	ND	ND	7.4	ND	
1,1Dichloro- ethene	ND	ND	ND	ND	
Dichloro- methane	ND	ND	ND	ND	
Trans-1,2 Dichloroethene	ND	ND	ND	ND	
1,1Dichloro- ethane	ND	ND	ND	ND	
Cis-1,2 Dichloroethene	ND	ND	ND	ND	
Chloroform	ND	ND	ND	ND	
1,1,1 Trichloro- ethane	ND	ND	ND	ND	
Carbon Tetrachloride	ND	ND	ND	ND	

**Table 2 - Continued**

Sample No.	BH-10-W	BH-11-W	BH-12-W	BH-13-W	BH-14-UST-W
<i>Analyte</i>					
1,2Dichloroethane	ND	ND	ND	ND	
Trichloroethene	ND	ND	ND	ND	
1,1,2Trichloroethane	ND	ND	ND	ND	
Tetrachloroethene	ND	ND	ND	ND	
1,1,1,2Tetrachloroethane	ND	ND	ND	ND	
Vinylchloride	ND	ND	ND	ND	
Gasoline	ND	ND	ND	ND	ND
Diesel Fuel	ND	ND	ND	ND	ND
Heavy Oil	ND	ND	ND	ND	ND

Notes: 1) Sample locations are characterized by area from which sample was obtained and the depth (in feet) below ground surface.

2) Soil sample results are reported in micrograms per liter (ug/l), which is equivalent to parts per billion (ppb).

ND indicates analyte not detected at the listed method detection limit.

Method Detection Limits: EPA Method 8021B [Benzene (1.0 ug/l), Toluene (1.0 ug/l), Ethylbenzene (1.0 ug/l), Total-Xylene (1.0 ug/l), and Halogenated Hydrocarbons (1.0 ug/l)]. NWTPH-HCID [Gasoline (200.0 ug/l), Diesel Fuel (500.0 ug/l), and Heavy Oil (500.0 ug/l)].

Applicable Model Toxics Control Act (MTCA) Method A cleanup levels: Benzene (5.0 ug/l), Toluene (40.0 ug/l), and Total-Xylene (20.0 ug/l).

Samples analyzed by EPA Method 8021B and NWTPH-HCID.

**Table 4**  
*Summary of NWTPH-Gx and EPA Method 8020 Analysis in Water*

Date Sample No.	Location <sup>1</sup>	Sample Type Matrix	Analyte				
			TPH-G <sup>2</sup> (ug/l) <sup>3</sup>	Benzene (ug/l) [B]	Toluene (ug/l) [T]	Ethylbenzene (ug/l) [E]	Xylenes (ug/l) [X]
BH-15A-W	22.0 ft.	Grab Water	41,000	130	120	530	5,000
BH-16-W	3.5 ft.	Grab Water		ND	ND	ND	6.9
BH-17-W	3.0 ft.	Grab Water		ND	ND	ND	ND
BH-18-W	3.5 ft.	Grab Water		ND	ND	ND	ND
BH-19-W	3.0 ft.	Grab Water		ND	ND	ND	2.0

- Notes: 1) Sample locations are characterized by area from which the sample was obtained and the depth (in feet) below ground surface.  
 2) TPH-G = Total petroleum hydrocarbons as gasoline.  
 3) Soil sample results are reported in micrograms per liter (ug/l), which is equivalent to parts per billion (ppb).  
 ND indicates analyte not detected at the listed method detection limit.  
 Method Detection Limit: Gasoline (100.0 ug/l), Benzene (1.0 ug/l), Toluene (1.0 ug/l), Ethylbenzene (1.0 ug/l), and Xylenes (1.0 ug/l).  
 Model Toxics Control Act (MTCA) Method A cleanup level for: TPH-G (1,000.0 ug/l), Benzene (5.0 ug/l), Toluene (40.0 ug/l), Ethylbenzene (30.0 ug/l), and Xylenes ( 20.0 ug/l).  
 Samples analyzed by Method NWTPH-Gx and EPA Method 8020.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

FRED MEYER-PORT ORCHARD PROJECT  
 Port Orchard, Sedgewick, And Bethel, Washington  
 G N Northern, Inc.  
 Project No.: 198-801

Hydrocarbon Identification by NWTPH-HCID for Water

Sample Number	Date	Recovery %	Gasoline ug/l	Diesel ug/l	Heavy Oil ug/l
Meth. Blank	01/06/99	107	nd	nd	nd
BH-14 UST W	01/06/99	107	nd	nd	nd
MDL			200	500	1000

"nd" Indicates not detected at the listed detection limit.  
 "D" Indicates detected above the listed detection limit.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

FRED MEYER PROJECT  
 Port Orchard, Washington  
 GN Northern, Inc.  
 Project No. 198-801

Hydrocarbon Identification by NWTPH-HCID for Water.

Sample Number	Date	Recovery %	Gasoline ug/l	Diesel ug/l	Heavy Oil ug/l
Meth. Blank	01/07/99	94	nd	nd	nd
SW-1	01/07/99	103	nd	nd	nd
SW-2	01/07/99	101	nd	nd	nd
SW-3	01/07/99	99	nd	nd	nd
Method Detection Limits			200	500	500

"nd" Indicates not detected at the listed detection limit.

"D" Indicates detected above the listed detection limit.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

FRED MEYER-PORT ORCHARD PROJECT  
 Port Orchard, Sedgewick, And Bethel, Washington  
 G N Northern, Inc.  
 Project No.: 198-801

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	Method Blank	SW - 1	SW - 2	SW - 3	MS	MSD	RPD %
Date	ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	
Vinylchloride	5	nd	nd	nd	nd	--	--	--
Benzene	1	nd	nd	nd	nd	4.85	5.40	10.7%
Toluene	1	nd	nd	nd	nd	4.71	4.84	2.7%
Ethylbenzene	1	nd	nd	nd	nd	--	--	--
Total-Xylene	1	nd	nd	nd	nd	--	--	--
1,1 Dichloroethene	1	nd	nd	nd	nd	5.10	4.83	5.4%
Dichloromethane	1	nd	nd	nd	nd	5.70	5.90	3.4%
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	5.04	5.70	12.3%
1,1 Dichloroethane	1	nd	nd	nd	nd	5.31	5.75	8.0%
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	5.05	5.36	6.0%
Chloroform	1	nd	nd	nd	nd	--	--	--
1,1,1 Trichloroethane	1	nd	nd	nd	nd	--	--	--
Carbon Tetrachloride	1	nd	nd	nd	nd	--	--	--
1,2 Dichloroethane	1	nd	nd	nd	nd	5.13	5.40	5.1%
Trichloroethene	1	nd	nd	nd	nd	5.79	5.12	12.3%
1,1,2 Trichloroethane	1	nd	nd	nd	nd	--	--	--
Tetrachloroethene	1	nd	nd	nd	nd	4.05	4.52	11.0%
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	--	--	--
Spike Recovery (%)		82	102	81	123	97	82	

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

PORT ORCHARD DEVELOPMENT PROJECT

Port Orchard, Washington

G N Northern, Inc.

Project No.: 198-801

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	Method Blank	BH-1-W	BH-1-W Dup.	BH-2-W	BH-3-W	BH-4-W
Date		01/06/99	01/06/99	01/06/99	01/06/99	01/06/99	01/06/99
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	5	nd	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd	nd
Ethylbenzene	1	nd	nd	nd	nd	nd	nd
Total-Xylene	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Chloroform	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		77	98	117	88	83	117

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.



TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

PORT ORCHARD DEVELOPMENT PROJECT

Port Orchard, Washington

G N Northern, Inc.

Project No.: 198-801

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	BH-5-W	BH-6-W	BH-7-W	BH-8-W	BH-9-W
Date		01/06/99	01/06/99	01/06/99	01/06/99	01/06/99
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
Vinylchloride	5	nd	nd	nd	nd	nd
Benzene	1	nd	nd	nd	nd	nd
Toluene	1	nd	nd	nd	nd	nd
Ethylbenzene	1	nd	nd	nd	nd	nd
Total-Xylene	1	nd	nd	nd	nd	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd
Chloroform	1	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd
Spike Recovery (%)		73	85	94	90	85

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

FRED MEYER-PORT ORCHARD PROJECT  
 Port Orchard, Sedgewick, And Bethel, Washington  
 G N Northern, Inc.  
 Project No.: 198-801

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	Method Blank	BH-10-W	BH-11-W	BH-12-W	BH-12-W Dup	BH-13-W
Date	ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l	01/06/99 ug/l
Vinylchloride	1	nd	nd	nd	nd	nd	nd
Benzene	1	nd	nd	3.7	2.0	2.1	nd
Toluene	1	nd	nd	9.9	8.0	7.1	nd
Ethylbenzene	1	nd	nd	nd	nd	nd	nd
Total-Xylene	1	nd	nd	nd	7.4	6.8	nd
1,1 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Dichloromethane	1	nd	nd	nd	nd	nd	nd
Trans-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
1,1 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Cis-1,2 Dichloroethene	1	nd	nd	nd	nd	nd	nd
Chloroform	1	nd	nd	nd	nd	nd	nd
1,1,1 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Carbon Tetrachloride	1	nd	nd	nd	nd	nd	nd
1,2 Dichloroethane	1	nd	nd	nd	nd	nd	nd
Trichloroethene	1	nd	nd	nd	nd	nd	nd
1,1,2 Trichloroethane	1	nd	nd	nd	nd	nd	nd
Tetrachloroethene	1	nd	nd	nd	nd	nd	nd
1,1,1,2-Tetrachloroethane	1	nd	nd	nd	nd	nd	nd
Spike Recovery (%)		82	106	117	123	75	123

"nd" Indicates Not Detected at the listed detection limit.

"Int" Indicates that interference peaks prevent determination.

TRANSGLOBAL ENVIRONMENTAL GEOSCIENCES NORTHWEST INC.

PORT ORCHARD DEVELOPMENT PROJECT

Port Orchard, Washington

G N Northern, Inc.

Project No.: 198-801

Specific Halogenated Hydrocarbons and BTEX (EPA 8021B) in Water

Sample-Number	MDL	MS	MSD	RPD
				%
Date		01/06/99	01/06/99	
	ug/l	ug/l	ug/l	
Vinylchloride	5	--	--	--
Benzene	1	4.85	5.40	10.7%
Toluene	1	4.71	4.84	2.7%
Ethylbenzene	1	--	--	--
Total-Xylene	1	--	--	--
1,1 Dichloroethene	1	5.10	4.83	5.4%
Dichloromethane	1	5.70	5.90	3.4%
Trans-1,2 Dichloroethene	1	5.04	5.70	12.3%
1,1 Dichloroethane	1	5.31	5.75	8.0%
Cis-1,2 Dichloroethene	1	5.05	5.36	6.0%
Chloroform	1	--	--	--
1,1,1 Trichloroethane	1	--	--	--
Carbon Tetrachloride	1	--	--	--
1,2 Dichloroethane	1	5.13	5.40	5.1%
Trichloroethene	1	5.79	5.12	12.3%
1,1,2 Trichloroethane	1	--	--	--
Tetrachloroethene	1	4.05	4.52	11.0%
1,1,1,2-Tetrachloroethane	1	--	--	--
		97	82	
Spike Recovery (%)				

"nd" Indicates Not Detected at the listed detection limit.

"int" Indicates that interference peaks prevent determination.

FRED MEYER DEVELOPMENT PROJECT

Port Orchard, Washington

GN Northern

Project No.: 198-801

BTEX (EPA 8020) Analyses for Water

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Recovery (%)
Meth. Blank	1/25/99	nd	nd	nd	nd	94
BH - 16 - W	1/25/99	nd	nd	nd	6.9	70
BH - 17 - W	1/25/99	nd	nd	nd	nd	105
BH - 18 - W	1/25/99	nd	nd	nd	nd	121
BH - 18 - W Dup	1/25/99	nd	nd	nd	nd	84
BH - 19 - W	1/25/99	nd	nd	nd	2.0	107
Detection Limits		1	1	1	1	

\*nd\* Indicates not detected at the listed detection limits.

\*int\* Indicates that interferences prevent determination.

FRED MEYER DEVELOPMENT PROJECT

Port Orchard, Washington

GN Northern

Project No.: 198-801

Gasoline (NWTPH-Gx) & BTEX (EPA 8020) Analyses for Water.

Sample Number	Date Analyzed	Benzene ug/l	Toluene ug/l	Eth Benz ug/l	Xylene ug/l	Gasoline ug/l	Recovery (%)
Meth. Blank	1/25/99	nd	nd	nd	nd	nd	94
15A - W	1/25/99	130	120	530	5000	41000	79
Detection Limits		1	1	1	1	100	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interferences prevent determination.

August 9, 1999

AGRA Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8025

**Attention: John Kuiper**

Dear Mr. Kuiper:

RE: Analytical Results For Project 9-91M10282-0

Attached are the results for the samples submitted on July 29, 1999 from the above referenced project. For your reference, our project number associated with these samples is OR990737.

The samples were analyzed at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**



Sean Gormley  
Laboratory Manager

Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Product

Service Request No.: WA990737  
 Report Date: 08/05/99  
 Report No.: 99073701  
 C.O.C. No.: 03719

**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/kg (ppm)**

Sample Name:	MW-103Prod	Lab Blank	Reporting Limit
Lab Code:	737-1	737-MB	
<b>(C7-C12)</b>			
<b>Gasoline Range</b>	Positive ID	ND	20
<b>(&gt;C12-C24)</b>			
<b>Diesel Range</b>	Present(a)	ND	50
<b>(&gt;C24)</b>			
<b>Fuel Oil Range</b>	ND	ND	100
<b>Sample Date:</b>	07/21/99	08/03/99	
<b>Extraction Date:</b>	08/03/99	08/03/99	
<b>Analysis Date:</b>	08/03/99	08/03/99	

Surrogate Recovery:			Control Limits
4-Bromofluorobenzene:	(b)	84%	50%-150%
O-Terphenyl:	73%	69%	50%-150%

ND Not Detected

- (a) Results are quantified as diesel, but the chromatographic evidence suggests that gasoline range petroleum hydrocarbons are eluting within the diesel range.
- (b) Outside of acceptance limits due to the presence of interfering chromatographic peaks from elevated concentrations of target compounds.

*Dan Hines*  
 \_\_\_\_\_  
 Signature of Chemist

\_\_\_\_\_  
 QA/QC Review



Project: Port Orchard Fred Meyer  
Project No.: 9-61M-10282-0  
Project Manager: John Kuiper  
Sample Matrix: Product

Service Request No.: WA990737  
Report Date: 08/05/99  
Report No.: 99073702  
C.O.C. No.: 03719

**QC Data Report - Duplicate Summary**  
**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/kg(ppm)**

<b>Sample Name:</b>	MW-103Prod	Sample
<b>Lab Code:</b>	737-1	Duplicate
Gasoline:	Positive ID	Positive ID
Diesel:	Present (a)	Present (a)
Heavy Oil:	ND	ND


**Control Limits:** ~ ~

<b>Sample Date:</b>	07/21/99	07/21/99
<b>Extraction Date:</b>	08/03/99	08/03/99
<b>Analysis Date:</b>	08/03/99	08/03/99

<b>Surrogate Recovery:</b>		
4-Bromofluorobenzene:	(b)	(b)
O-Terphenyl:	73%	70%

ND Not Detected

(a) Results are quantified as diesel, but the chromatographic evidence suggests that gasoline range petroleum hydrocarbons are eluting within the diesel range.

  
\_\_\_\_\_  
Signature of Chemist

  
\_\_\_\_\_  
QA/QC Review





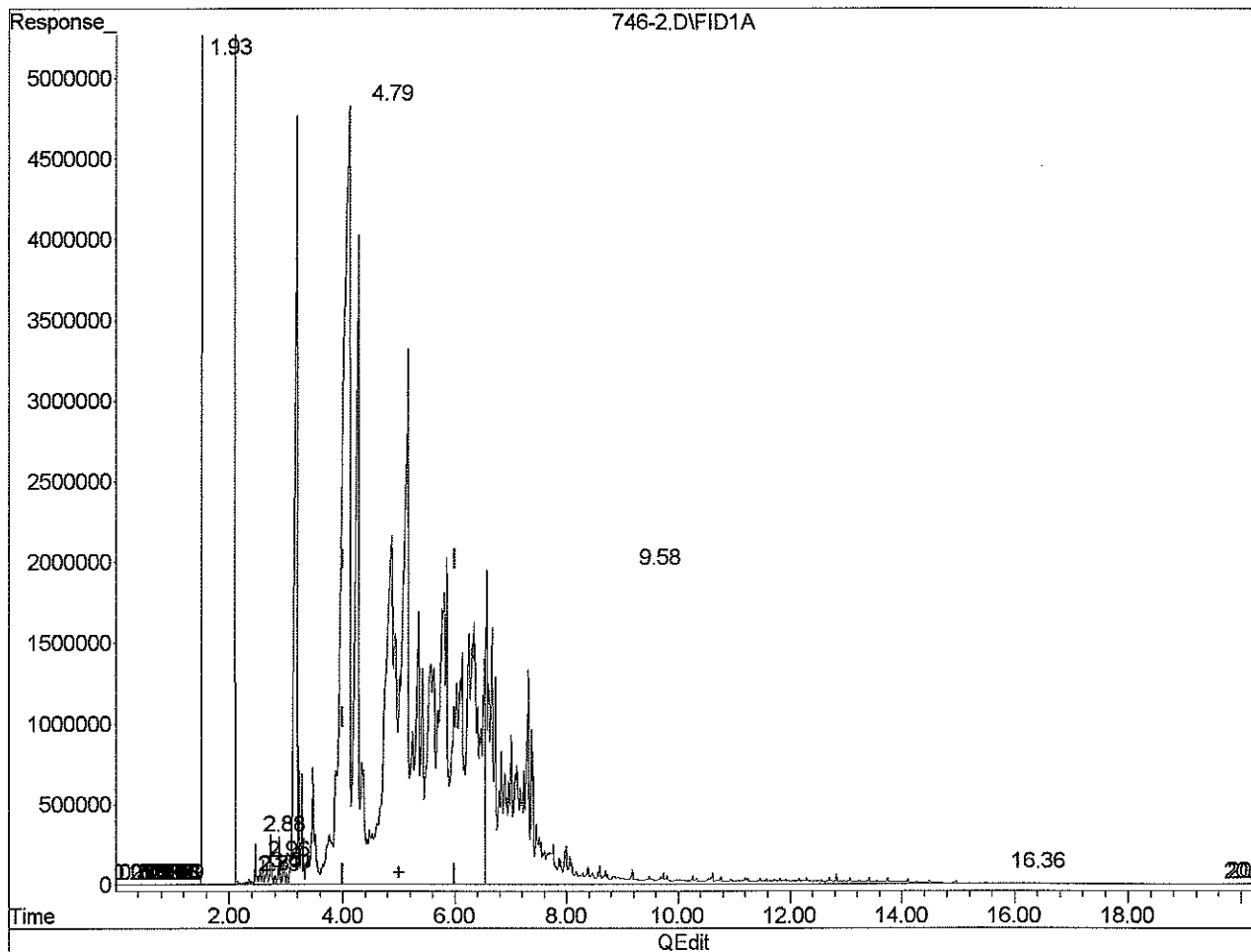
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-2.D  
Acq On : 8-8-1999 21:13:39  
Sample : hcid h2o  
Misc :

Vial: 13  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 77837.922ppm m  
response 2248913157

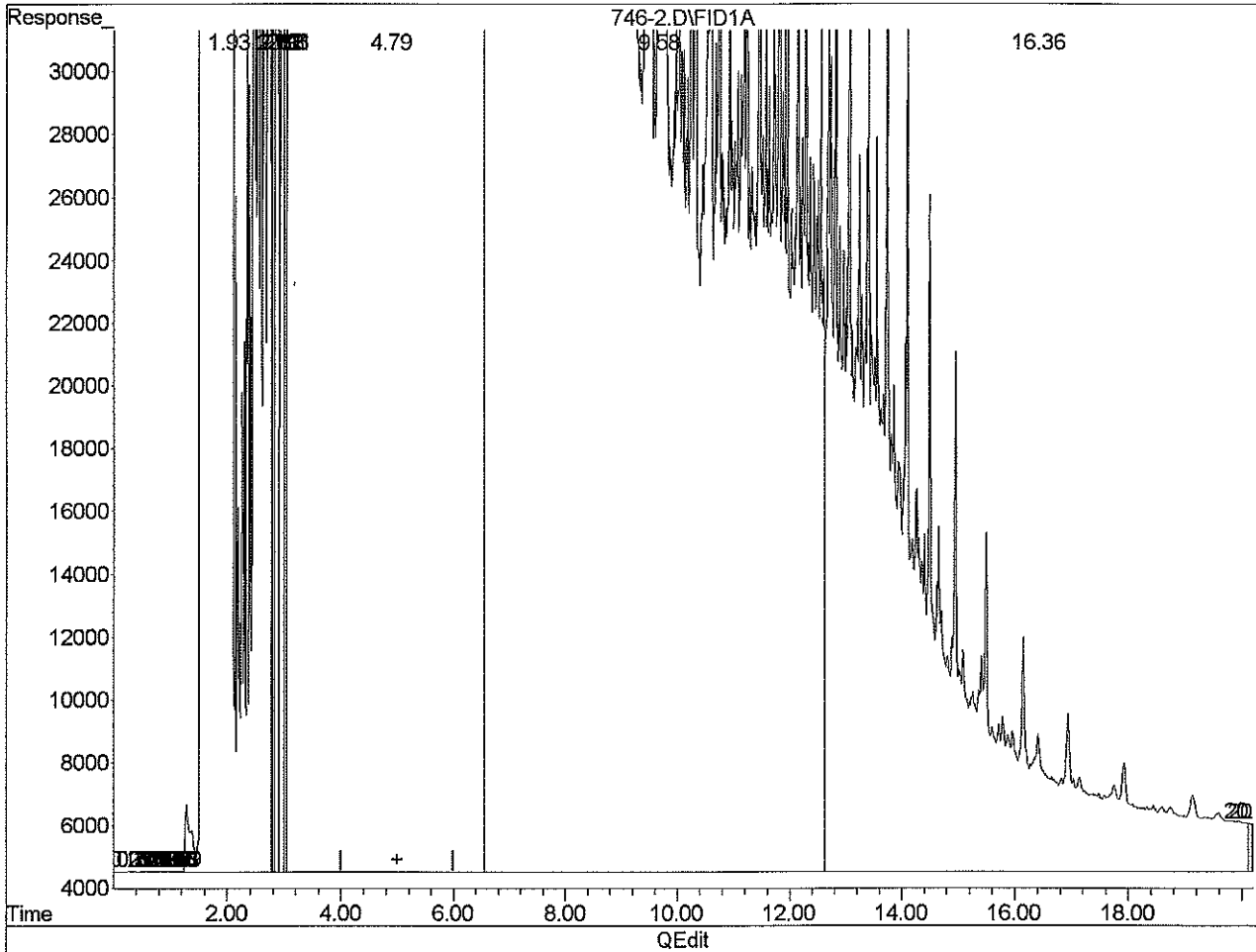
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-2.D  
Acq On : 8-8-1999 21:13:39  
Sample : hcid h2o  
Misc :

Vial: 13  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 77837.922ppm m  
response 2248913157

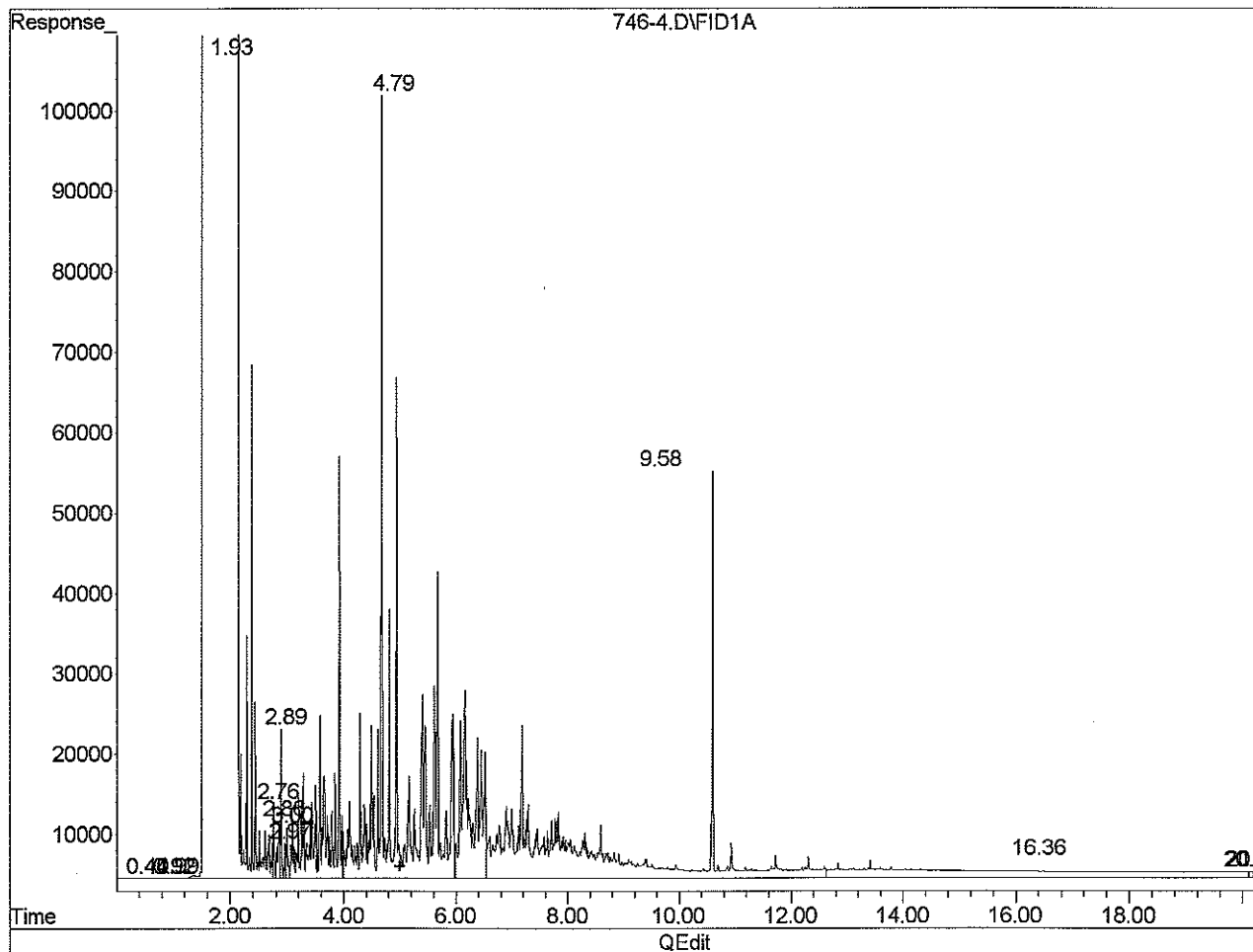
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-4.D  
Acq On : 8-8-1999 16:12:31  
Sample : hcid h2o  
Misc :

Vial: 3  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 501.108ppm m  
response 14478150

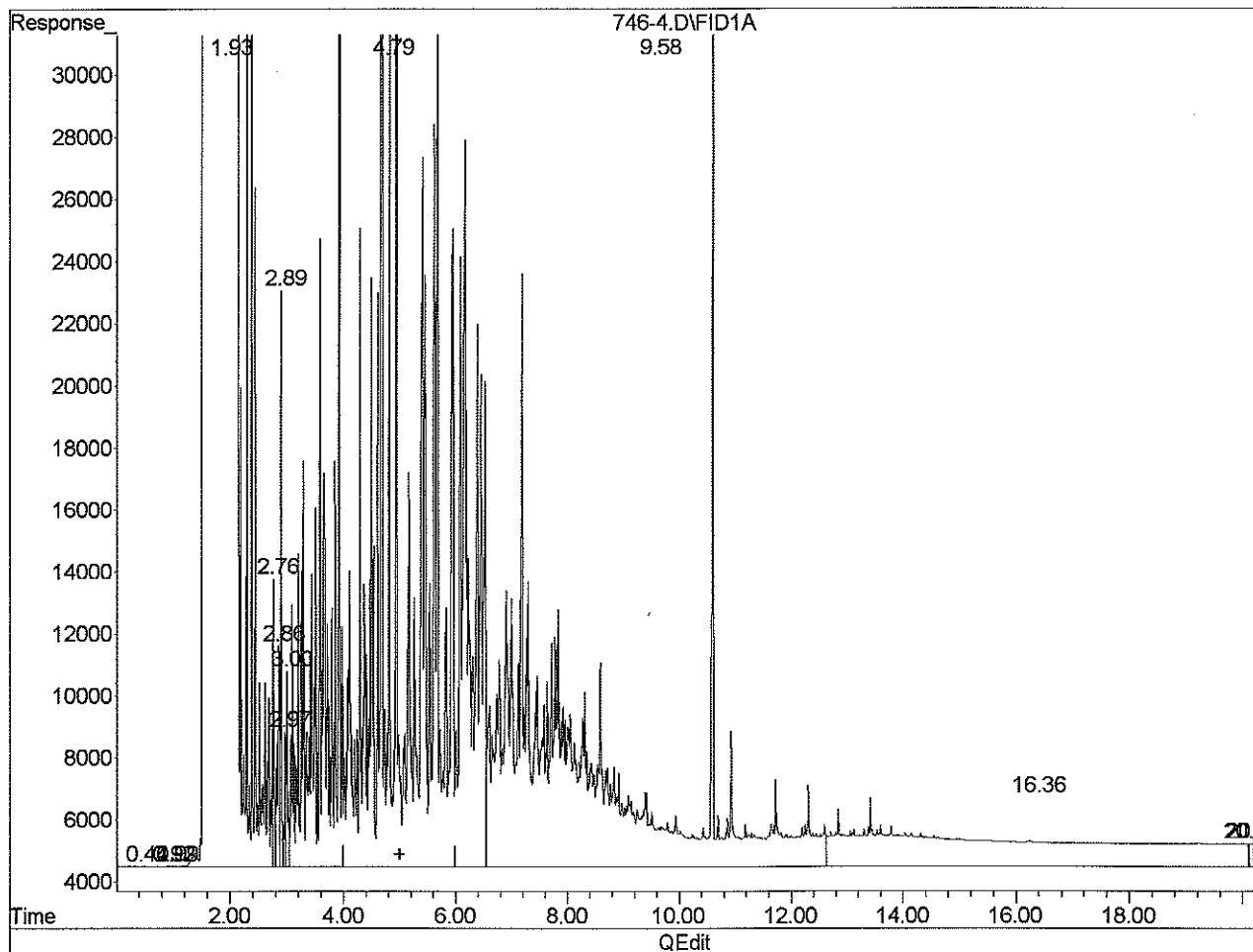
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-4.D  
Acq On : 8-8-1999 16:12:31  
Sample : hcid h2o  
Misc :

Vial: 3  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 501.108ppm m  
response 14478150

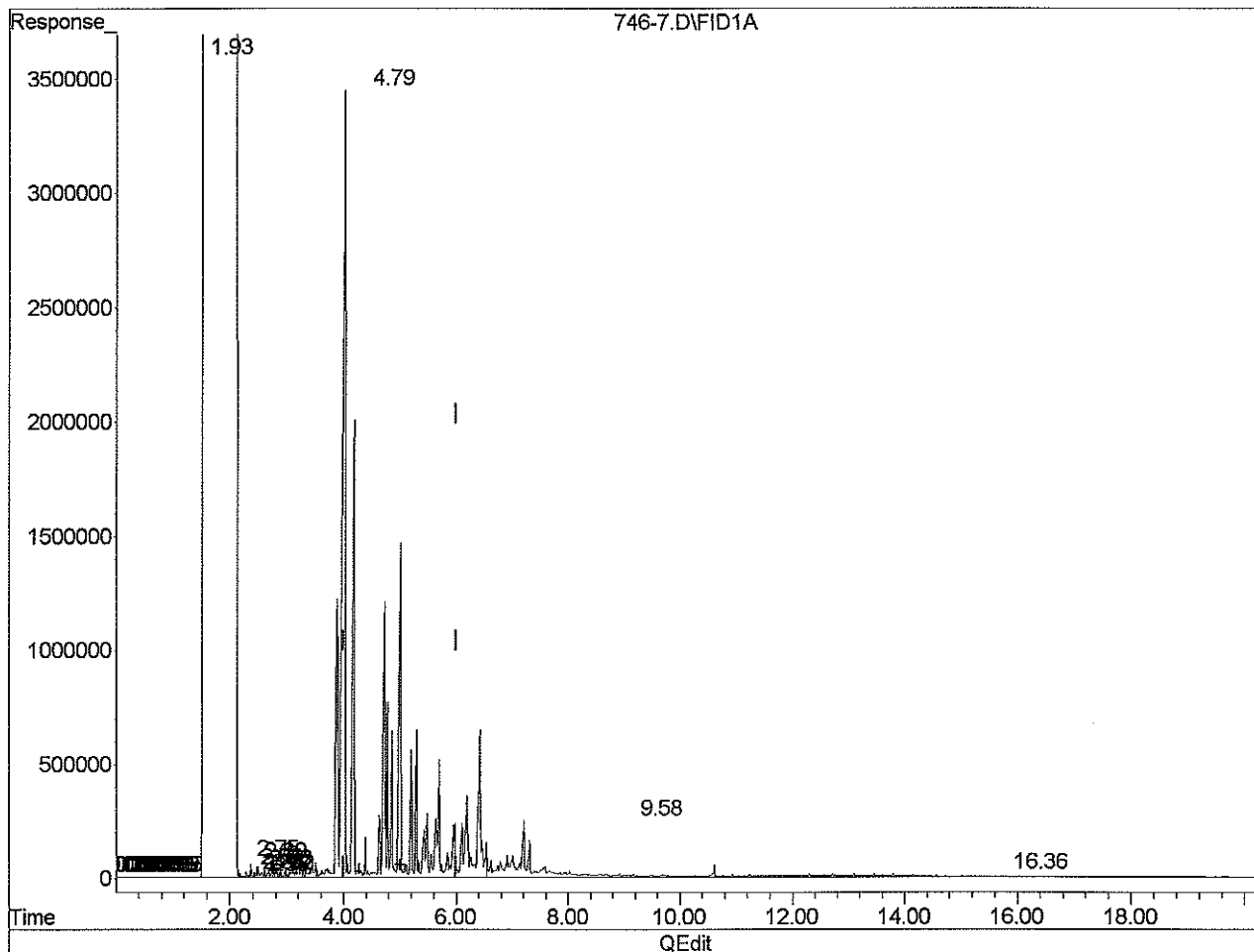
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-7.D  
Acq On : 8-8-1999 17:43:03  
Sample : hcid h2o  
Misc :

Vial: 6  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 14247.862ppm m  
response 411652889

Quantitation Report (Qedit)

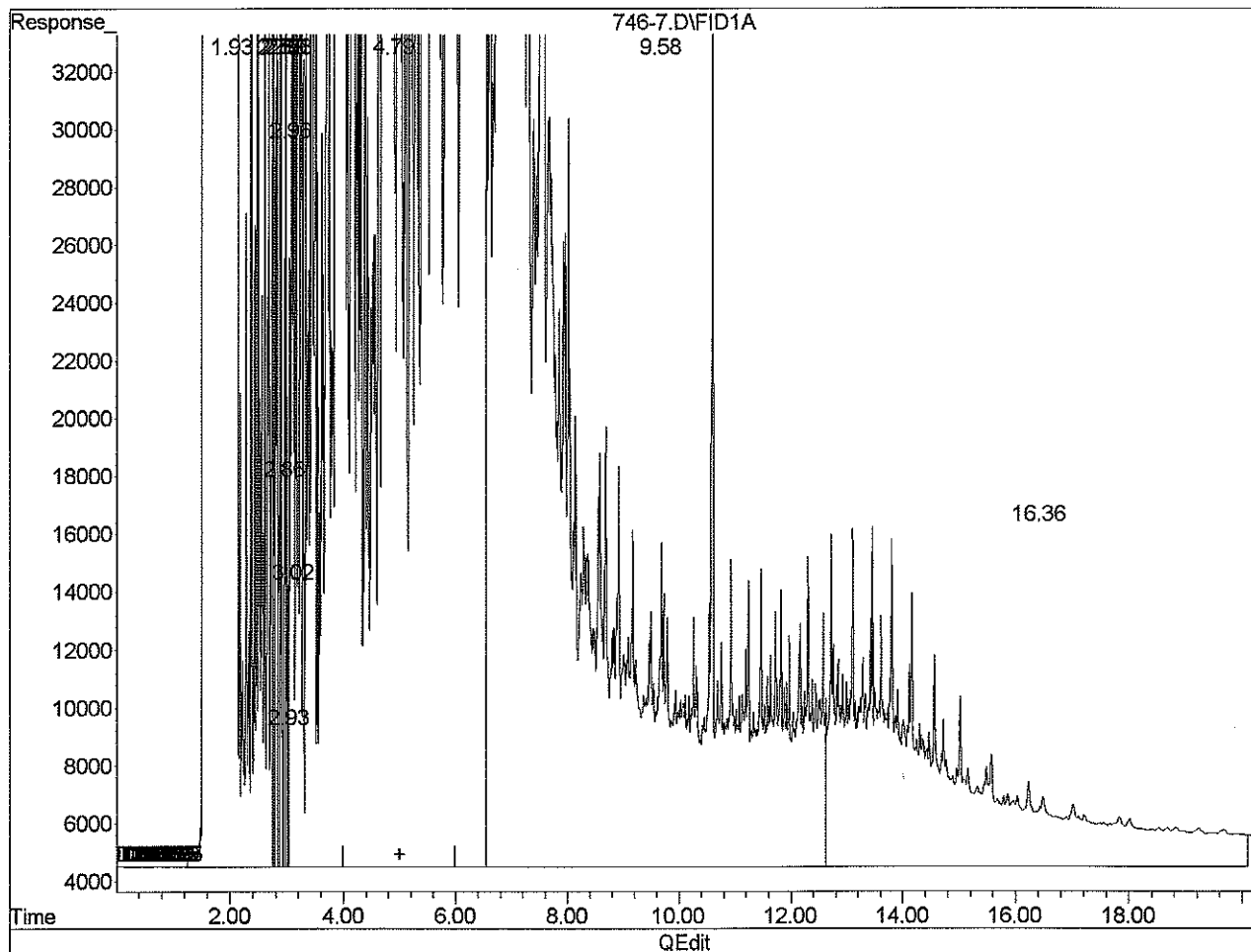
Data File : C:\HPCHEM\1\DATA\990808\746-7.D  
Acq On : 8-8-1999 17:43:03  
Sample : hcid h2o  
Misc :

Vial: 6  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E

Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)

5.00min 14247.862ppm m

response 411652889

(+) = Expected Retention Time

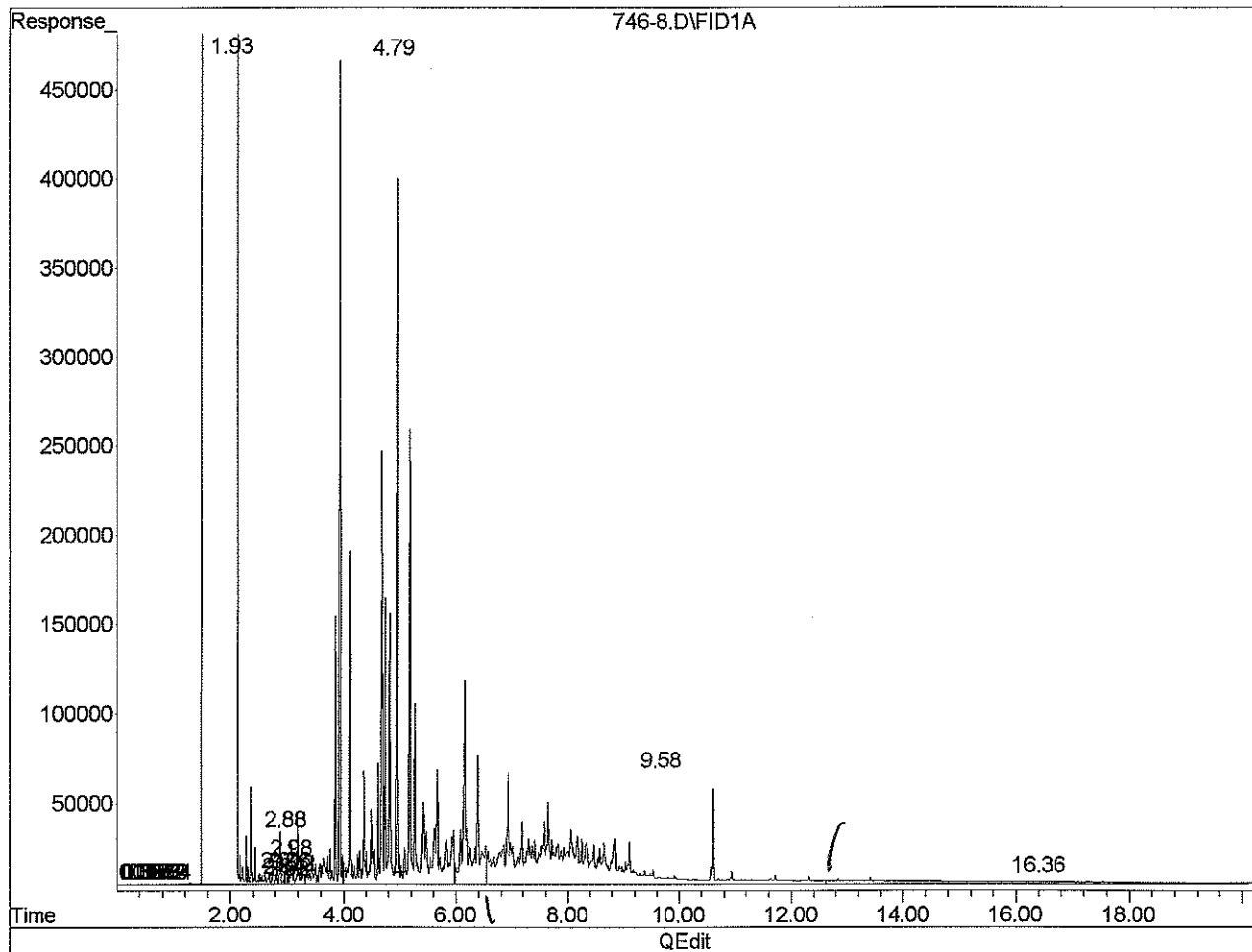
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-8.D  
Acq On : 8-8-1999 18:13:19  
Sample : hcid h2o  
Misc :

Vial: 7  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 1701.107ppm m  
response 49148829

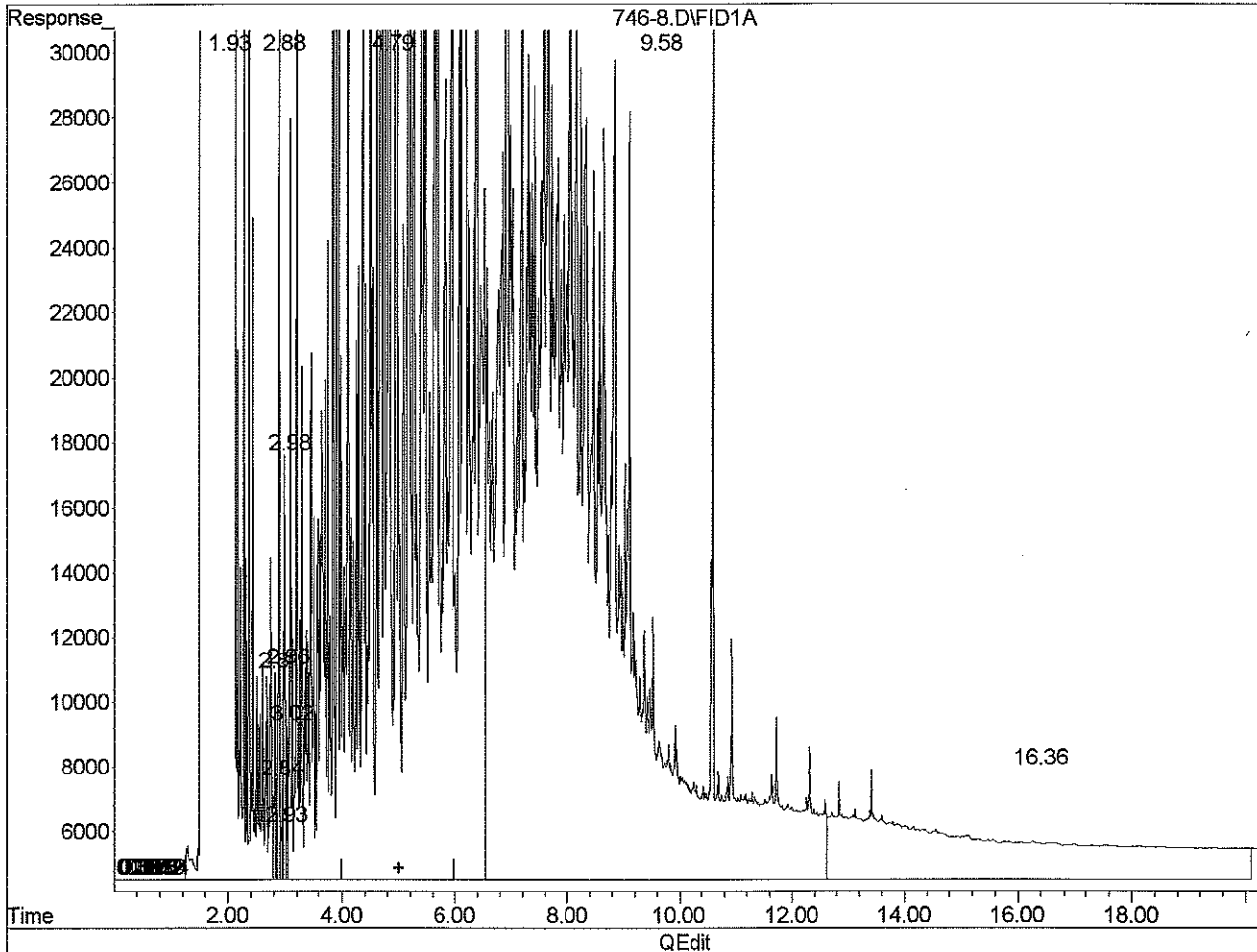
Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-8.D  
Acq On : 8-8-1999 18:13:19  
Sample : hcid h2o  
Misc :

Vial: 7  
Operator: DPM  
Inst : GC/FID I  
Multiplr: 1.00  
Sample Amount: 0.00

IntFile : EVENTSA.E  
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Method : C:\ENVDEMO\GCMETHOD\W-ID0808.M (Chemstation Integrator)  
Title : GC TPH Method  
Last Update : Mon Aug 09 07:18:43 1999  
Response via : Multiple Level Calibration



(2) GASOLINE (H)  
5.00min 1701.107ppm m  
response 49148829



Project: Port Orchard Fred Meyer  
Project No.: 9-91M-12933-0  
Project Manager: John Kuiper  
Sample Matrix: Water

Service Request No.: OR990746  
Report Date: 8/10/99  
Report No.: 99074607  
C.O.C. No.: 5772, 5773

**QC Data Report - Duplicate Summary**  
**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/L(ppm)**

<b>Sample Name:</b>	BH24-16W	Sample
<b>Lab Code:</b>	746-11	Duplicate
Gasoline:	ND	ND
Diesel:	ND	ND
Heavy Oil:	ND	ND

**Control Limits:** ~ ~

<b>Sample Date:</b>	7/30/99	7/30/99
<b>Extraction Date:</b>	8/4/99	8/4/99
<b>Analysis Date:</b>	8/8/99	8/8/99

<b>Surrogate Recovery:</b>		
4-Bromofluorobenzene:	67%	41%(a)
O-Terphenyl:	95%	94%

ND Not Detected

(a) Outside of acceptance limits due to matrix effects.  
An unbreakable emulsion formed during sample preparation.

*Dan Hines for Pat Marshall*

Signature of Chemist

QA/QC Review



August 17, 1999

AGRA Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8025

**Attention: John Kuiper**

Dear Mr. Kuiper:

RE: Analytical Results For Project 9-91M-10282-0

Attached are the results for the samples submitted on July 30, 1999 from the above referenced project. For your reference, our project number associated with these samples is OR990746.

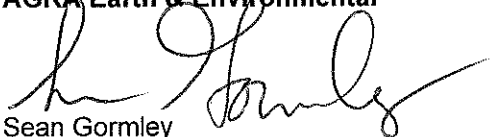
The samples were analyzed at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**



Sean Gormley  
Laboratory Manager

Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request NO.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074601a  
 C.O.C. No.: 5772/5773

**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B and WDOE/ODEQ Method NWTPH-Gx**  
 µg/L(ppb)

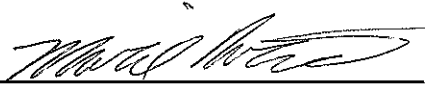
Sample Name: Lab Code:	(a)							Method Reporting Limit
	BH20- 31W 0746-1	BH20A- 24W 0746-2	BH21- 25W 0746-3	BH22- 28W 0746-4	VP3-23W 0746-5	VP6-18W 0746-6	VP1-23W 0746-7	
Gasoline:	256	78,000	ND	1410	ND	ND	47,000(b)	50.0
Benzene:	15.0	200	ND	ND	ND	ND	ND	0.50
Toluene:	10.8	8700(c)	ND	1.44	ND	ND	16.2	0.50
Ethylbenzene:	4.49	2400	ND	6.14	ND	ND	2100(b)	0.50
Total Xylenes:	13.5	14,000	ND	22.3	ND	ND	9400(b)	1.50
Sample Date:	07/27/99	07/27/99	07/27/99	07/27/99	07/28/99	07/28/99	07/28/99	
Analysis Date:	08/02/99	08/03/99	08/03/99	08/03/99	08/03/99	08/03/99	08/03/99	


Surrogate Recovery:								Control Limits
Gasoline Analysis(FID):	104%	104%	102%	136%	101%	101%	(d)	66%-144%
BTEX Analysis(PID):	98%	98%	91%	105%	93%	94%	(d)	61%-130%

Surrogate Recovery:								Control Limits	
Gasoline Analysis(FID):	(1:25 dilution)							106%	66%-144%
BTEX Analysis(PID):								99%	61%-130%

ND Not Detected

- (a) Results are from a 1:50 dilution.
- (b) Result is from a 1:25 dilution.
- (c) Estimated value because the analyte concentration was above the instrument calibration range, and no sample remained for reanalysis.
- (d) Not applicable due to the presence of chromatographic peaks from target and nontarget compounds which prevented determination of the surrogate.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request NO.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074601b  
 C.O.C. No.: 5772/5773

**Gasoline Range Petroleum Hydrocarbons & BTEX  
 EPA Methods 5030/8021B and WDOE/ODEQ Method NWTPH-Gx  
 µg/L(ppb)**

Sample Name:	VP2-22W	VP4-21W	BH23- 36W	BH24- 16W	BH25- 22W	Trip Blank	Lab Blank	Method Reporting Limit
Lab Code:	0746-8	0746-9	0746-10	0746-11	0746-12	0746-13	0746-MB <sub>1</sub>	
Gasoline:	8200(a)(b)	60.2	ND	ND	ND	ND	ND	50.0
Benzene:	ND	ND	ND	ND	ND	ND	ND	0.50
Toluene:	5.35	ND	ND	ND	ND	ND	ND	0.50
Ethylbenzene:	110(a)	0.56	ND	ND	ND	ND	ND	0.50
Total Xylenes:	630(a)	2.18	ND	ND	ND	ND	ND	1.50
Sample Date:	07/28/99	07/29/99	07/29/99	07/29/99	07/29/99	07/27/99	08/02/99	
Analysis Date:	08/03/99	08/03/99	08/03/99	08/03/99	08/03/99	08/02/99	08/02/99	

Surrogate Recovery:								Control Limits
Gasoline Analysis(FID):	(c)	101%	102%	101%	101%	101%	102%	66%-144%
BTEX Analysis(PID):	114%	80%	86%	91%	93%	94%	96%	61%-130%
Surrogate Recovery: (1:2 dilution)								Control Limits
Gasoline Analysis(FID):	137%							66%-144%
BTEX Analysis(PID):	106%							61%-130%

ND Not Detected

- (a) Result is from a 1:2 dilution.
- (b) Estimated value because the analyte concentration was above the instrument calibration range, and no sample remained for reanalysis.
- (c) Not applicable due to the presence of chromatographic peaks from target and nontarget compounds which prevented determination of the surrogate.

  
 Signature of Chemist

QA/QC Review



Project: Port Orchard Fred Meyer  
Project No.: 9-61M-10282-0  
Project Manager: John Kuiper  
Sample Matrix: Water

Service Request NO.: OR990746  
Report Date: 08/04/99  
Report No.: 99074601c  
C.O.C. No.: 5772/5773

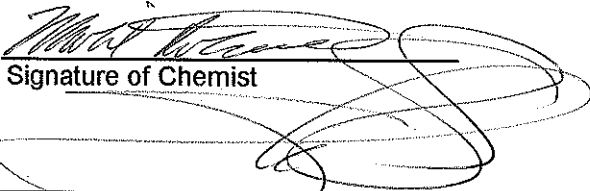
**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B and WDOE/ODEQ Method NWTPH-Gx**  
**µg/L(ppb)**

Sample Name:	Lab Blank	Method Reporting
Lab Code:	0746-MB <sub>2</sub>	Limit
Gasoline:	ND	50.0
Benzene:	ND	0.50
Toluene:	ND	0.50
Ethylbenzene:	ND	0.50
Total Xylenes:	ND	1.50

Sample Date: 08/03/99  
Analysis Date: 08/03/99

Surrogate Recovery:		Control Limits
Gasoline Analysis(FID):	102%	66%-144%
BTEX Analysis(PID):	92%	61%-130%

ND Not Detected

  
Signature of Chemist

QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074602  
 C.O.C. No.: 5772/5773

**QC Data Report**  
**Blank Spike Recoveries**  
**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B & WDOE/ODEQ Method NWTPH-G**  
**ug/L(ppb)**

Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference	Control Limits
Gasoline:	<50.0	1000	1000	100	982	98	2	74%-109%
Benzene:	<0.50	20.0	18.8	94	19.6	98	4	72%-129%
Toluene:	<0.50	20.0	19.6	98	20.3	102	4	74%-124%
Ethylbenzene:	<0.50	20.0	19.5	98	20.1	100	3	71%-126%
Total Xylenes:	<1.50	60.0	63.1	105	65.0	108	3	77%-125%


**Sample Date:** 08/02/99 ~ 08/02/99 ~ 08/02/99 ~ ~  
**Analysis Date:** 08/02/99 ~ 08/02/99 ~ 08/02/99 ~ ~

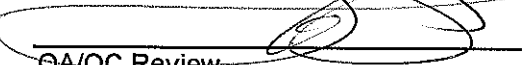
**Surrogate Recovery (a,a,a-Trifluorotoluene):**

	Recovery	Control Limits
Gasoline Analysis(FID):	102%	66% - 144%
BTEX Analysis(PID):	96%	61% - 130%

ND Not Detected

**Spike Source:** Ultra Scientific RGO-601, Lot # M-0910  
**Spike Source:** Accustandard WA-VPH Lot # A7060438

  
 Signature of Chemist

  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074603  
 C.O.C. No.: 5772/5773

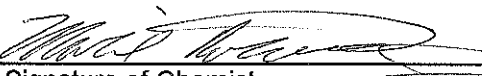
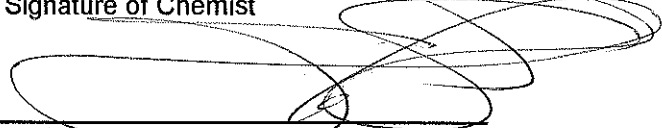
**QC Data Report**  
**Blank Spike Recoveries**  
**Gasoline Range Petroleum Hydrocarbons & BTEX**  
**EPA Methods 5030/8021B & WDOE/ODEQ Method NWTPH-G**  
 ug/L(ppb)

Sample Name:	Lab Blank	Spike Level	Blank Spike	Percent Recovery	Blank Spike Duplicate	Percent Recovery	Relative Percent Difference	Control Limits
Lab Code:	0746-MB <sub>2</sub>	(ug/L)	(BS)	(BS)	(BSD)	(BSD)		
Gasoline:	<50.0	1000	958	96	933	93	3	74%-109%
Benzene:	<0.50	20.0	18.4	92	17.4	87	6	72%-129%
Toluene:	<0.50	20.0	19.4	97	19.0	95	2	74%-124%
Ethylbenzene:	<0.50	20.0	19.9	100	19.6	98	2	71%-126%
Total Xylenes:	<1.50	60.0	64.6	108	64.7	108	<1	77%-125%

Sample Date: 08/03/99 ~ 08/03/99 ~ 08/03/99 ~ ~  
 Analysis Date: 08/03/99 ~ 08/03/99 ~ 08/03/99 ~ ~

Surrogate Recovery (a,a,a-Trifluorotoluene):							Control Limits
Gasoline Analysis(FID):	102%	~	111%	~	111%	~	66% - 144%
BTEX Analysis(PID):	92%	~	95%	~	91%	~	61% - 130%

ND Not Detected  
 Spike Source: Ultra Scientific RGO-601, Lot # M-0910  
 Spike Source: Accustandard WA-VPH Lot # A7060438

  
 Signature of Chemist  
  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

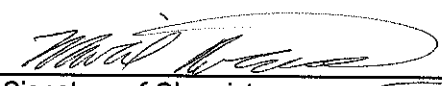
Service Request No.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074604  
 C.O.C. No.: 5772/5773

**QC Data Report  
 Matrix Spike Recoveries  
 BTEX Compounds  
 EPA Methods 5030/8021B  
 ug/L (ppb)**

Sample Name:	Batch QC	Spike Level (ug/L)	Matrix Spike (MS)	Percent Recovery (MS)	Matrix Spike Duplicate (DMS)	Percent Recovery (DMS)	AEE Acceptance Limits	Relative Percent Difference (RPD)
Lab Code:	0743-1							
Benzene	<0.50	20.0	19.7	98	19.3	96	44%-162%	2
Toluene	<0.50	20.0	20.4	102	20.1	100	62%-139%	1
Ethylbenzene	<0.50	20.0	20.6	103	20.2	101	49%-146%	2
Total Xylenes	<1.50	60.0	65.8	110	64.6	108	46%-143%	2
Sample Date:	07/27/99	~	07/27/99	~	07/27/99	~	~	
Analysis Date:	08/02/99	~	08/02/99	~	08/02/99	~	~	

Surrogate Recovery:							Control Limits
a,a,a-Trifluorotoluene:	96%	~	96%	~	96%	~	61% - 130%
4-Bromofluorobenzene:	95%	~	94%	~	95%	~	72% - 120%

Spike Source: Accustandard WA-VPH Lot # A7060438.

  
 Signature of Chemist

  
 QA/QC Review





Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/04/99  
 Report No.: 99074605  
 C.O.C. No.: 5772/5773

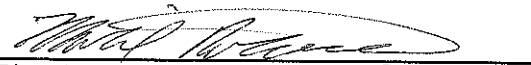
**QC Data Report**  
**Matrix Spike Recoveries**  
**BTEX Compounds**  
**EPA Methods 5030/8021B**  
**ug/L (ppb)**

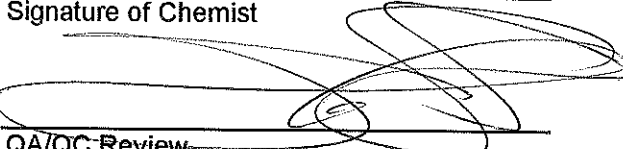
Sample Name:	Batch QC	Spike Level (ug/L)	Matrix Spike (MS)	Percent Recovery (MS)	Matrix Spike Duplicate (DMS)	Percent Recovery (DMS)	AEE Acceptance Limits	Relative Percent Difference (RPD)
Lab Code:	748-9							
Benzene	<0.50	20.0	17.6	88	17.4	87	44%-162%	1
Toluene	<0.50	20.0	18.7	94	17.8	89	62%-139%	5
Ethylbenzene	<0.50	20.0	19.0	95	18.0	90	49%-146%	5
Total Xylenes	<1.50	60.0	61.3	102	54.7	91	46%-143%	11
Sample Date:	07/28/99	~	07/28/99	~	07/28/99	~	~	
Analysis Date:	08/03/99	~	08/03/99	~	08/03/99	~	~	

Surrogate Recovery:							Control Limits
a,a,a-Trifluorotoluene:	92%	~	94%	~	95%	~	61% - 130%
4-Bromofluorobenzene:	94%	~	93%	~	93%	~	72% - 120%

ND Not Detected

Spike Source: Accustandard WA-VPH Lot # A7060438.

  
 Signature of Chemist

  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/10/99  
 Report No.: 99074606  
 C.O.C. No.: 5772, 5773

**Hydrocarbon Identification Scan  
 NWTPH-HCID  
 mg/L (ppm)**

Sample Name:	BH20A-24W	BH21-25W	BH22-28W	VP3-23W	VP6-182	Reporting Limit
Lab Code:	746-2	746-3	746-4	746-5	746-6	
(C7-C12)						
Gasoline Range	Positive ID	ND	Positive ID	ND	ND	0.25
(>C12-C24)						
Diesel Range	Present (a)	ND	ND	ND	ND	0.50
(>C24)						
Fuel Oil Range	Present (b)	ND	ND	ND	ND	0.50
Sample Date:	07/27/99	07/27/99	07/27/99	07/28/99	07/28/99	
Extraction Date:	08/06/99	08/06/99	08/06/99	08/06/99	08/06/99	
Analysis Date:	08/08/99	08/08/99	08/08/99	08/08/99	08/08/99	
Surrogate Recovery:						Control Limits
4-Bromofluorobenzene:	(c)	50%	62%	44%(d)	60%	50%-150%
O-Terphenyl:	84%	89%	92%	82%	97%	50%-150%

ND Not Detected

- (a) Peaks were present in the diesel range, but the chromatographic evidence suggests that gasoline range petroleum hydrocarbons are eluting within the diesel range.
- (b) Peaks were present in the fuel oil range, but the chromatographic evidence suggests that diesel range petroleum hydrocarbons are eluting within the fuel oil range.
- (c) Outside of acceptance limits due to the presence of interfering chromatographic peaks from elevated concentrations of target compounds.
- (d) Outside of acceptance limits due to matrix effects. An unbreakable emulsion formed during sample preparation.

*Van Hines for Pat Marshall*  
 Signature of Chemist

QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/10/99  
 Report No.: 99074606  
 C.O.C. No.: 5772, 5773

**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/L (ppm)**

Sample Name:	VP1-23W	VP2-22W	VP4-21W	(a) BH23-36W	BH24-16W	Reporting Limit
Lab Code:	746-7	746-8	746-9	746-10	746-11	
(C7-C12)						
Gasoline Range	Positive ID	Positive ID	ND	<0.50	ND	0.25
(>C12-C24)						
Diesel Range	Present (b)	Present (c)	ND	<1.0	ND	0.50
(>C24)						
Fuel Oil Range	Present (d)	ND	ND	<1.0	ND	0.50
Sample Date:	07/28/99	07/28/99	07/29/99	07/29/99	07/29/99	
Extraction Date:	08/06/99	08/06/99	08/06/99	08/06/99	08/06/99	
Analysis Date:	08/08/99	08/08/99	08/08/99	08/08/99	08/08/99	
Surrogate Recovery:						<b>Control Limits</b>
4-Bromofluorobenzene:	(e)	55%	55%	74%	67%	50%-150%
O-Terphenyl:	79%	78%	89%	100%	95%	50%-150%

ND Not Detected

- (a) Method reporting limits are elevated because the sample had a low percent solids.
- (b) Peaks were present in the diesel range, but the chromatographic evidence suggests that gasoline range petroleum hydrocarbons are eluting within the diesel range.
- (c) Peaks were present in the diesel range, but the chromatographic pattern does not match that of the standard.
- (d) Peaks were present in the fuel oil range, but the chromatographic evidence suggests that diesel range petroleum hydrocarbons are eluting within the fuel oil range.
- (e) Outside of acceptance limits due to the presence of interfering chromatographic peaks from elevated concentrations of target compounds.

*Pat Hines for Pat Marshall*  
 Signature of Chemist

QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: John Kuiper  
 Sample Matrix: Water

Service Request No.: OR990746  
 Report Date: 08/10/99  
 Report No.: 99074606  
 C.O.C. No.: 5772, 5773

**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/L (ppm)**

Sample Name:	BH25-22W	Lab Blank	Reporting
Lab Code:	746-12	746-3	Limit
<b>(C7-C12)</b>			
Gasoline Range	ND	ND	0.25
<b>(&gt;C12-C24)</b>			
Diesel Range	ND	ND	0.50
<b>(&gt;C24)</b>			
Fuel Oil Range	ND	ND	0.50
Sample Date:	07/29/99	08/06/99	
Extraction Date:	08/06/99	08/06/99	
Analysis Date:	08/08/99	08/08/99	
<b>Surrogate Recovery:</b>			<b>Control</b>
			<b>Limits</b>
4-Bromofluorobenzene:	74%	79%	50%-150%
O-Terphenyl:	99%	120%	50%-150%

ND Not Detected

- (a) Peaks were present in the diesel range, but the chromatographic evidence suggests that gasoline range petroleum hydrocarbons are eluting within the diesel range.
- (b) Peaks were present in the fuel oil range, but the chromatographic evidence suggests that diesel range petroleum hydrocarbons are eluting within the fuel oil range.
- (c) Outside of acceptance limits due to the presence of interfering chromatographic peaks from elevated concentrations of target compounds.
- (d) Outside of acceptance limits due to matrix effects. An unbreakable emulsion formed during sample preparation.

*Don Hines for Pat Marshall*  
 Signature of Chemist

QA/QC Review



Project: Port Orchard Fred Meyer  
Project No.: 9-61M-10282-0  
Project Manager: John Kuiper  
Sample Matrix: Water

Service Request No.: OR990746  
Report Date: 08/10/99  
Report No.: 99074607  
C.O.C. No.: 5772, 5773

**QC Data Report - Duplicate Summary**  
**Hydrocarbon Identification Scan**  
**NWTPH-HCID**  
**mg/L(ppm)**

<b>Sample Name:</b>	BH24-16W	Sample
<b>Lab Code:</b>	746-11	Duplicate
Gasoline:	ND	ND
Diesel:	ND	ND
Heavy Oil:	ND	ND

**Control Limits:** ~ ~

<b>Sample Date:</b>	07/30/99	07/30/99
<b>Extraction Date:</b>	08/06/99	08/06/99
<b>Analysis Date:</b>	08/08/99	08/08/99

<b>Surrogate Recovery:</b>		
4-Bromofluorobenzene:	67%	41%(a)
O-Terphenyl:	95%	94%

ND Not Detected

(a) Outside of acceptance limits due to matrix effects.  
An unbreakable emulsion formed during sample preparation.

*Don Hines for Pat Marshall*  
Signature of Chemist

QA/QC Review



March 14, 2000

AGRA Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8024

**Attention: Paul Stull**

Dear Mr. Stull:

RE: Analytical Results for Project 9-61M-10282-0

Attached are the results for the samples submitted on March 3, 2000 from the above referenced project. For your reference, our project number associated with these samples is OR000126.

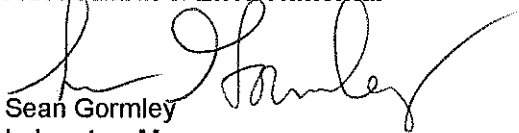
The samples were analyzed at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**

  
Sean Gormley  
Laboratory Manager

Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000126  
 Report Date: 03/09/00  
 Report No.: 00012601  
 C.O.C. No.: 6080

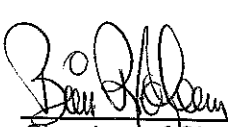
**BTEX Compounds & MTBE & EDC & EDB**  
**EPA Methods 5030B/8260B**  
 µg/L(ppb)

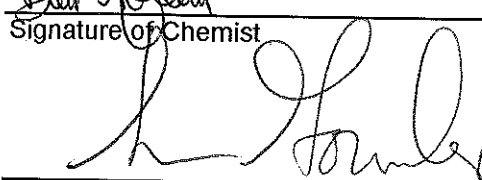
Sample Name: Lab Code:	(a)						Reporting Limit
	MW-106 126-1	MW-107 126-2	MW-108 126-3	MW-105 126-4	MW-103 126-5	Lab Blank 126-MB	
Benzene	ND	ND	ND	ND	<20	ND	1.0
Toluene	ND	ND	ND	ND	450	ND	1.0
Ethylbenzene	ND	ND	ND	ND	1200	ND	1.0
m/p-Xylene	ND	ND	ND	ND	6400	ND	2.0
o-Xylene	ND	ND	ND	ND	1500	ND	1.0
MTBE	ND	ND	ND	ND	<20	ND	1.0
EDC	ND	ND	ND	ND	<20	ND	1.0
EDB	ND	ND	ND	ND	<20	ND	1.0
<b>Sample Date:</b>	03/01/00	03/01/00	03/01/00	03/01/00	03/01/00	03/08/00	
<b>Analysis Date:</b>	03/08/00	03/08/00	03/08/00	03/08/00	03/08/00	03/08/00	

Surrogate Recovery:							Control Limits
Dibromofluoromethane:	103%	102%	105%	103%	104%	100%	81%-115%
Toluene-d <sub>8</sub> :	98%	99%	100%	99%	101%	98%	88%-106%
4-Bromofluorobenzene:	104%	102%	100%	101%	100%	104%	88%-111%

ND Not Detected

(a) Results are from a 1:20 dilution. Note elevated reporting limits.

  
 Signature of Chemist

  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000126  
 Report Date: 03/09/00  
 Report No.: 00012602  
 C.O.C. No.: 6080

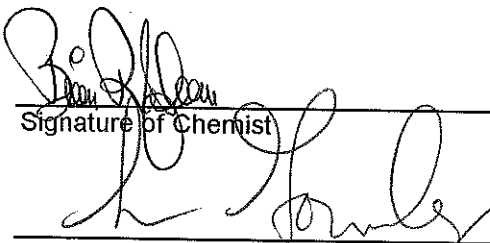
**QC Data Report**  
**MS/MSD Summary**  
**Volatile Organic Compounds by GC/MSD**  
**EPA Methods 5030B/8260B**  
 µg/L(ppb)

Sample Name:	Batch QC	Spike Level (µg/L)	Matrix Spike	Percent Recovery (MS)	Matrix Spike Duplicate	Percent Recovery (MSD)	% Recovery Control Criteria	Relative Percent Difference (RPD)
1,1 - Dichloroethene	<1.0	50.0	56.9	114	54.4	109	84% - 136%	4
Benzene	<1.0	50.0	52.4	105	53.1	106	92% - 112%	1
Trichloroethene	<1.0	50.0	49.2	98	48.8	98	86% - 116%	<1
Toluene	<1.0	50.0	51.5	103	51.4	103	79% - 116%	<1
Chlorobenzene	<1.0	50.0	52.7	105	54.4	109	90% - 111%	3
<b>Sample Date:</b>	02/29/00	~	02/29/00	~	02/29/00	~		
<b>Analysis Date:</b>	03/08/00	~	03/08/00	~	03/08/00	~		

Surrogate Recovery:						Control Limits
Dibromofluoromethane:	103%	~	102%	~	99%	~ 81%-115%
Toluene-d <sub>8</sub> :	99%	~	98%	~	97%	~ 88%-106%
4-Bromofluorobenzene:	101%	~	101%	~	102%	~ 88%-111%

ND Not Detected

Spike Source: Ultra Scientific, CLP-100N, Lot M-1791.

  
 Signature of Chemist

QA/QC Review





Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000126  
 Report Date: 03/10/00  
 Report No.: 00012603  
 C.O.C. No.: 6080


**Total Petroleum Hydrocarbons as Gasoline**  
**WDOE/ODEQ Method NWTPH-Gx**  
**ug/L(ppb)**

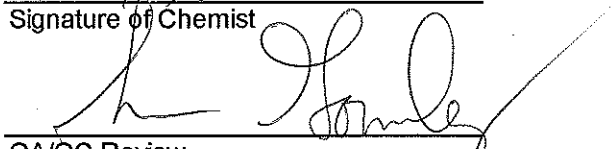
Sample Name	Lab Code	Sample Date	Analysis Date	Method Reporting Limit	Result	Surrogate Rec. a,a,a - TFT
MW-106	126-1	03/01/00	03/08/00	50.0	ND	100
MW-107	126-2	03/01/00	03/08/00	50.0	ND	100
MW-108	126-3	03/01/00	03/08/00	50.0	ND	101
MW-105	126-4	03/01/00	03/09/00	50.0	ND	100
MW-103	126-5	03/01/00	03/09/00	2500(a)	47,000(b)	103
Lab Blank	126-MB1	03/08/00	03/08/00	50.0	ND	99
Lab Blank	126-MB2	03/09/00	03/09/00	50.0	ND	99

ND Not Detected

Control Limits: 80%-122%

- (a) Method reporting limit is elevated because the sample required dilution.
- (b) Result is from a 1:50 dilution.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000126  
 Report Date: 03/10/00  
 Report No.: 00012604  
 C.O.C. No.: 6080


**QC Data Report  
 Blank Spike Recoveries  
 Gasoline Range Organics  
 WDOE/ODEQ Method NWTPH-Gx  
 ug/L(ppb)**

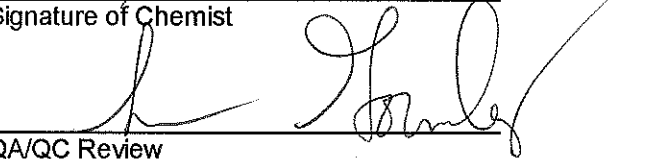
Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Lab Code:	126-MB1						
Gasoline:	<50.0	1000	868	87	903	90	4

<b>AEE Acceptance Limits:</b>	~	~	~	76%-113%	~	76%-113%	<25
<b>Sample Date:</b>	03/08/00	~	03/08/00	~	03/08/00	~	~
<b>Analysis Date:</b>	03/08/00	~	03/08/00	~	03/08/00	~	~
<b>Surrogate Recovery:</b>							<b>Control Limits</b>
a,a,a-Trifluorotoluene:	99%	~	111%	~	112%	~	80%-122%

ND Not Detected

Spike Source: Ultra Scientific RGO-601, Lot # M-1832

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Port Orchard Fred Meyer  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000126  
 Report Date: 03/10/00  
 Report No.: 00012605  
 C.O.C. No.: 6080

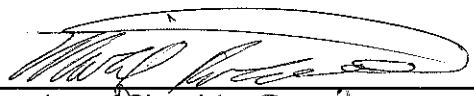
**QC Data Report**  
**Blank Spike Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**ug/L(ppb)**

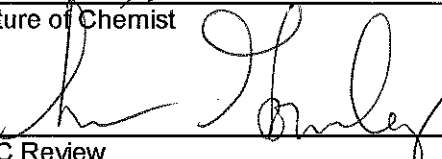
Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Lab Code:	126-MB2						
Gasoline:	<50.0	1000	890	89	918	92	3

<b>AEE Acceptance Limits:</b>	~	~	~	76%-113%	~	76%-113%	<25
<b>Sample Date:</b>	03/09/00	~	03/09/00	~	03/09/00	~	~
<b>Analysis Date:</b>	03/09/00	~	03/09/00	~	03/09/00	~	~
<b>Surrogate Recovery:</b>							<b>Control Limits</b>
a,a,a-Trifluorotoluene:	99%	~	112%	~	112%	~	80%-122%

ND Not Detected

Spike Source: Ultra Scientific RGO-601, Lot # M-1832

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Port Orchard Fred Meyer  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

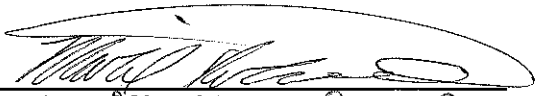
Service Request No.: OR000126  
Report Date: 03/10/00  
Report No.: 00012606  
C.O.C. No.: 6080

**QC Data Report**  
**Duplicate Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**µg/L(ppb)**

Sample Name:	MW-106	Duplicate Sample	Relative Percent
Lab Code:	126-1	(µg/L)	Difference
Gasoline:	<50.0	<50.0	(a)
<b>Acceptance Limits:</b>	~	~	<25
<b>Sample Date:</b>	03/01/00	03/01/00	~
<b>Analysis Date:</b>	03/08/00	03/08/00	
<b>Surrogate Recovery:</b>			<b>Control Limits</b>
a,a,a-Trifluorotoluene:	100%	102%	80%-122%

ND Not Detected

(a) Not applicable when sample concentration is less than the method reporting limit.

  
Signature of Chemist

  
QA/QC Review





**AGRA Earth &  
Environmental, Inc.**  
7477 SW Tech Center Drive  
Portland, Oregon  
USA 97223-8025  
Tel (503) 639-3400  
Fax (503) 620-7892

June 2, 2000

AGRA Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8024

**Attention: Paul Stull**

Dear Mr. Stull:

RE: Analytical Results for Project 9-61M-10282-0

Attached are the results for the samples submitted on May 25, 2000 from the above referenced project. For your reference, our project number associated with these samples is OR000303.

The samples were analyzed at the AGRA Earth & Environmental Portland Chemistry Laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AGRA Earth & Environmental**

Sean Gormley  
Laboratory Manager



Project: Fred Meyer - Port Orchard  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

Service Request No.: OR000303  
Report Date: 06/01/00  
Report No.: 00030301  
C.O.C. No.: 3204

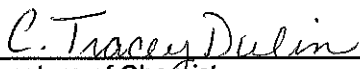
**Total Petroleum Hydrocarbons as Gasoline**  
**WDOE/ODEQ Method NWTPH-Gx**  
**ug/L(ppb)**

Sample Name	Lab Code	Sample Date	Analysis Date	Method Reporting Limit	Result	Surrogate Rec. a,a,a - TFT
MW-103	303-1	05/24/00	05/30/00	250(a)	3900(b)	98%
Lab Blank	303-MB	05/30/00	05/30/00	50.0	ND	96%

Control Limits: 80%-122%

ND Not Detected

- (a) Method reporting limit is elevated because the sample required dilution.
- (b) Result is from a 1:5 dilution.

  
Signature of Chemist

  
QA/QC Review



Project: Fred Meyer - Port Orchard  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

Service Request No.: OR000303  
Report Date: 06/01/00  
Report No.: 00030302  
C.O.C. No.: 3204

**QC Data Report**  
**Duplicate Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**µg/L(ppb)**

Sample Name:	MW-103	Duplicate Sample	Relative Percent
Lab Code:	303-1	(µg/L)	Difference
Gasoline:	3900(a)	3900(a)	<1
<b>Acceptance Limits:</b>	~	~	<25
<b>Sample Date:</b>	05/24/00	05/24/00	~
<b>Analysis Date:</b>	05/30/00	05/30/00	
<b>Surrogate Recovery:</b>			<b>Control Limits</b>
a,a,a-Trifluorotoluene:	98%	98%	80%-122%

ND Not Detected

(a) Result is from a 1:5 dilution.

*C. Tracey Dalin*  
\_\_\_\_\_  
Signature of Chemist

*[Signature]*  
\_\_\_\_\_  
QA/QC Review



Project: Fred Meyer - Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000303  
 Report Date: 06/01/00  
 Report No.: 00030303  
 C.O.C. No.: 3204

**QC Data Report  
 Blank Spike Recoveries  
 Gasoline Range Organics  
 WDOE/ODEQ Method NWTPH-Gx  
 ug/L(ppb)**

Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Lab Code:	303-MB						
Gasoline:	<50	1000	956	96	910	91	5%
<b>AEE Acceptance Limits:</b>	~	~	~	76%-113%	~	76%-113%	<25
<b>Sample Date:</b>	05/30/00	~	05/30/00	~	05/30/00	~	~
<b>Analysis Date:</b>	05/30/00	~	05/30/00	~	05/30/00	~	~
<b>Surrogate Recovery:</b>							<b>Control Limits</b>
a,a,a-Trifluorotoluene:	96%	~	108%	~	107%	~	80%-122%

ND Not Detected

Spike Source: Ultra Scientific RGO-601, Lot # M-1832

*C. Tracy Dalin*  
 Signature of Chemist

QA/QC Review






Project: Fred Meyer - Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water


Service Request No.: OR000303  
 Report Date: 06/01/00  
 Report No.: 00030304  
 C.O.C. No.: 3204

**BTEX Compounds, MTBE, EDC, EDB,  
 Naphthalene, & Alkylbenzenes  
 EPA Methods 5030B/8260B  
 µg/L(ppb)**

Sample Name: Lab Code:	MW-103 303-1	Lab Blank 303-MB	Reporting Limit
Benzene	ND	ND	1.0
Toluene	18.3	ND	1.0
Ethylbenzene	33.2	ND	1.0
m/p-Xylene	345	ND	2.0
o-Xylene	249	ND	1.0
MTBE	ND	ND	1.0
EDC	ND	ND	1.0
EDB	ND	ND	1.0
Isopropylbenzene	2.05	ND	1.0
n-Propylbenzene	4.79	ND	1.0
1,3,5-Trimethylbenzene	93.6	ND	1.0
tert-Butylbenzene	ND	ND	1.0
1,2,4-Trimethylbenzene	137	ND	1.0
sec-Butylbenzene	ND	ND	1.0
4-Isopropyltoluene	1.54	ND	1.0
n-Butylbenzene	ND	ND	1.0
Naphthalene	31.2	ND	25
<b>Sample Date:</b>	05/24/00	05/31/00	
<b>Analysis Date:</b>	05/31/00	05/31/00	
<b>Surrogate Recovery:</b>			<b>Control Limits</b>
Dibromofluoromethane:	101%	101%	81%-115%
Toluene-d <sub>8</sub> :	101%	99%	88%-106%
4-Bromofluorobenzene:	98%	101%	88%-111%

ND Not Detected

  
 Signature of Chemist

  
 QA/QC Review



Project: Fred Meyer - Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000303  
 Report Date: 06/01/00  
 Report No.: 00030305  
 C.O.C. No.: 3204

**QC Data Report**  
**MS/MSD Summary**  
**Volatile Organic Compounds by GC/MSD**  
**EPA Methods 5030B/8260B**  
**µg/L(ppb)**

Sample Name:	Batch QC	Spike Level	Matrix Spike	Percent Recovery	Matrix Spike Duplicate	Percent Recovery	% Recovery Control Criteria	Relative Percent Difference (RPD)
Lab Code:	306-1	(µg/L)	Spike	(MS)	Duplicate	(MSD)		(RPD)
1,1 - Dichloroethene	<1.0	50.0	60.8	122	61.3	123	84% - 136%	<1
Benzene	<1.0	50.0	53.5	107	54.0	108	92% - 112%	<1
Trichloroethene	<1.0	50.0	50.3	101	50.0	100	86% - 116%	<1
Toluene	<1.0	50.0	52.7	105	53.0	106	79% - 116%	<1
Chlorobenzene	<1.0	50.0	52.2	104	53.2	106	90% - 111%	2
<b>Sample Date:</b>	05/25/00	~	05/25/00	~	05/25/00	~		
<b>Analysis Date:</b>	05/31/00	~	05/31/00	~	05/31/00	~		

Surrogate Recovery:							Control Limits
Dibromofluoromethane:	100%	~	102%	~	103%	~	81%-115%
Toluene-d <sub>8</sub> :	99%	~	99%	~	100%	~	88%-106%
4-Bromofluorobenzene:	99%	~	98%	~	97%	~	88%-111%

ND Not Detected

Spike Source: Ultra Scientific, CLP-100N, Lot M-1791.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



**AGRA Earth & Environmental Portland Chemistry Laboratory  
Sample Receipt Documentation Form**

Project: <i>Fred Meyer - Port Orchard</i>	Cooler Temperatures  11.5°C      11.7°C      11.9°C		
SR No.: <i>OR000303</i>			
Date: <i>3/26/00</i>			
Time: <i>9:30</i>			
Temperature of Cooler Upon Receipt (Record to the Right):			
Received By: <i>Sean Samley</i>			

**Section One: Shipping/Delivery Issues**

1. Method of Sample Delivery: <i>NA</i>			
2. Airbill or Courier Receipt Number:			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	Yes	No	<i>NA</i>

**Section Two: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	<i>Yes</i>	No	<i>NA</i>
5. Is a COC or other sample transmittal document present?	<i>Yes</i>	No	NA
6. Is the COC complete?	<i>Yes</i>	No	NA
7. Are the sample seals intact?	<i>Yes</i>	No	NA
8. Does the COC match the samples received?	<i>Yes</i>	No	NA

**Section Three: Sample Integrity Issues**

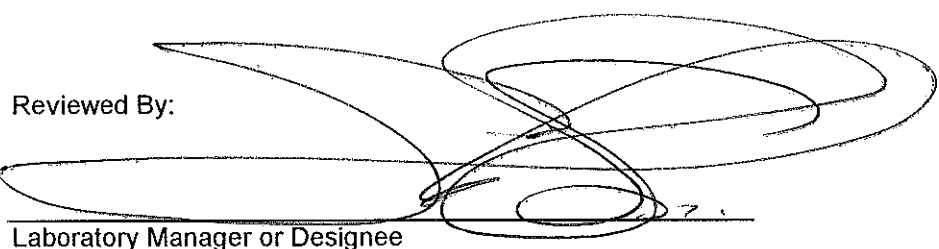
9. Are all sample containers intact and not leaking?	<i>Yes</i>	No	NA
10. Are all samples preserved properly?	<i>Yes</i>	No	NA
11. Are all samples within holding time for the required tests?	<i>Yes</i>	No	NA
12. *Were all samples received at the proper temperature?	Yes	<i>No</i>	NA
13. Are samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	Yes	<i>No</i>	NA

**Section Four: Sample Containers Received:**

14. 4 oz. glass jars:	19. 2oz. amber (MeOH):
15. 8 oz. glass jars:	20. Encore samplers:
16. 40ml VOA vials: <i>3</i>	21. 500ml plastic:
17. 1 liter glass:	22. 1 liter plastic:
18. Other (describe):	

\*Temperatures for: soil and water = 4°C-6°C, MeOH jars = 25°C, air = not required

*13.) Sample 303-1A and 303-1C have pea size bubbles.*

Reviewed By: 

Laboratory Manager or Designee



November 2, 2000

AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8024

**Attention: Paul Stull**

Dear Mr. Stull:

RE: Analytical Results for Project 9-61M-10282-0

Attached are the results for the samples submitted on October 25, 2000 from the above referenced project. For your reference, our project number associated with these samples is OR000601.

The samples were analyzed at the AMEC Environmental Chemistry Laboratory. This report shall not be reproduced, except in its entirety, without written approval of the laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AMEC Earth & Environmental**

A handwritten signature in black ink, appearing to read "Sean Gormley", written over a horizontal line.

Sean Gormley  
Laboratory Manager



Project: Fred Meyer-Port Orchard  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

Service Request No.: OR000601  
Report Date: 10/30/00  
Report No.: 00060101  
C.O.C. No.: 1097

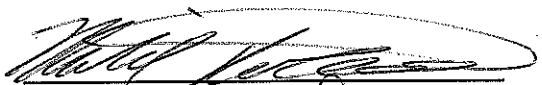
**Total Petroleum Hydrocarbons as Gasoline**  
**WDOE/ODEQ Method NWTPH-Gx**  
**ug/L(ppb)**

Sample Name	Lab Code	Sample Date	Analysis Date	Method Reporting Limit	Result	Surrogate Rec. 4-BFB
MW103	601-3	10/19/00	10/26/00	100(a)	1000(b)	110(c)
MW105	601-4	10/19/00	10/26/00	50.0	ND	100
MW106	601-5	10/20/00	10/26/00	50.0	ND	100
MW107	601-6	10/20/00	10/26/00	50.0	ND	100
MW108	601-7	10/19/00	10/26/00	50.0	ND	100
Lab Blank	601-MB	10/26/00	10/26/00	50.0	ND	101

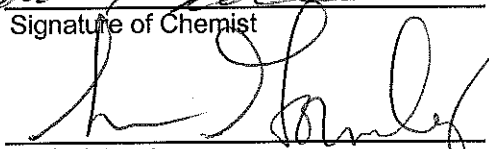
Control Limits: 90%-108%

ND Not Detected

- (a) Method reporting limit is elevated because the sample required dilution.
- (b) Result is from a 1:2 dilution.
- (c) Outside of AEE acceptance limits. Since the recovery is within USEPA method specified guidance limits, it is the opinion of the laboratory that usability of the data has not been adversely affected.



Signature of Chemist



QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water


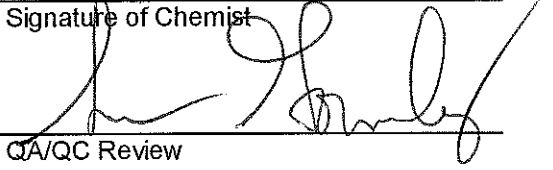
Service Request No.: OR000601  
 Report Date: 10/30/00  
 Report No.: 00060102  
 C.O.C. No.: 1097

**QC Data Report**  
**Blank Spike Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**ug/L(ppb)**

Sample Name:	Lab Blank	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Lab Code:	601-MB						
Gasoline:	<50.0	1000	909	91	938	94	3
<b>AEE Acceptance Limits:</b>	~	~	~	80%-109%	~	80%-109%	<25
<b>Sample Date:</b>	10/26/00	~	10/26/00	~	10/26/00	~	~
<b>Analysis Date:</b>	10/26/00	~	10/26/00	~	10/26/00	~	~
<b>Surrogate Recovery:</b>							<b>Control Limits</b>
4-Bromofluorobenzene:	101%	~	106%	~	107%	~	90%-108%

ND Not Detected

Spike Source: Ultra Scientific RGO-601, Lot # M-1832

  
 Signature of Chemist  
  
 QA/QC Review



Project: Fred Meyer-Port Orchard  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

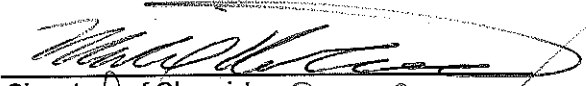
Service Request No.: OR000601  
Report Date: 10/30/00  
Report No.: 00060103  
C.O.C. No.: 1097

**QC Data Report**  
**Duplicate Recoveries**  
**Gasoline Range Organics**  
**WDOE/ODEQ Method NWTPH-Gx**  
**µg/L(ppb)**

Sample Name:	MW105	Duplicate Sample	Relative Percent Difference
Lab Code:	601-4	(µg/L)	
Gasoline:	<50.0	<50.0	(a)
Acceptance Limits:	~	~	<25
Sample Date:	10/19/00	10/19/00	~
Analysis Date:	10/26/00	10/26/00	
Surrogate Recovery:			Control Limits
4-Bromofluorobenzene:	100%	100%	90%-108%

ND Not Detected

(a) Not applicable when sample concentration is less than the method reporting limit.

  
Signature of Chemist

  
QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

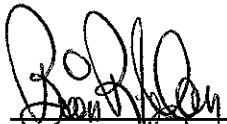
Service Request No.: OR000601  
 Report Date: 11/01/00  
 Report No.: 00060104  
 C.O.C. No.: 1097

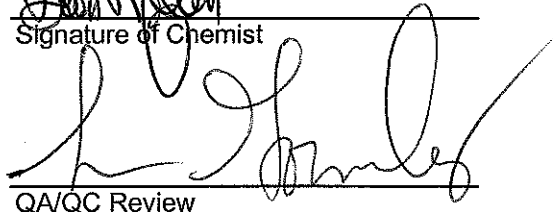
**BTEX Compounds, MTBE, EDC, EDB,  
 Naphthalene, & Alkylbenzenes  
 EPA Methods 5030B/8260B  
 µg/L(ppb)**

Sample Name: Lab Code:	MW103 601-3	MW105 601-4	MW106 601-5	MW107 601-6	MW108 601-7	Lab Blank 601-MB1	Lab Blank 601-MB2	Reporting Limit
Benzene	ND	ND	ND	ND	ND	ND	ND	1.0
Toluene	17.1	ND	ND	ND	ND	ND	ND	1.0
Ethylbenzene	34.0	ND	ND	ND	ND	ND	ND	1.0
m/p-Xylene	215	ND	ND	ND	ND	ND	ND	2.0
o-Xylene	107	ND	ND	ND	ND	ND	ND	1.0
MTBE	ND	ND	ND	ND	ND	ND	ND	1.0
EDC	ND	ND	ND	ND	ND	ND	ND	1.0
EDB	ND	ND	ND	ND	ND	ND	ND	1.0
Isopropylbenzene	1.35	ND	ND	ND	ND	ND	ND	1.0
n-Propylbenzene	3.51	ND	ND	ND	ND	ND	ND	1.0
1,3,5-Trimethylbenzene	27.8	ND	ND	ND	ND	ND	ND	1.0
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	1.0
1,2,4-Trimethylbenzene	98.9	ND	ND	ND	ND	ND	ND	1.0
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	1.0
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	1.0
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	5.0
Naphthalene	38.3	ND	ND	ND	ND	ND	ND	25
<b>Sample Date:</b>	10/19/00	10/19/00	10/20/00	10/20/00	10/19/00	10/26/00	10/31/00	
<b>Analysis Date:</b>	10/26/00	10/26/00	10/31/00	10/31/00	10/31/00	10/26/00	10/31/00	
<b>Surrogate Recovery:</b>								<b>Control Limits</b>
Dibromofluoromethane:	103%	101%	103%	102%	101%	100%	101%	81%-115%
Toluene-d <sub>8</sub> :	102%	100%	99%	101%	100%	101%	99%	88%-106%
4-Bromofluorobenzene:	111%	111%	102%	102%	103%	112%(a)	100%	88%-111%

ND Not Detected

(a) Outside of AEE acceptance limits. Since the recovery is within USEPA method specified guidance limits, it is the opinion of the laboratory that usability of the data has not been adversely affected.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review





Project: Fred Meyer-Port Orchard  
Project No.: 9-61M-10282-0  
Project Manager: Paul Stull  
Sample Matrix: Water

Service Request No.: OR000601  
Report Date: 11/01/00  
Report No.: 00060105  
C.O.C. No.: 1097

**BTEX Compounds & MTBE**  
**EPA Methods 5030B/8260B**  
**µg/L(ppb)**

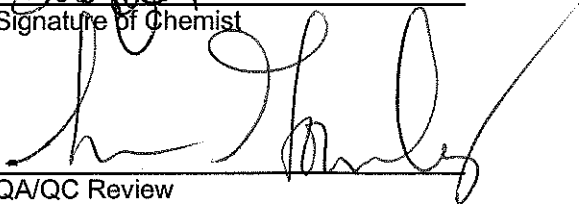
<b>Sample Name:</b>	<b>EB</b>	<b>Lab Blank</b>	<b>Reporting</b>
<b>Lab Code:</b>	<b>601-2</b>	<b>601-MB</b>	<b>Limit</b>
Benzene	ND	ND	1.0
Toluene	ND	ND	1.0
Ethylbenzene	ND	ND	1.0
m/p-Xylene	ND	ND	2.0
o-Xylene	ND	ND	1.0
MTBE	ND	ND	1.0

**Sample Date:** 10/19/00      10/26/00  
**Analysis Date:** 10/31/00      10/31/00

<b>Surrogate Recovery:</b>			<b>Control</b>
			<b>Limits</b>
Dibromofluoromethane:	104%	101%	81%-115%
Toluene-d <sub>8</sub> :	97%	99%	88%-106%
4-Bromofluorobenzene:	101%	100%	88%-111%

ND Not Detected

  
\_\_\_\_\_  
Signature of Chemist

  
\_\_\_\_\_  
QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000601  
 Report Date: 11/01/00  
 Report No.: 00060106  
 C.O.C. No.: 1097

**QC Data Report**  
**BS/BSD Summary**  
**Volatile Organic Compounds by GC/MSD**  
**EPA Methods 5030B/8260B**  
**µg/L(ppb)**


Sample Name:	Lab Blank	Spike Level	Blank Spike	Percent Recovery	Blank Spike Duplicate	Percent Recovery	% Recovery Control Criteria	Relative Percent Difference (RPD)
1,1 - Dichloroethene	<1.0	50.0	58.9	118	57.8	116	88% - 125%	2
Benzene	<1.0	50.0	54.1	108	53.7	107	91% - 115%	<1
Trichloroethene	<1.0	50.0	54.5	109	54.1	108	90% - 111%	<1
Toluene	<1.0	50.0	53.9	108	52.6	105	96% - 111%	2
Chlorobenzene	<1.0	50.0	53.3	107	53.4	107	95% - 110%	<1
<b>Sample Date:</b>	10/26/00	~	10/26/00	~	10/26/00	~		
<b>Analysis Date:</b>	10/26/00	~	10/26/00	~	10/26/00	~		

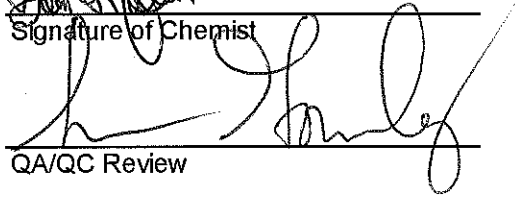
Surrogate Recovery:						Control Limits	
Dibromofluoromethane:	100%	~	101%	~	101%	~	81%-115%
Toluene-d <sub>8</sub> :	101%	~	101%	~	101%	~	88%-106%
4-Bromofluorobenzene:	112%(a)	~	106%	~	106%	~	88%-111%

ND Not Detected

**Spike Source:** Accustandard, M-502, Lot B0010296.  
 Accustandard, S-078, Lot A8100179.  
 Accustandard, AS-E0285, Lot A8120353.  
 Accustandard, M-8260-ADD, Lot B0050106.

(a) Outside of AEE acceptance limits. Since the recovery is above acceptance limits, and there was nothing detected in the sample, it is the opinion of the laboratory that usability of the data has not been adversely affected.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000601  
 Report Date: 11/01/00  
 Report No.: 00060107  
 C.O.C. No.: 1097


**QC Data Report  
 BS/BSD Summary  
 Volatile Organic Compounds by GC/MSD  
 EPA Methods 5030B/8260B  
 µg/L(ppb)**

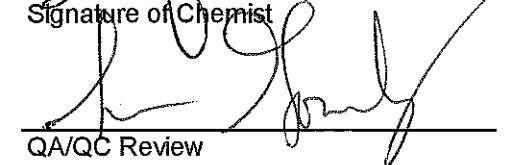
Sample Name:	Lab Blank	Spike Level	Blank Spike	Percent Recovery (BS)	Blank Spike Duplicate	Percent Recovery (BSD)	% Recovery Control Criteria	Relative Percent Difference (RPD)
1,1 - Dichloroethene	<1.0	50.0	56.8	114	58.7	117	88% - 125%	3
Benzene	<1.0	50.0	51.2	102	52.2	104	91% - 115%	2
Trichloroethene	<1.0	50.0	51.2	102	52.3	105	90% - 111%	2
Toluene	<1.0	50.0	50.5	101	51.3	103	96% - 111%	2
Chlorobenzene	<1.0	50.0	52.0	104	53.0	106	95% - 110%	2
<b>Sample Date:</b>	10/31/00	~	10/31/00	~	10/31/00	~		
<b>Analysis Date:</b>	10/31/00	~	10/31/00	~	10/31/00	~		

Surrogate Recovery:							Control Limits
Dibromofluoromethane:	101%	~	101%	~	104%	~	81%-115%
Toluene-d <sub>8</sub> :	99%	~	100%	~	100%	~	88%-106%
4-Bromofluorobenzene:	100%	~	96%	~	99%	~	88%-111%

ND Not Detected

**Spike Source:** Accustandard, M-502, Lot B0010296.  
 Accustandard, S-078, Lot A8100179.  
 Accustandard, AS-E0285, Lot A8120353.  
 Accustandard, M-8260-ADD, Lot B0050106.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000601  
 Report Date: 11/01/00  
 Report No.: 00060108  
 C.O.C. No.: 1097

**QC Data Report**  
**MS/MSD Summary**  
**Volatile Organic Compounds by GC/MSD**  
**EPA Methods 5030B/8260B**  
**µg/L(ppb)**


Sample Name:	MW105	Spike Level	Matrix Spike	Percent Recovery	Matrix Spike Duplicate	Percent Recovery	% Recovery Control Criteria	Relative Percent Difference (RPD)
Lab Code:	601-4	(µg/L)	Spike	(MS)	Duplicate	(MSD)		(RPD)
1,1 - Dichloroethene	<1.0	50.0	53.7	107	54.8	110	84% - 136%	2
Benzene	<1.0	50.0	53.8	108	54.3	109	92% - 112%	<1
Trichloroethene	<1.0	50.0	50.3	101	50.1	100	86% - 116%	<1
Toluene	<1.0	50.0	52.9	106	52.9	106	79% - 116%	<1
Chlorobenzene	<1.0	50.0	52.7	105	52.8	106	90% - 111%	<1
<b>Sample Date:</b>	10/19/00	~	10/19/00	~	10/19/00	~		
<b>Analysis Date:</b>	10/26/00	~	10/26/00	~	10/26/00	~		


Surrogate Recovery:							Control Limits
Dibromofluoromethane:	101%	~	100%	~	99%	~	81%-115%
Toluene-d <sub>8</sub> :	100%	~	101%	~	100%	~	88%-106%
4-Bromofluorobenzene:	111%	~	111%	~	117%(a)	~	88%-111%

ND Not Detected

**Spike Source:** Ultra Scientific, CLP-100N, Lot M-1791.

(a) Outside of AEE acceptance limits. Since the recovery is within USEPA method specified guidance limits, it is the opinion of the laboratory that usability of the data has not been adversely affected.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review



Project: Fred Meyer-Port Orchard  
 Project No.: 9-61M-10282-0  
 Project Manager: Paul Stull  
 Sample Matrix: Water

Service Request No.: OR000601  
 Report Date: 11/01/00  
 Report No.: 00060109  
 C.O.C. No.: 1097


**QC Data Report  
 MS/MSD Summary  
 Volatile Organic Compounds by GC/MSD  
 EPA Methods 5030B/8260B  
 µg/L(ppb)**

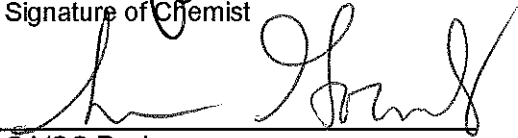
Sample Name:	MW106	Spike Level	Matrix Spike	Percent Recovery (MS)	Matrix Spike Duplicate	Percent Recovery (MSD)	% Recovery Control Criteria	Relative Percent Difference (RPD)
1,1 - Dichloroethene	<1.0	50.0	53.8	108	54.8	110	84% - 136%	2
Benzene	<1.0	50.0	51.4	103	52.7	105	92% - 112%	2
Trichloroethene	<1.0	50.0	48.5	97	49.8	100	86% - 116%	3
Toluene	<1.0	50.0	51.0	102	51.4	103	79% - 116%	<1
Chlorobenzene	<1.0	50.0	52.3	105	51.6	103	90% - 111%	1

**Sample Date:** 10/20/00 ~ 10/20/00 ~ 10/20/00 ~  
**Analysis Date:** 10/31/00 ~ 10/31/00 ~ 10/31/00 ~

Surrogate Recovery:						Control Limits	
Dibromofluoromethane:	103%	~	102%	~	103%	~	81%-115%
Toluene-d <sub>8</sub> :	99%	~	98%	~	100%	~	88%-106%
4-Bromofluorobenzene:	102%	~	102%	~	102%	~	88%-111%

ND Not Detected  
 Spike Source: Ultra Scientific, CLP-100N, Lot M-1791.

  
 \_\_\_\_\_  
 Signature of Chemist

  
 \_\_\_\_\_  
 QA/QC Review

**AMEC Environmental Chemistry Laboratory  
Sample Receipt Documentation Form**

Project: <u>Fred Meyer Port Orchard</u>	Cooler Temperatures  0.0°C                      1.1°C  1.4°C                      1.4°C  1.4°C                      0.0°C	
SP No.: <u>OR0000001</u>		
Date: <u>10/25/00</u>		
Time: <u>830</u>		
Temperature of Cooler Upon Receipt:		
Received By: <u>KD</u>		

**Section One: Shipping/Delivery Issues**

1. Method of sample delivery: <u>Hand</u>			
2. Airbill or courier number: <u>NA</u>			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	Yes	No	<u>NA</u>

**Section Two: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	Yes	No	<u>NA</u>
5. Is the COC or other sample transmittal document present?	<u>Yes</u>	No	NA
6. Is the COC complete?	<u>Yes</u>	No	NA
7. Are the sample seals intact?	Yes	No	<u>NA</u>
8. Does the COC match the samples received?	<u>Yes</u>	No	NA

**Section Three: Sample Integrity Issues**

9. Are all sample containers intact and not leaking?	<u>Yes</u>	No	NA
10. Are all samples preserved properly?	<u>Yes</u>	No	NA
11. Are all samples within holding time for the required tests?	<u>Yes</u>	No	NA
12. *Were all samples received at the proper temperature?	Yes	<u>No</u>	NA
13. Are all samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	<u>Yes</u>	No	NA

**Section Four: Sample Containers Received**

14. 4 oz. glass jars:	19. 2 oz. Amber (MeOH):
15. 9 oz. glass jars:	20. Encore samplers:
16. 40 mL VOA vials: <u>10</u>	21. 500 ml plastic:
17. 1 liter glass:	22. 1 liter plastic:
18. Other (describe):	

\*Temperature for soil and water = 4°C-6°C, MeOH jars = 25°C, air = not required

12 Samples below 4°C none frozen

Reviewed By:



\_\_\_\_\_  
Laboratory Manager or Designee



ENVIRONMENTAL CHEMISTRY LABORATORY  
 7477 SW Tech Center Drive  
 Portland, Oregon, U.S.A. 97223-8025  
 Tel (503)639-3400 Fax (503) 620-7892

1097

DRO000001

CHAIN OF CUSTODY

Page 1 of 12

PROJECT <i>Fred Meyer Port Orchard</i>		PROJECT No. <i>9-Leim - 10282-0</i>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)																
REPORT TO: <i>Paul Stull</i>		PHONE No.																		
PROJECT MANGER		PHONE No.																		
SAMPLER'S NAME (please print) <i>McFarland</i>		PHONE No.																		
SAMPLER'S SIGNATURE <i>[Signature]</i>																				
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS		MULTIPL-G	SO21B BTEX-MTBE												
					No.	VOL.														
<i>max</i>	<i>10-19-00</i>	<i>8:00</i>	<i>W20</i>	<i>100% HCl</i>	<i>2</i>	<i>100ml</i>														
<i>EB</i>		<i>21:10</i>			<i>2</i>															
<i>msc103</i>		<i>20:50</i>			<i>2</i>			X												
<i>msc105</i>		<i>20:05</i>			<i>3</i>		X	X												
<i>msc104</i>	<i>10-20-00</i>	<i>8:45</i>					X	X												
<i>msc107</i>		<i>8:00</i>					X	X												
<i>msc108</i>	<i>10-19-00</i>	<i>19:20</i>					X	X												

SAMPLE RECEIPT <i>See SRDF</i>		LABORATORY <i>See SRDF</i>		TURNAROUND TIME		QC Reporting Requirements (Add'l charges may apply)		COMMENTS / INSTRUCTIONS	
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #		<input type="checkbox"/> 8 HOUR		<input type="checkbox"/> LEVEL I			
CONDITION OF CONTAINERS		CARRIER		<input type="checkbox"/> 24 HOUR		<input checked="" type="checkbox"/> LEVEL II			
CONDITION OF SEALS		DOT DESIGNATION		<input type="checkbox"/> 1 WEEK		<input type="checkbox"/> LEVEL II w/project specific Duplicates/Spikes			
				<input checked="" type="checkbox"/> 2 WEEK (standard)		<input type="checkbox"/> Level III & IV (Full validation package)			
				<input type="checkbox"/> OTHER _____					
RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME		
<i>[Signature] AMEC</i>		<i>10-25-00</i>	<i>8:20</i>	<i>[Signature] AMEC</i>		<i>10/25/00</i>	<i>8:30</i>		



December 21, 2000

AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 972238024

**Attention: Paul Stull**

RE: Analytical Results for Project 9-61M-10282-0

Attached are the results for the samples submitted on December 18, 2000 from the above referenced project. For your reference, our project number associated with these samples is 0000723.


The samples were analyzed at the AMEC Environmental Chemistry Laboratory. This report shall not be reproduced, except in its entirety, without written approval of the laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AMEC Earth & Environmental**

  
Sean Gormley  
Laboratory Manager

AMEC Earth & Environmental, Inc.  
7477 SW Tech Center Drive  
Portland, Oregon USA 97223

[www.amec.com](http://www.amec.com)

Tel +1 (503) 639-3400  
Fax +1 (503) 620-7892





AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB	0000723-02	Water	12/13/00 19:35	12/18/00 11:30
MW103	0000723-03	Water	12/13/00 21:40	12/18/00 11:30
MW105	0000723-04	Water	12/13/00 19:20	12/18/00 11:30
MW106	0000723-05	Water	12/13/00 20:20	12/18/00 11:30
MW107	0000723-06	Water	12/13/00 20:55	12/18/00 11:30
MW108	0000723-07	Water	12/13/00 16:45	12/18/00 11:30

AMEC Environmental Chemistry Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Project Chemist



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

EB

0000723-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

AMEC Environmental Chemistry Laboratory

**BTEX/MTBE by EPA 8021B**

Benzene	ND	0.50	ug/l	1	0121907	12/14/00	12/18/00	EPA 8021	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Methyl tert-Butyl Ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene (PID)		91.0 %	74-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene (PID)		93.8 %	72-118		"	"	"	"	



AMEC Earth & Environmental  
 7477 SW Tech Center Drive  
 Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 01/02/01 15:08

**MW103**

**0000723-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx**

<b>Gasoline (NWTPH-Gx)</b>	<b>3810</b>	50.0	ug/l	1	0121907	12/14/00	12/18/00	NWTPH-Gx/ 8021B	ES-03
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	29.2	0.500	"	"	"	"	"	"	
Ethylbenzene	73.8	0.500	"	"	"	"	"	"	
Total Xylenes	597	1.50	"	"	"	"	"	"	ES-03
<b>Methyl tert-Butyl Ether (MTBE)</b>	<b>2.21</b>	0.500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene (FID)		138 %	88-111		"	"	"	"	OT-04
Surrogate: a,a,a-Trifluorotoluene (PID)		106 %	74-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene (PID)		112 %	72-118		"	"	"	"	



AMEC Earth & Environmental  
 7477 SW Tech Center Drive  
 Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 01/02/01 15:08

**MW105**

**0000723-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	0121907	12/14/00	12/18/00	NWTPH-Gx/ 8021B	
Benzene	ND	0.500	"	"	"	"	"	"	"
Toluene	ND	0.500	"	"	"	"	"	"	"
Ethylbenzene	ND	0.500	"	"	"	"	"	"	"
Total Xylenes	ND	1.50	"	"	"	"	"	"	"
Methyl tert-Butyl Ether (MTBE)	ND	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene (FID)</i>		102 %		88-111	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>		92.0 %		74-120	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		94.0 %		72-118	"	"	"	"	"



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

**MW106**

**0000723-05 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx**

Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	0121907	12/14/00	12/18/00	NWTPH-Gx/ 8021B	
Benzene	ND	0.500	"	"	"	"	"	"	"
Toluene	ND	0.500	"	"	"	"	"	"	"
Ethylbenzene	ND	0.500	"	"	"	"	"	"	"
Total Xylenes	ND	1.50	"	"	"	"	"	"	"
Methyl tert-Butyl Ether (MTBE)	ND	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene (FID)</i>		<i>94.0 %</i>	<i>88-111</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>		<i>92.0 %</i>	<i>74-120</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		<i>91.0 %</i>	<i>72-118</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

MW107

0000723-06 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

AMEC Environmental Chemistry Laboratory

Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	0121907	12/14/00	12/18/00	NWTPH-Gx/ 8021B	
Benzene	ND	0.500	"	"	"	"	"	"	"
Toluene	ND	0.500	"	"	"	"	"	"	"
Ethylbenzene	ND	0.500	"	"	"	"	"	"	"
Total Xylenes	ND	1.50	"	"	"	"	"	"	"
Methyl tert-Butyl Ether (MTBE)	ND	0.500	"	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene (FID)		101 %	88-111		"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene (PID)		93.0 %	74-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene (PID)		93.0 %	72-118		"	"	"	"	



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

**MW108**

**0000723-07 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	0121907	12/14/00	12/18/00	NWTPH-Gx/ 8021B	
Benzene	ND	0.500	"	"	"	"	"	"	"
Toluene	ND	0.500	"	"	"	"	"	"	"
Ethylbenzene	ND	0.500	"	"	"	"	"	"	"
Total Xylenes	ND	1.50	"	"	"	"	"	"	"
Methyl tert-Butyl Ether (MTBE)	ND	0.500	"	"	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene (FID)</i>		<i>99.0 %</i>		<i>88-111</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>		<i>94.0 %</i>		<i>74-120</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		<i>93.0 %</i>		<i>72-118</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

**BTEX/MTBE by EPA 8021B - Quality Control**  
**AMEC Environmental Chemistry Laboratory**

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

**Batch 0121907 - EPA 5030B Water GC**

<b>Matrix Spike (0121907-MS1)</b>		<b>Source: 0000723-03</b>			<b>Prepared: 12/18/00</b>		<b>Analyzed: 12/19/00</b>			
Benzene	20.3	0.50	ug/l	20.0	ND	99.7	66-135			
Toluene	45.9	0.50	"	20.0	29	84.5	63-131			NA-04
Ethylbenzene	83.8	0.50	"	20.0	74	49.0	67-124			NA-04
m,p-Xylene	393	1.0	"	40.0	410	NR	57-134			NA-04
o-Xylene	188	0.50	"	20.0	190	NR	55-134			NA-04
Methyl tert-Butyl Ether (MTBE)	22.4	0.50	"	20.0	2.2	101	66-125			
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>	<i>52.5</i>		<i>"</i>	<i>50.0</i>		<i>105</i>	<i>74-120</i>			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>55.0</i>		<i>"</i>	<i>50.0</i>		<i>110</i>	<i>72-118</i>			

<b>Matrix Spike Dup (0121907-MSD1)</b>		<b>Source: 0000723-03</b>			<b>Prepared: 12/18/00</b>		<b>Analyzed: 12/19/00</b>			
Benzene	18.6	0.50	ug/l	20.0	ND	91.3	66-135	8.74	25	
Toluene	42.4	0.50	"	20.0	29	67.0	63-131	7.93	25	NA-04
Ethylbenzene	77.0	0.50	"	20.0	74	15.0	67-124	8.46	25	NA-04
m,p-Xylene	335	1.0	"	40.0	410	NR	57-134	15.9	25	NA-04
o-Xylene	161	0.50	"	20.0	190	NR	55-134	15.5	25	NA-04
Methyl tert-Butyl Ether (MTBE)	22.3	0.50	"	20.0	2.2	100	66-125	0.447	25	
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>	<i>48.6</i>		<i>"</i>	<i>50.0</i>		<i>97.2</i>	<i>74-120</i>			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>56.0</i>		<i>"</i>	<i>50.0</i>		<i>112</i>	<i>72-118</i>			





AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx - Quality Control**

**AMEC Environmental Chemistry Laboratory**

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

**Batch 0121907 - EPA 5030B Water GC**

**Blank (0121907-BLK1)**

Prepared & Analyzed: 12/18/00

Gasoline (NWTPH-Gx)	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Total Xylenes	ND	1.50	"							
Methyl tert-Butyl Ether (MTBE)	ND	0.500	"							
<i>Surrogate: 4-Bromofluorobenzene (FID)</i>	51.3		"	50.0		103	88-111			
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>	51.3		"	50.0		103	74-120			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	47.5		"	50.0		95.0	72-118			

**LCS (0121907-BS1)**

Prepared & Analyzed: 12/18/00

Benzene	19.3	0.500	ug/l	20.0		96.5	73-124			
Toluene	18.4	0.500	"	20.0		92.0	74-122			
Ethylbenzene	18.4	0.500	"	20.0		92.0	69-123			
Total Xylenes	62.7	1.50	"	60.0		105	77-126			
Methyl tert-Butyl Ether (MTBE)	18.1	0.500	"	20.0		90.5	67-120			
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>	47.5		"	50.0		95.0	74-120			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	49.0		"	50.0		98.0	72-118			

**LCS (0121907-BS2)**

Prepared: 12/18/00 Analyzed: 12/19/00

Gasoline (NWTPH-Gx)	1020	50.0	ug/l	1000		102	74-110		25	
<i>Surrogate: 4-Bromofluorobenzene (FID)</i>	52.0		"	50.0		104	88-111			

**LCS Dup (0121907-BSD1)**

Prepared: 12/18/00 Analyzed: 01/02/01

Benzene	18.9	0.500	ug/l	20.0		94.5	73-124	2.09	25	
Toluene	17.8	0.500	"	20.0		89.0	74-122	3.31	25	
Ethylbenzene	17.8	0.500	"	20.0		89.0	69-123	3.31	25	
Total Xylenes	60.9	1.50	"	60.0		102	77-126	2.91	25	
Methyl tert-Butyl Ether (MTBE)	18.0	0.500	"	20.0		90.0	67-120	0.554	25	
<i>Surrogate: a,a,a-Trifluorotoluene (PID)</i>	47.0		"	50.0		94.0	74-120			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	49.0		"	50.0		98.0	72-118			



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/02/01 15:08

**Gasoline Range Petroleum Hydrocarbons and BTEX by EPA 5030B/8021B and NWTPH-Gx - Quality Control**  
**AMEC Environmental Chemistry Laboratory**

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

**Batch 0121907 - EPA 5030B Water GC**

**LCS Dup (0121907-BSD2)**

Prepared: 12/18/00 Analyzed: 12/19/00

Gasoline (NWTPH-Gx)	1060	50.0	ug/l	1000		106	74-110	3.85	25	
Surrogate: 4-Bromofluorobenzene (FID)	52.5		"	50.0		105	88-111			



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 972238024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
01/02/01 15:08

### Notes and Definitions

- ES-03 Estimated value because the analyte concentration was above the instrument calibration range, and no sample remained for reanalysis.
- NA-04 Not applicable because the amount spiked was less than the sample concentration.
- OT-04 Outside of acceptance limits due to the presence of interfering chromatographic peaks from elevated concentrations of target compounds.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

**AMEC Environmental Chemistry Laboratory  
Sample Receipt Documentation Form**

Project: <u>Fred Meyer Port Orchard</u>	Cooler Temperatures 5.2°C      5.1°C 5.5°C 4.4°C      5.4°C	
SR No.: <u>0000783</u>		
Date: <u>12/18/00</u>		
Time: <u>1130</u>		
Temperature of Cooler Upon Receipt:		
Received By: <u>KD</u>		

**Section One: Shipping/Delivery Issues**

1. Method of sample delivery: <u>Hand</u>			
2. Airbill or courier number: <u>WA</u>			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	Yes	No	<u>NA</u>

**Section Two: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	Yes	No	<u>NA</u>
5. Is the COC or other sample transmittal document present?	<u>Yes</u>	No	NA
6. Is the COC complete?	<u>Yes</u>	No	NA
7. Are the sample seals intact?	Yes	No	<u>NA</u>
8. Does the COC match the samples received?	<u>Yes</u>	No	NA

**Section Three: Sample Integrity Issues**

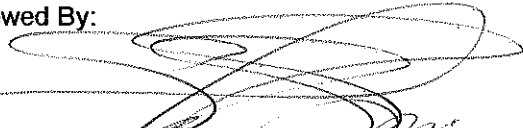
9. Are all sample containers intact and not leaking?	<u>Yes</u>	No	NA
10. Are all samples preserved properly?	<u>Yes</u>	No	NA
11. Are all samples within holding time for the required tests?	<u>Yes</u>	No	NA
12. *Were all samples received at the proper temperature?	<u>Yes</u>	No	NA
13. Are all samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	<u>Yes</u>	No	NA

**Section Four: Sample Containers Received**

14. 4 oz. glass jars:	19. 2 oz. Amber (MeOH):
15. 9 oz. glass jars:	20. Encore samplers:
16. 40 mL VOA vials: <u>19</u>	21. 500 ml plastic:
17. 1 liter glass: <u>10 HCl preserved</u>	22. 1 liter plastic:
18. Other (describe):	

\*Temperature for soil and water = 4°C ± 2°C, MeOH jars = 25°C, air = not required

Reviewed By:

  
\_\_\_\_\_  
Laboratory Manager or Designee



ENVIRONMENTAL CHEMISTRY LABORATORY  
 7477 SW Tech Center Drive  
 Portland, Oregon, U.S.A. 97223-8025  
 Tel (503)639-3400 Fax (503) 620-7892

1341

0000723

**CHAIN OF CUSTODY**

PROJECT <b>Fred Meyer Pest Orchard</b>				PROJECT No. <b>0-61m</b> <b>10282-0</b>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)																	
REPORT TO: <b>Paul Stull</b>				PHONE No. <b>6393400</b>		NWTPH-6	BTEX	BTEX	MTBE														
PROJECT MANGER <b>John Kuiper</b>				PHONE No.																			
SAMPLER'S NAME (please print) <b>McFarland</b>				PHONE No. ↓																			
SAMPLER'S SIGNATURE <i>upm</i>																							
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS																		
					No.	VOL.																	
1. <b>mcx</b>	<b>12-13-00</b>	<b>8:00</b>	<b>H2O</b>	<b>ICE/W</b>	<b>1/2</b>	<b>VOA</b>																	
2. <b>EB</b>		<b>19:35</b>			<b>2</b>	↓																	
3. <b>mc103</b>		<b>21:40</b>			<b>3/2</b>	<b>VOA</b>	X																
4. <b>mc105</b>		<b>19:20</b>					X																
5. <b>mc106</b>		<b>20:20</b>					X																
6. <b>mc107</b>		<b>20:55</b>					X																
7. <b>mc108</b>		<b>16:45</b>					X																
8.																							
9.																							
10.																							

SAMPLE RECEIPT <b>See SRDF</b>		LABORATORY <b>See SRDF</b>		TURNAROUND TIME		QC Reporting Requirements (Add'l charges may apply)		COMMENTS / INSTRUCTIONS			
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #		<input type="checkbox"/> 8 HOUR		<input type="checkbox"/> LEVEL I		Check with Paul Stull if NWTPH-DX is to be Ran			
CONDITION OF CONTAINERS		CARRIER		<input type="checkbox"/> 24 HOUR		<input checked="" type="checkbox"/> LEVEL II					
CONDITION OF SEALS		DOT DESIGNATION		<input type="checkbox"/> 1 WEEK		<input type="checkbox"/> LEVEL II w/project specific Duplicates/Spikes					
RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME	
1. <i>upm</i>		12/18/00		11:30		1. <i>Kimberlye Davis AMEC</i>		12/18/00		11:30	
2.						2.					
3.						3.					



April 2, 2001

AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland, OR 97223-8024

**Attention: Paul Stull**

RE: Analytical Results for Project 9-61M-10282-0

Attached are the results for the samples submitted on March 21, 2001 from the above referenced project. For your reference, our project number associated with these samples is 0100139.

The samples were analyzed at the AMEC Environmental Chemistry Laboratory. This report shall not be reproduced, except in its entirety, without written approval of the laboratory.

All analyses were conducted in accordance with applicable QA/QC guidelines. The results apply only to the samples submitted.

Please feel free to contact me if you have any questions regarding this report, or if I can be of any assistance in any other matter.

Respectfully submitted,

**AMEC Earth & Environmental**

  
Sean Gormley  
Laboratory Manager



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW108	0100139-03	Water	03/19/01 16:00	03/21/01 11:23
MW105	0100139-04	Water	03/19/01 16:30	03/21/01 11:23
MW103	0100139-05	Water	03/19/01 16:50	03/21/01 11:23

AMEC Environmental Chemistry Laboratory

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Project Chemist



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**MW108**

**0100139-03 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B**

Methyl tert-Butyl Ether (MTBE)	ND	1.00	ug/l	1	1033001	03/30/01	03/30/01	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
Isopropylbenzene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
4-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	25.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		108 %	81-115		"	"	"	"	
Surrogate: Toluene-d8		97.4 %	88-106		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	88-111		"	"	"	"	

**Gasoline Range Petroleum Hydrocarbons as Gasoline by Method NWTPH-Gx**

Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	1032601	03/22/01	03/23/01	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (FID)		111 %	88-111		"	"	"	"	





AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**MW105**

**0100139-04 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B**

Methyl tert-Butyl Ether (MTBE)	ND	1.00	ug/l	1	1033001	03/30/01	03/30/01	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
Isopropylbenzene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
4-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Naphthalene	ND	25.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		106 %	81-115		"	"	"	"	
Surrogate: Toluene-d8		98.8 %	88-106		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	88-111		"	"	"	"	

**Gasoline Range Petroleum Hydrocarbons as Gasoline by Method NWTPH-Gx**

Gasoline (NWTPH-Gx)	ND	50.0	ug/l	1	1032601	03/22/01	03/23/01	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (FID)		114 %	88-111		"	"	"	"	QS-01



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**MW103**

**0100139-05 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**AMEC Environmental Chemistry Laboratory**

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B**

Methyl tert-Butyl Ether (MTBE)	ND	10.0	ug/l	10	1033001	03/30/01	03/30/01	EPA 8260B	
Benzene	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	10.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>218</b>	10.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>528</b>	10.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>2690</b>	20.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>1060</b>	10.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>21.0</b>	10.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>58.5</b>	10.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>389</b>	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1290</b>	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
4-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	50.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>309</b>	250	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		104 %	81-115	"	"	"	"	"	
Surrogate: Toluene-d8		98.0 %	88-106	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %	88-111	"	"	"	"	"	

**Gasoline Range Petroleum Hydrocarbons as Gasoline by Method NWTPH-Gx**

<b>Gasoline (NWTPH-Gx)</b>	<b>16600</b>	250	ug/l	5	1032601	03/22/01	03/23/01	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (FID)		136 %	88-111	"	"	"	"	"	NA-05



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B - Quality Control**

**AMEC Environmental Chemistry Laboratory**

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

**Batch 1033001 - EPA 5030B Water MS**

**Blank (1033001-BLK1)**

Prepared & Analyzed: 03/30/01

Methyl tert-Butyl Ether (MTBE)	ND	1.00	ug/l							
Benzene	ND	1.00	"							
1,2-Dichloroethane (EDC)	ND	1.00	"							
Toluene	ND	1.00	"							
1,2-Dibromoethane (EDB)	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
Isopropylbenzene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
4-Isopropyltoluene	ND	1.00	"							
n-Butylbenzene	ND	5.00	"							
Naphthalene	ND	25.0	"							
Surrogate: Dibromofluoromethane	52.0		"	50.0		104	81-115			
Surrogate: Toluene-d8	48.7		"	50.0		97.4	88-106			
Surrogate: 4-Bromofluorobenzene	54.5		"	50.0		109	88-111			

**LCS (1033001-BS1)**

Prepared & Analyzed: 03/30/01

Methyl tert-Butyl Ether (MTBE)	36.3	1.00	ug/l	50.0		72.6	70-130			
Benzene	46.5	1.00	"	50.0		93.0	94-113			QS-01
1,2-Dichloroethane (EDC)	48.8	1.00	"	50.0		97.6	70-130			
Toluene	42.9	1.00	"	50.0		85.8	94-111			QS-01
1,2-Dibromoethane (EDB)	42.9	1.00	"	50.0		85.8	70-130			
Ethylbenzene	46.5	1.00	"	50.0		93.0	70-130			
m,p-Xylene	94.4	2.00	"	100		94.4	70-130			
o-Xylene	47.3	1.00	"	50.0		94.6	70-130			
Isopropylbenzene	45.9	1.00	"	50.0		91.8	70-130			
n-Propylbenzene	47.4	1.00	"	50.0		94.8	70-130			
1,3,5-Trimethylbenzene	46.6	1.00	"	50.0		93.2	70-130			
tert-Butylbenzene	46.4	1.00	"	50.0		92.8	70-130			
1,2,4-Trimethylbenzene	50.6	1.00	"	50.0		101	70-130			
sec-Butylbenzene	49.4	1.00	"	50.0		98.8	70-130			
4-Isopropyltoluene	49.6	1.00	"	50.0		99.2	70-130			
n-Butylbenzene	51.2	5.00	"	50.0		102	70-130			
Naphthalene	50.5	25.0	"	50.0		101	70-130			



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B - Quality Control**  
**AMEC Environmental Chemistry Laboratory**

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

**Batch 1033001 - EPA 5030B Water MS**

**LCS (1033001-BS1)**

Prepared & Analyzed: 03/30/01

Surrogate: Dibromofluoromethane	51.7		ug/l	50.0		103	81-115			
Surrogate: Toluene-d8	48.3		"	50.0		96.6	88-106			
Surrogate: 4-Bromofluorobenzene	49.6		"	50.0		99.2	88-111			

**LCS Dup (1033001-BSD1)**

Prepared & Analyzed: 03/30/01

Methyl tert-Butyl Ether (MTBE)	38.3	1.00	ug/l	50.0		76.6	70-130	5.36	25	
Benzene	46.1	1.00	"	50.0		92.2	94-113	0.864	25	QS-01
1,2-Dichloroethane (EDC)	49.2	1.00	"	50.0		98.4	70-130	0.816	25	
Toluene	43.1	1.00	"	50.0		86.2	94-111	0.465	25	QS-01
1,2-Dibromoethane (EDB)	44.6	1.00	"	50.0		89.2	70-130	3.89	25	
Ethylbenzene	46.1	1.00	"	50.0		92.2	70-130	0.864	25	
m,p-Xylene	93.1	2.00	"	100		93.1	70-130	1.39	25	
o-Xylene	46.0	1.00	"	50.0		92.0	70-130	2.79	25	
Isopropylbenzene	47.1	1.00	"	50.0		94.2	70-130	2.58	25	
n-Propylbenzene	48.0	1.00	"	50.0		96.0	70-130	1.26	25	
1,3,5-Trimethylbenzene	47.4	1.00	"	50.0		94.8	70-130	1.70	25	
tert-Butylbenzene	47.1	1.00	"	50.0		94.2	70-130	1.50	25	
1,2,4-Trimethylbenzene	51.0	1.00	"	50.0		102	70-130	0.787	25	
sec-Butylbenzene	50.0	1.00	"	50.0		100	70-130	1.21	25	
4-Isopropyltoluene	49.8	1.00	"	50.0		99.6	70-130	0.402	25	
n-Butylbenzene	50.5	5.00	"	50.0		101	70-130	1.38	25	
Naphthalene	53.9	25.0	"	50.0		108	70-130	6.51	25	
Surrogate: Dibromofluoromethane	51.7		"	50.0		103	81-115			
Surrogate: Toluene-d8	48.7		"	50.0		97.4	88-106			
Surrogate: 4-Bromofluorobenzene	50.6		"	50.0		101	88-111			

**Matrix Spike (1033001-MS1)**

Source: 0100132-06

Prepared & Analyzed: 03/30/01

Methyl tert-Butyl Ether (MTBE)	39.0	1.00	ug/l	50.0	ND	78.0	70-130			
Benzene	48.5	1.00	"	50.0	ND	97.0	92-112			
1,2-Dichloroethane (EDC)	52.6	1.00	"	50.0	ND	105	70-130			
Toluene	46.0	1.00	"	50.0	ND	92.0	79-116			
1,2-Dibromoethane (EDB)	46.1	1.00	"	50.0	ND	92.2	70-130			
Ethylbenzene	48.3	1.00	"	50.0	ND	96.6	70-130			
m,p-Xylene	98.4	2.00	"	100	ND	98.4	70-130			
o-Xylene	48.4	1.00	"	50.0	ND	96.8	70-130			
Isopropylbenzene	48.4	1.00	"	50.0	ND	96.8	70-130			
n-Propylbenzene	49.5	1.00	"	50.0	ND	99.0	70-130			
1,3,5-Trimethylbenzene	48.6	1.00	"	50.0	ND	97.2	70-130			
tert-Butylbenzene	48.5	1.00	"	50.0	ND	97.0	70-130			



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B - Quality Control**  
**AMEC Environmental Chemistry Laboratory**

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

**Batch 1033001 - EPA 5030B Water MS**

<b>Matrix Spike (1033001-MS1)</b>	<b>Source: 0100132-06</b>			<b>Prepared &amp; Analyzed: 03/30/01</b>						
1,2,4-Trimethylbenzene	52.3	1.00	ug/l	50.0	ND	105	70-130			
sec-Butylbenzene	52.0	1.00	"	50.0	ND	104	70-130			
4-Isopropyltoluene	51.7	1.00	"	50.0	ND	103	70-130			
n-Butylbenzene	52.0	5.00	"	50.0	ND	104	70-130			
Naphthalene	48.9	25.0	"	50.0	ND	97.8	70-130			
<i>Surrogate: Dibromofluoromethane</i>	<i>51.6</i>		"	<i>50.0</i>		<i>103</i>	<i>81-115</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.5</i>		"	<i>50.0</i>		<i>99.0</i>	<i>88-106</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>49.5</i>		"	<i>50.0</i>		<i>99.0</i>	<i>88-111</i>			

<b>Matrix Spike Dup (1033001-MSD1)</b>	<b>Source: 0100132-06</b>			<b>Prepared &amp; Analyzed: 03/30/01</b>						
Methyl tert-Butyl Ether (MTBE)	38.7	1.00	ug/l	50.0	ND	77.4	70-130	0.772	25	
Benzene	46.9	1.00	"	50.0	ND	93.8	92-112	3.35	25	
1,2-Dichloroethane (EDC)	50.2	1.00	"	50.0	ND	100	70-130	4.67	25	
Toluene	43.6	1.00	"	50.0	ND	87.2	79-116	5.36	25	
1,2-Dibromoethane (EDB)	45.7	1.00	"	50.0	ND	91.4	70-130	0.871	25	
Ethylbenzene	46.6	1.00	"	50.0	ND	93.2	70-130	3.58	25	
m,p-Xylene	94.7	2.00	"	100	ND	94.7	70-130	3.83	25	
o-Xylene	46.8	1.00	"	50.0	ND	93.6	70-130	3.36	25	
Isopropylbenzene	45.8	1.00	"	50.0	ND	91.6	70-130	5.52	25	
n-Propylbenzene	47.2	1.00	"	50.0	ND	94.4	70-130	4.76	25	
1,3,5-Trimethylbenzene	46.1	1.00	"	50.0	ND	92.2	70-130	5.28	25	
tert-Butylbenzene	46.0	1.00	"	50.0	ND	92.0	70-130	5.29	25	
1,2,4-Trimethylbenzene	49.5	1.00	"	50.0	ND	99.0	70-130	5.50	25	
sec-Butylbenzene	48.8	1.00	"	50.0	ND	97.6	70-130	6.35	25	
4-Isopropyltoluene	48.9	1.00	"	50.0	ND	97.8	70-130	5.57	25	
n-Butylbenzene	50.0	5.00	"	50.0	ND	100	70-130	3.92	25	
Naphthalene	52.8	25.0	"	50.0	ND	106	70-130	7.67	25	
<i>Surrogate: Dibromofluoromethane</i>	<i>51.9</i>		"	<i>50.0</i>		<i>104</i>	<i>81-115</i>			
<i>Surrogate: Toluene-d8</i>	<i>49.2</i>		"	<i>50.0</i>		<i>98.4</i>	<i>88-106</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>49.0</i>		"	<i>50.0</i>		<i>98.0</i>	<i>88-111</i>			



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/02/01 13:06

**Gasoline Range Petroleum Hydrocarbons as Gasoline by Method NWTPH-Gx - Quality Control**  
**AMEC Environmental Chemistry Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1032601 - EPA 5030B Water GC</b>										
<b>Blank (1032601-BLK1)</b> Prepared & Analyzed: 03/22/01										
Gasoline (NWTPH-Gx)	ND	50.0	ug/l							
Surrogate: 4-Bromofluorobenzene (FID)	29.8		"	25.0		119	88-111			QS-01
<b>LCS (1032601-BS2)</b> Prepared & Analyzed: 03/22/01										
Gasoline (NWTPH-Gx)	964	50.0	ug/l	1000		96.4	74-110			
Surrogate: 4-Bromofluorobenzene (FID)	29.4		"	25.0		118	88-111			QS-01
<b>LCS Dup (1032601-BSD2)</b> Prepared & Analyzed: 03/22/01										
Gasoline (NWTPH-Gx)	935	50.0	ug/l	1000		93.5	74-110	3.05	25	
Surrogate: 4-Bromofluorobenzene (FID)	29.4		"	25.0		118	88-111			QS-01
<b>Duplicate (1032601-DUP1)</b> Source: 0100130-02 Prepared: 03/22/01 Analyzed: 03/23/01										
Gasoline (NWTPH-Gx)	ND	50.0	ug/l		ND				25	
Surrogate: 4-Bromofluorobenzene (FID)	28.4		"	25.0		114	88-111			QS-01



AMEC Earth & Environmental  
7477 SW Tech Center Drive  
Portland OR, 97223-8024

Project: Fred Meyer - Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
04/02/01 13:06

### Notes and Definitions

- NA-05 Not applicable due to the presence of chromatographic peaks from non-target compounds which prevented determination of the surrogate.
- QS-01 Outside of laboratory established control limits, since the recovery is within EPA guidance limits and since evaluation of the recovery indicate that it is within 20% of the true value, no further action was taken.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

**AMEC Environmental Chemistry Laboratory  
Sample Receipt Documentation Form**

Project: Fred Meyer Park Orchard	Cooler Temperatures			
SR No.: 0100139			2.5°C	4.3°C
Date: 3/21/01				
Time: 11:05			3.9°C	
Temperature of Cooler Upon Receipt:			2.2°C	5.0°C
Received By: KD				

3.6

**Section One: Shipping/Delivery Issues**

1. Method of sample delivery: Hand			
2. Airbill or courier number: NA			
3. Is a copy of the airbill or courier receipt available to be placed in the job file?	Yes	No	NA

**Section Two: Sample Custody Issues**

4. Are custody seals on the shipping container intact?	Yes	No	NA
5. Is the COC or other sample transmittal document present?	Yes	No	NA
6. Is the COC complete?	Yes	No	NA
7. Are the sample seals intact?	Yes	No	NA
8. Does the COC match the samples received?	Yes	No	NA

**Section Three: Sample Integrity Issues**

9. Are all sample containers intact and not leaking?	Yes	No	NA
10. Are all samples preserved properly?	Yes	No	NA
11. Are all samples within holding time for the required tests?	Yes	No	NA
12. *Were all samples received at the proper temperature?	Yes	No	NA
13. Are all samples for volatiles and other headspace sensitive parameters free of headspace or bubbles?	Yes	No	NA

**Section Four: Sample Containers Received**

14. 4 oz. glass jars:	19. 2 oz. Amber (MeOH):
15. 8 oz. glass jars:	20. Encore samplers:
16. 40 mL VOA vials: 14	21. 500 ml plastic:
17. 1 liter glass:	22. 1 liter plastic:
18. Other (describe):	

\*Temperature for soil and water = 4°C ± 2°C, MeOH jars = 25°C, air = not required

⑧ Received on 1L for sample MW103

Reviewed By:



\_\_\_\_\_  
Laboratory Manager or Designee





ENVIRONMENTAL CHEMISTRY LABORATORY

7477 SW Tech Center Drive  
Portland, Oregon, U.S.A. 97223-8025  
Tel (503)639-3400 Fax (503) 620-7892

1927

0100139

# CHAIN OF CUSTODY

PROJECT <i>Fred Meyer Port Orchard</i>				PROJECT No. <i>9-4-01-10282-0</i>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)																	
REPORT TO: <i>P. Stull</i>				PHONE No. <i>639 3400</i>		<i>NWTH-60</i> <i>NO MS</i> <i>HOPH DR</i> <i>8021-B BTEX</i> <i>MTBE</i> <i>See comments</i>																	
PROJECT MANGER				PHONE No.																			
SAMPLER'S NAME (please print) <i>McFarland</i>				PHONE No. ↓																			
SAMPLER'S SIGNATURE <i>cy</i>																							
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS																		
					No.	VOL.																	
<i>1. Mux</i>	<i>3-19-01</i>	<i>8:00</i>	<i>H2O</i>	<i>Hcl</i>	<i>2</i>	<i>var</i>																	
<i>2. EB</i>		<i>14:00</i>		<i>Hcl</i>	<i>2</i>	<i>↓</i>																	
<i>3. Muc 108</i>		<i>16:00</i>		<i>Hcl</i>	<i>6</i>	<i>varies</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>													
<i>4. Muc 105</i>		<i>16:30</i>		<i>Hcl</i>	<i>6</i>		<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>													
<i>5. Muc 103</i>		<i>16:50</i>		<i>Hcl</i>	<i>6</i>		<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>													
6.																							
7.																							
8.																							
9.																							
10.																							

SAMPLE RECEIPT <i>See SRDF</i>		LABORATORY <i>See SRDF</i>		TURNAROUND TIME		QC Reporting Requirements (Add'l charges may apply)		COMMENTS / INSTRUCTIONS	
TOTAL # CONTAINERS ↓		SHIPPING I.D. / AIRBILL # ↓		<input type="checkbox"/> 8 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 1 WEEK <input checked="" type="checkbox"/> 2 WEEK (standard) <input type="checkbox"/> OTHER _____		<input type="checkbox"/> LEVEL I <input checked="" type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL II w/project specific Duplicates/Spikes <input type="checkbox"/> Level III & IV (Full validation package)		<i>Run for BTEX EDB, EDC, MTBE Naphthalene, Alkylbenzene suite</i>	
CONDITION OF CONTAINERS		CARRIER							
CONDITION OF SEALS		DOT DESIGNATION							
RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME		
<i>cy AMEC</i>		<i>3-21-01</i>	<i>11:05</i>	<i>Kimberly D. Davis AMEC</i>		<i>3/21/01</i>	<i>11:05</i>		



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

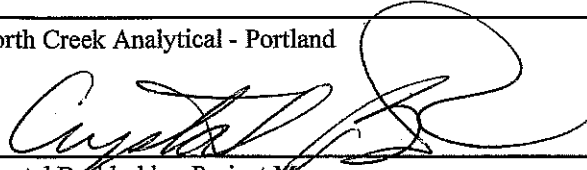
AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P1G0092-01	Water	06/28/01 16:00	07/03/01 15:32
MW105	P1G0092-02	Water	06/28/01 15:00	07/03/01 15:32
MWX	P1G0092-03	Water	06/28/01 08:00	07/03/01 15:32
EB	P1G0092-04	Water	06/28/01 12:00	07/03/01 15:32

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P1G0092-01RE1) Water</b>						Sampled: 06/28/01 Received: 07/03/01			
Benzene	ND	10.0	ug/l	20	NW-G, 8021B	07/09/01	07/09/01	1070994	
Toluene	25.5	10.0	"	"	"	"	"	"	
Ethylbenzene	126	10.0	"	"	"	"	"	"	
Xylenes (total)	953	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	40.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>9660</b>	<b>1600</b>	"	"	"	"	"	"	
<i>Surr: 4-BFB (FID)</i>	98.8 %	50-150							
<i>Surr: 4-BFB (PID)</i>	83.8 %	75-125							
<b>MW105 (P1G0092-02) Water</b>						Sampled: 06/28/01 Received: 07/03/01			
Benzene	ND	0.500	ug/l	1	NW-G, 8021B	07/06/01	07/06/01	1070942	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>99.8</b>	<b>80.0</b>	"	"	"	"	"	"	
<i>Surr: 4-BFB (FID)</i>	123 %	50-150							
<i>Surr: 4-BFB (PID)</i>	118 %	75-125							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P1G0092-01) Water</b>						Sampled: 06/28/01 Received: 07/03/01			
Diesel Range Organics	6.17	0.250	mg/l	1	NWTPH-Dx	07/05/01	07/06/01	1070934	A-01
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
<i>Surr: 1-Chlorooctadecane</i>	95.7 %	50-150							
<b>MW105 (P1G0092-02) Water</b>						Sampled: 06/28/01 Received: 07/03/01			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	07/05/01	07/06/01	1070934	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
<i>Surr: 1-Chlorooctadecane</i>	87.0 %	50-150							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**BTEX per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
---------	--------	-----------------	-------	----------	--------	----------	----------	-------	-------

MWX (P1G0092-03) Water						Sampled: 06/28/01 Received: 07/03/01			
Benzene	ND	0.500	ug/l	1	EPA 8021B	07/06/01	07/06/01	1070942	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>118 %</i>	<i>75-120</i>							

EB (P1G0092-04) Water						Sampled: 06/28/01 Received: 07/03/01			
Benzene	ND	0.500	ug/l	1	EPA 8021B	07/06/01	07/06/01	1070942	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>121 %</i>	<i>75-120</i>							<i>S-02</i>

North Creek Analytical - Portland

Crystal Burkholder, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1070942 - EPA 5030B**

Blank (1070942-BLK1)			Prepared & Analyzed: 07/06/01							
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Gasoline Range Hydrocarbons	ND	80.0	"							
Surr: 4-BFB (FID)	48.7		"	50.0		97.4	50-150			
Surr: 4-BFB (PID)	48.1		"	50.0		96.2	75-125			

LCS (1070942-BS1)			Prepared & Analyzed: 07/06/01							
Gasoline Range Hydrocarbons	1300	80.0	ug/l	1250		104	50-150			
Surr: 4-BFB (FID)	56.3		"	50.0		113	50-150			

LCS (1070942-BS2)			Prepared & Analyzed: 07/06/01							
Benzene	15.7	0.500	ug/l	20.0		78.5	70-130			
Toluene	18.2	0.500	"	20.0		91.0	70-130			
Ethylbenzene	21.1	0.500	"	20.0		106	70-130			
Xylenes (total)	64.0	1.00	"	60.0		107	70-130			
Methyl tert-butyl ether	15.0	2.00	"	20.0		75.0	70-130			
Surr: 4-BFB (PID)	48.4		"	50.0		96.8	75-125			

LCS Dup (1070942-BSD2)			Prepared & Analyzed: 07/06/01							
Benzene	15.8	0.500	ug/l	20.0		79.0	70-130	0.635	200	
Toluene	17.7	0.500	"	20.0		88.5	70-130	2.79	200	
Ethylbenzene	19.3	0.500	"	20.0		96.5	70-130	8.91	200	
Xylenes (total)	57.7	1.00	"	60.0		96.2	70-130	10.4	200	
Methyl tert-butyl ether	15.0	2.00	"	20.0		75.0	70-130	0.00	200	
Surr: 4-BFB (PID)	46.1		"	50.0		92.2	75-125			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1070942 - EPA 5030B**

<b>Duplicate (1070942-DUP1)</b>	<b>Source: P1G0092-01</b>			<b>Prepared &amp; Analyzed: 07/06/01</b>						
Gasoline Range Hydrocarbons	ND	80.0	ug/l		10000000				50	
<i>Surr: 4-BFB (FID)</i>	53.3		"	50.0		107	50-150			

**Batch 1070994 - EPA 5030B**

<b>Blank (1070994-BLK1)</b>	<b>Prepared &amp; Analyzed: 07/09/01</b>									
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Gasoline Range Hydrocarbons	ND	80.0	"							
<i>Surr: 4-BFB (FID)</i>	50.7		"	50.0		101	50-150			
<i>Surr: 4-BFB (PID)</i>	43.5		"	50.0		87.0	75-125			

**LCS (1070994-BS1)**

	<b>Prepared &amp; Analyzed: 07/09/01</b>									
Gasoline Range Hydrocarbons	1450	80.0	ug/l	1250		116	50-150			
<i>Surr: 4-BFB (FID)</i>	65.6		"	50.0		131	50-150			

**LCS (1070994-BS2)**

	<b>Prepared &amp; Analyzed: 07/09/01</b>									
Benzene	16.5	0.500	ug/l	20.0		82.5	70-130			
Toluene	17.0	0.500	"	20.0		85.0	70-130			
Ethylbenzene	17.5	0.500	"	20.0		87.5	70-130			
Xylenes (total)	51.3	1.00	"	60.0		85.5	70-130			
Methyl tert-butyl ether	16.5	2.00	"	20.0		82.5	70-130			
<i>Surr: 4-BFB (PID)</i>	41.6		"	50.0		83.2	75-125			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1070994 - EPA 5030B**

Matrix Spike (1070994-MS1)	Source: P1G0123-07			Prepared: 07/09/01		Analyzed: 07/10/01				
Benzene	26.4	0.500	ug/l	20.0	6.75	98.2	70-130			
Toluene	31.9	0.500	"	20.0	12.6	96.5	70-130			
Ethylbenzene	62.4	0.500	"	20.0	46.2	81.0	70-130			
Xylenes (total)	225	1.00	"	60.0	179	76.7	70-130			
Methyl tert-butyl ether	29.7	2.00	"	20.0	8.38	107	70-130			
Surr: 4-BFB (PID)	39.3		"	50.0		78.6	75-125			

Matrix Spike Dup (1070994-MSD1)	Source: P1G0123-07			Prepared: 07/09/01		Analyzed: 07/10/01				
Benzene	22.6	0.500	ug/l	20.0	6.75	79.2	70-130	15.5	15	Q-01
Toluene	27.8	0.500	"	20.0	12.6	76.0	70-130	13.7	15	
Ethylbenzene	57.6	0.500	"	20.0	46.2	57.0	70-130	8.00	15	Q-01
Xylenes (total)	209	1.00	"	60.0	179	50.0	70-130	7.37	15	Q-01
Methyl tert-butyl ether	24.7	2.00	"	20.0	8.38	81.6	70-130	18.4	15	Q-01
Surr: 4-BFB (PID)	37.9		"	50.0		75.8	75-125			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Diesel and Heavy Range Hydrocarbons per NWTPII-Dx Method - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1070934 - EPA 3510 Fuels**

**Blank (1070934-BLK1)** Prepared: 07/05/01 Analyzed: 07/06/01

Diesel Range Organics	ND	0.250	mg/l							
Heavy Oil Range Hydrocarbons	ND	0.500	"							

<i>Surr: 1-Chlorooctadecane</i>	0.0752		"	0.0960		78.3	50-150			
---------------------------------	--------	--	---	--------	--	------	--------	--	--	--

**LCS (1070934-BS1)** Prepared: 07/05/01 Analyzed: 07/06/01

Diesel Range Organics	2.46	0.250	mg/l	2.58		95.3	50-150			
Heavy Oil Range Hydrocarbons	1.23	0.500	"	1.58		77.8	50-150			

<i>Surr: 1-Chlorooctadecane</i>	0.0767		"	0.0960		79.9	50-150			
---------------------------------	--------	--	---	--------	--	------	--------	--	--	--

**LCS Dup (1070934-BSD1)** Prepared: 07/05/01 Analyzed: 07/06/01

Diesel Range Organics	2.53	0.250	mg/l	2.58		98.1	50-150	2.81	50	
Heavy Oil Range Hydrocarbons	1.21	0.500	"	1.58		76.6	50-150	1.64	50	

<i>Surr: 1-Chlorooctadecane</i>	0.0801		"	0.0960		83.4	50-150			
---------------------------------	--------	--	---	--------	--	------	--------	--	--	--

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**BTEX per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1070942 - EPA 5030B**

**Blank (1070942-BLK1)** Prepared & Analyzed: 07/06/01

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surr: 4-BFB (PID)	48.1		"	50.0		96.2	75-120			

**LCS (1070942-BS2)** Prepared & Analyzed: 07/06/01

Benzene	15.7	0.500	ug/l	20.0		78.5	70-130			
Toluene	18.2	0.500	"	20.0		91.0	70-130			
Ethylbenzene	21.1	0.500	"	20.0		106	70-130			
Xylenes (total)	64.0	1.00	"	60.0		107	70-130			
Surr: 4-BFB (PID)	48.4		"	50.0		96.8	75-120			

**LCS Dup (1070942-BSD2)** Prepared & Analyzed: 07/06/01

Benzene	15.8	0.500	ug/l	20.0		79.0	70-130	0.635	200	
Toluene	17.7	0.500	"	20.0		88.5	70-130	2.79	200	
Ethylbenzene	19.3	0.500	"	20.0		96.5	70-130	8.91	200	
Xylenes (total)	57.7	1.00	"	60.0		96.2	70-130	10.4	200	
Surr: 4-BFB (PID)	46.1		"	50.0		92.2	75-120			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/11/01 16:45
--	--	-----------------------------

**Notes and Definitions**

- A-01 Detected hydrocarbons appear to be due to weathered gas as well as weathered diesel.
- Q-01 The spike recovery, and/or RPD, for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.  
Environmental Laboratory Network**



18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508  
 East 11115 Montgomery, Suite B, Spokane, WA 98206-4776  
 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132  
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200 FAX 420-9210  
 (509) 924-9200 FAX 924-9290  
 (503) 906-9200 FAX 906-9210  
 (541) 383-9310 FAX 382-7588


## CHAIN OF CUSTODY REPORT

Work Order #: **P160092**

CLIENT: **AMEC**  
 REPORT TO: **Paul Stull**  
 ADDRESS: **7477 S.W. Tech Ctr Dr. Port. OR 97223**  
 PHONE: **503 639 3000** FAX:

INVOICE TO: **AMEC**  
 P.O. NUMBER:

**TURNAROUND REQUEST in Business Days\***

Organic & Inorganic Analyses  
 7  5  4  3  2  1  <1

Petroleum Hydrocarbon Analyses  
 STD.  5  4  3  2  1  <1

STD.  **OTHER** Please Specify

\*Turnaround Requests less than standard may incur Rush Charges.

PROJECT NAME: **Fred Meyer Port Orchard**  
 PROJECT NUMBER: **9-61m-10282-0**  
 SAMPLED BY: **McFarlane**

**REQUESTED ANALYSES**

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	M.W.TPH-C	M.W.TPH-D	BOZ-B GTEx/MTBE	BTEx													
1. MW 103	6-28-01 16:00	X	X	X														
2. MW 105	6-28-01 15:00	X	X	X														
3. MW 10	6-28-01 8:00				X													
4. EPB	6-28-01				X													
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		
11.																		
12.																		
13.																		
14.																		
15.																		

MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
W	5		
W	5		
W	2		
W	2		

RELINQUISHED BY: <b>W. J. McFarlane</b> PRINT NAME: <b>W. J. McFarlane</b> FIRM: <b>AMEC</b>	DATE: <b>7-3-01</b> TIME: <b>15:30</b>	RECEIVED BY: <b>Camille Holladay</b> PRINT NAME: <b>Camille Holladay</b> FIRM: <b>NCA</b>	DATE: <b>7/2/01</b> TIME: <b>1532</b>
RELINQUISHED BY: <b> </b> PRINT NAME: <b> </b> FIRM: <b> </b>	DATE: <b> </b> TIME: <b> </b>	RECEIVED BY: <b> </b> PRINT NAME: <b> </b> FIRM: <b> </b>	DATE: <b> </b> TIME: <b> </b>

ADDITIONAL REMARKS:  TEMP: **6.1** PAGE **1** OF **1**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

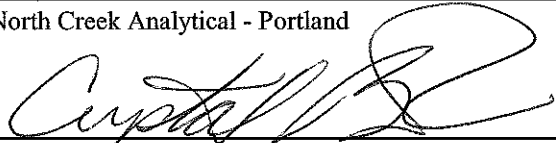
AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MWX	P1I0912-01	Water	09/23/01 08:00	09/28/01 10:59
EB	P1I0912-02	Water	09/23/01 08:20	09/28/01 10:59
MW103	P1I0912-03	Water	09/23/01 09:45	09/28/01 10:59
MW105	P1I0912-04	Water	09/23/01 10:50	09/28/01 10:59

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7477 S.W. Tech Center Drive  
 Portland, OR 97223-8024

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 10/04/01 16:28

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B  
 North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P110912-03RE1) Water</b>					Sampled: 09/23/01 Received: 09/28/01				
Benzene	ND	10.0	ug/l	20	NW-G, 8021B	10/02/01	10/02/01	1100063	
Toluene	109	10.0	"	"	"	"	"	"	
Ethylbenzene	628	10.0	"	"	"	"	"	"	
Xylenes (total)	3560	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	40.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>23200</b>	<b>1600</b>	"	"	"	"	"	"	
Surr: 4-BFB (FID)	114 %	50-150							
Surr: 4-BFB (PID)	109 %	75-125							
<b>MW105 (P110912-04) Water</b>					Sampled: 09/23/01 Received: 09/28/01				
Benzene	ND	0.500	ug/l	1	NW-G, 8021B	10/01/01	10/01/01	1100002	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>135</b>	<b>80.0</b>	"	"	"	"	"	"	
Surr: 4-BFB (FID)	110 %	50-150							
Surr: 4-BFB (PID)	101 %	75-125							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588


AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P110912-03) Water</b>						Sampled: 09/23/01 Received: 09/28/01			
Diesel Range Organics	2.80	0.250	mg/l	1	NWTPH-Dx	09/28/01	10/01/01	1091882	D-15
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	90.6 %	50-150							
<b>MW105 (P110912-04) Water</b>						Sampled: 09/23/01 Received: 09/28/01			
Diesel Range Organics	ND	0.250	mg/l	1	NWTPH-Dx	09/28/01	10/01/01	1091882	
Heavy Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	90.3 %	50-150							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7477 S.W. Tech Center Drive  
 Portland, OR 97223-8024

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 10/04/01 16:28

**BTEX and MTBE per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MWX (P110912-01) Water</b>						Sampled: 09/23/01 Received: 09/28/01			
Benzene	ND	0.500	ug/l	1	EPA 8021B	10/01/01	10/01/01	1100002	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	104 %	75-120							
<b>EB (P110912-02) Water</b>						Sampled: 09/23/01 Received: 09/28/01			
Benzene	ND	0.500	ug/l	1	EPA 8021B	10/01/01	10/01/01	1100002	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	99.2 %	75-120							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7477 S.W. Tech Center Drive  
 Portland, OR 97223-8024

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 10/04/01 16:28

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1100002 - EPA 5030B**

**Blank (1100002-BLK1)**

Prepared & Analyzed: 10/01/01

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Gasoline Range Hydrocarbons	ND	80.0	"							
Surr: 4-BFB (FID)	52.0		"	50.0		104	50-150			
Surr: 4-BFB (PID)	48.9		"	50.0		97.8	75-125			

**LCS (1100002-BS1)**

Prepared & Analyzed: 10/01/01

Gasoline Range Hydrocarbons	882	80.0	ug/l	1000		88.2	50-150			
Surr: 4-BFB (FID)	67.7		"	50.0		135	50-150			

**LCS (1100002-BS2)**

Prepared & Analyzed: 10/01/01

Benzene	20.3	0.500	ug/l	20.0		102	70-130			
Toluene	20.4	0.500	"	20.0		102	70-130			
Ethylbenzene	19.9	0.500	"	20.0		99.5	70-130			
Xylenes (total)	56.8	1.00	"	60.0		94.7	70-130			
Methyl tert-butyl ether	18.7	2.00	"	20.0		93.5	70-130			
Surr: 4-BFB (PID)	49.3		"	50.0		98.6	75-125			

**Duplicate (1100002-DUP1)**

Source: P110912-03

Prepared & Analyzed: 10/01/01

Gasoline Range Hydrocarbons	26200	800	ug/l		25500			2.71	50	
Surr: 4-BFB (FID)	55.1		"	50.0		110	50-150			

**Duplicate (1100002-DUP2)**

Source: P110686-01

Prepared & Analyzed: 10/01/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l		ND				50	
Surr: 4-BFB (FID)	52.6		"	50.0		105	50-150			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1100002 - EPA 5030B**

Matrix Spike (1100002-MS1)	Source: P110912-01			Prepared & Analyzed: 10/01/01						
Benzene	20.7	0.500	ug/l	20.0	ND	104	70-130			
Toluene	20.8	0.500	"	20.0	ND	104	70-130			
Ethylbenzene	20.6	0.500	"	20.0	ND	103	70-130			
Xylenes (total)	58.6	1.00	"	60.0	ND	97.7	70-130			
Surr: 4-BFB (PID)	49.7		"	50.0		99.4	75-125			

Matrix Spike Dup (1100002-MSD1)	Source: P110912-01			Prepared & Analyzed: 10/01/01						
Benzene	21.0	0.500	ug/l	20.0	ND	105	70-130	1.44	15	
Toluene	20.8	0.500	"	20.0	ND	104	70-130	0.00	15	
Ethylbenzene	20.3	0.500	"	20.0	ND	102	70-130	1.47	15	
Xylenes (total)	57.7	1.00	"	60.0	ND	96.2	70-130	1.55	15	
Surr: 4-BFB (PID)	47.0		"	50.0		94.0	75-125			

**Batch 1100063 - EPA 5030B**

Blank (1100063-BLK1)	Prepared & Analyzed: 10/02/01									
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Gasoline Range Hydrocarbons	ND	80.0	"							
Surr: 4-BFB (FID)	47.0		"	50.0		94.0	50-150			
Surr: 4-BFB (PID)	47.3		"	50.0		94.6	75-125			

LCS (1100063-BS1)	Prepared & Analyzed: 10/02/01									
Gasoline Range Hydrocarbons	1090	80.0	ug/l	1000		109	50-150			
Surr: 4-BFB (FID)	53.3		"	50.0		107	50-150			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1100063 - EPA 5030B**

LCS (1100063-BS2)				Prepared & Analyzed: 10/02/01						
Benzene	22.2	0.500	ug/l	20.0		111	70-130			
Toluene	23.8	0.500	"	20.0		119	70-130			
Ethylbenzene	20.6	0.500	"	20.0		103	70-130			
Xylenes (total)	62.3	1.00	"	60.0		104	70-130			
Surr: 4-BFB (PID)	53.0		"	50.0		106	75-125			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1091882 - EPA 3510 Fuels**

**Blank (1091882-BLK1)** Prepared: 09/28/01 Analyzed: 10/01/01

Diesel Range Organics	ND	0.250	mg/l							
Heavy Oil Range Hydrocarbons	ND	0.500	"							
<i>Surr: 1-Chlorooctadecane</i>	<i>0.0867</i>		<i>"</i>	<i>0.0960</i>		<i>90.3</i>	<i>50-150</i>			

**LCS (1091882-BS1)** Prepared: 09/28/01 Analyzed: 10/02/01

Diesel Range Organics	2.53	0.250	mg/l	2.58		98.1	50-150			
Heavy Oil Range Hydrocarbons	1.52	0.500	"	1.58		96.2	50-150			
<i>Surr: 1-Chlorooctadecane</i>	<i>0.0771</i>		<i>"</i>	<i>0.0960</i>		<i>80.3</i>	<i>50-150</i>			

**LCS Dup (1091882-BSD1)** Prepared: 09/28/01 Analyzed: 10/02/01

Diesel Range Organics	2.31	0.250	mg/l	2.58		89.5	50-150	9.09	50	
Heavy Oil Range Hydrocarbons	1.37	0.500	"	1.58		86.7	50-150	10.4	50	
<i>Surr: 1-Chlorooctadecane</i>	<i>0.0708</i>		<i>"</i>	<i>0.0960</i>		<i>73.8</i>	<i>50-150</i>			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7477 S.W. Tech Center Drive Portland, OR 97223-8024	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/04/01 16:28
--	--	-----------------------------

**BTEX and MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1100002 - EPA 5030B**

**Blank (1100002-BLK1)**

Prepared & Analyzed: 10/01/01

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Surr: 4-BFB (PID)	48.9		"	50.0		97.8	75-120			

**LCS (1100002-BS2)**

Prepared & Analyzed: 10/01/01

Benzene	20.3	0.500	ug/l	20.0		102	70-130			
Toluene	20.4	0.500	"	20.0		102	70-130			
Ethylbenzene	19.9	0.500	"	20.0		99.5	70-130			
Xylenes (total)	56.8	1.00	"	60.0		94.7	70-130			
Methyl tert-butyl ether	18.7	2.00	"	20.0		93.5	70-130			
Surr: 4-BFB (PID)	49.3		"	50.0		98.6	75-120			

**Matrix Spike (1100002-MS1)**

Source: P110912-01

Prepared & Analyzed: 10/01/01

Benzene	20.7	0.500	ug/l	20.0	ND	104	70-130			
Toluene	20.8	0.500	"	20.0	ND	104	70-130			
Ethylbenzene	20.6	0.500	"	20.0	ND	103	70-130			
Xylenes (total)	58.6	1.00	"	60.0	ND	97.7	70-130			
Surr: 4-BFB (PID)	49.7		"	50.0		99.4	75-120			

**Matrix Spike Dup (1100002-MSD1)**

Source: P110912-01

Prepared & Analyzed: 10/01/01

Benzene	21.0	0.500	ug/l	20.0	ND	105	70-130	1.44	15	
Toluene	20.8	0.500	"	20.0	ND	104	70-130	0.00	15	
Ethylbenzene	20.3	0.500	"	20.0	ND	102	70-130	1.47	15	
Xylenes (total)	57.7	1.00	"	60.0	ND	96.2	70-130	1.55	15	
Surr: 4-BFB (PID)	47.0		"	50.0		94.0	75-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7477 S.W. Tech Center Drive  
 Portland, OR 97223-8024

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

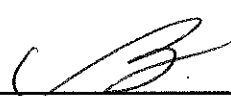
Reported:  
 10/04/01 16:28

**Notes and Definitions**

- D-15 Detected hydrocarbons have non-petroleum peaks or elution pattern that suggests the presence of biogenic interference.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



11720 North Creek Pkwy N. Suite 400, Bothell, WA 98011-8244  
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132  
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

(425) 420-9200 FAX 420-9210  
 (509) 924-9200 FAX 924-9290  
 (503) 906-9200 FAX 906-9210  
 (541) 383-9310 FAX 382-7588


### CHAIN OF CUSTODY REPORT

Work Order #: P110912

CLIENT: <u>AMEC</u>		INVOICE TO:						TURNAROUND REQUEST in Business Days*																																																																																																																																																																																																																																																																																																																																			
REPORT TO: <u>P. Stull</u>		P.O. NUMBER:						Organic & Inorganic Analyses																																																																																																																																																																																																																																																																																																																																			
ADDRESS: <u>7477 S - Tech Center Dr Port OR 97223</u>								<input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD.				Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD.																																																																																																																																																																																																																																																																																																																															
PHONE: <u>5036393400</u> FAX:		PROJECT NAME: <u>Port Orchard Firm.</u>						OTHER <input type="checkbox"/> Please Specify																																																																																																																																																																																																																																																																																																																																			
PROJECT NUMBER: <u>9-6111-10282-</u>		REQUESTED ANALYSES						*Turnaround Requests less than standard may incur Rush Charges.																																																																																																																																																																																																																																																																																																																																			
SAMPLED BY: <u>McFarland</u>		<table border="1"> <thead> <tr> <th></th> <th>MWTPH-GX</th> <th>MWTPH-DX</th> <th>DOZD</th> <th>MTBE/BTEX</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. <u>max</u></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. <u>EB</u></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. <u>mw103</u></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u>mw105</u></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td>5.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15.</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>							MWTPH-GX	MWTPH-DX	DOZD	MTBE/BTEX																1. <u>max</u>				X																2. <u>EB</u>				X																3. <u>mw103</u>			X	X	X															4. <u>mw105</u>			X	X	X															5.																				6.																				7.																				8.																				9.																				10.																				11.																				12.																				13.																				14.																				15.																				MATRIX (W. S. O)	# OF CONT.	COMMENTS	NCA WO ID
	MWTPH-GX	MWTPH-DX	DOZD	MTBE/BTEX																																																																																																																																																																																																																																																																																																																																							
1. <u>max</u>				X																																																																																																																																																																																																																																																																																																																																							
2. <u>EB</u>				X																																																																																																																																																																																																																																																																																																																																							
3. <u>mw103</u>			X	X	X																																																																																																																																																																																																																																																																																																																																						
4. <u>mw105</u>			X	X	X																																																																																																																																																																																																																																																																																																																																						
5.																																																																																																																																																																																																																																																																																																																																											
6.																																																																																																																																																																																																																																																																																																																																											
7.																																																																																																																																																																																																																																																																																																																																											
8.																																																																																																																																																																																																																																																																																																																																											
9.																																																																																																																																																																																																																																																																																																																																											
10.																																																																																																																																																																																																																																																																																																																																											
11.																																																																																																																																																																																																																																																																																																																																											
12.																																																																																																																																																																																																																																																																																																																																											
13.																																																																																																																																																																																																																																																																																																																																											
14.																																																																																																																																																																																																																																																																																																																																											
15.																																																																																																																																																																																																																																																																																																																																											
RELINQUISHED BY: <u>[Signature]</u> DATE: <u>9-25-01</u>		RECEIVED BY: <u>[Signature]</u> DATE: <u>9/27/01</u>		FIRM: <u>AMEC</u>		FIRM: <u>NCA</u>		DATE: <u>9/27/01</u>																																																																																																																																																																																																																																																																																																																																			
PRINT NAME: <u>Walter Parkhal</u> FIRM: <u>AMEC</u> TIME: <u>12:00</u>		PRINT NAME: <u>[Signature]</u> FIRM: <u>NCA</u> TIME: <u>9:40</u>		RELINQUISHED BY: <u>[Signature]</u> DATE: <u> </u>		RECEIVED BY: <u>Camille Holladay</u> DATE: <u>9/27/01</u>		FIRM: <u>NCA</u> TIME: <u>12:01</u>																																																																																																																																																																																																																																																																																																																																			
PRINT NAME: <u>[Signature]</u> FIRM: <u> </u> TIME: <u> </u>		PRINT NAME: <u>Camille Holladay</u> FIRM: <u>NCA</u> TIME: <u> </u>		ADDITIONAL REMARKS:		TEMP: <u>10.6</u>		PAGE 1 OF 1																																																																																																																																																																																																																																																																																																																																			



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Amended Report</b> Issued: 01/24/02 15:45
---	--	---

**ANALYTICAL REPORT FOR SAMPLES - Amended**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EB	P1L0426-02	Water	12/11/01 11:00	12/13/01 14:00
MW105	P1L0426-03	Water	12/11/01 12:00	12/13/01 14:00
MW103	P1L0426-04	Water	12/11/01 13:00	12/13/01 14:00

North Creek Analytical - Portland

Crystal Burkholder, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.  
Environmental Laboratory Network**





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Amended Report</b> Issued: 01/24/02 15:45
---	--	---

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>EB (P1L0426-02RE1) Water</b>						Sampled: 12/11/01 Received: 12/13/01			
Gasoline Range Hydrocarbons	ND	80.0	ug/l	1	NW TPH-Gx	12/19/01	12/19/01	1120640	
<i>Surr: 4-BFB</i>	86.2 %	50-150							
<b>MW105 (P1L0426-03RE1) Water</b>						Sampled: 12/11/01 Received: 12/13/01			
Gasoline Range Hydrocarbons	ND	80.0	ug/l	1	NW TPH-Gx	12/19/01	12/19/01	1120640	
<i>Surr: 4-BFB</i>	96.2 %	50-150							
<b>MW103 (P1L0426-04RE2) Water</b>						Sampled: 12/11/01 Received: 12/13/01			
Gasoline Range Hydrocarbons	21100	1600	ug/l	20	NW TPH-Gx	12/19/01	12/19/01	1120640	
<i>Surr: 4-BFB</i>	101 %	50-150							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

**Amended Report**  
 Issued: 01/24/02 15:45


**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW105 (P1L0426-03) Water</b>						Sampled: 12/11/01 Received: 12/13/01			
n-Butylbenzene	ND	5.00	ug/l	1	EPA 8260B	12/20/01	12/20/01	1120663	
p-Isopropyltoluene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
<i>Surr: 4-BFB</i>	98.0 %	84-118							
<i>Surr: 1,2-DCA-d4</i>	104 %	79-123							
<i>Surr: Dibromofluoromethane</i>	102 %	81-121							
<i>Surr: Toluene-d8</i>	99.0 %	87-111							

<b>MW103 (P1L0426-04) Water</b>						Sampled: 12/11/01 Received: 12/13/01			
n-Butylbenzene	ND	100	ug/l	20	EPA 8260B	12/20/01	12/21/01	1120663	
p-Isopropyltoluene	ND	40.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	20.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	20.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
Benzene	ND	10.0	"	"	"	"	"	"	
<b>Toluene</b>	<b>18.0</b>	10.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>264</b>	10.0	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1950</b>	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	40.0	"	"	"	"	"	"	
Naphthalene	<b>137</b>	40.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1130</b>	20.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>441</b>	10.0	"	"	"	"	"	"	
Isopropylbenzene	ND	40.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>35.0</b>	10.0	"	"	"	"	"	"	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Amended Report</b> Issued: 01/24/02 15:45
---	--	---

**Selected Volatile Organic Compounds per EPA Method 8260B**

**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
---------	--------	-----------------	-------	----------	--------	----------	----------	-------	-------

**MW103 (P1L0426-04) Water**

Sampled: 12/11/01 Received: 12/13/01

Surr: 4-BFB	105 %	84-118							
Surr: 1,2-DCA-d4	107 %	79-123							
Surr: Dibromofluoromethane	103 %	81-121							
Surr: Toluene-d8	99.5 %	87-111							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**

Page 4 of 9



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	<b>Project: Fred Meyer Port Orchard</b> <b>Project Number: 9-61M-10282</b> <b>Project Manager: Paul Stull</b>	<b>Amended Report</b> <b>Issued: 01/24/02 15:45</b>
--	---	--

**Gasoline Hydrocarbons per NW TPH-Gx Method - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1120591 - EPA 5030B**

**Blank (1120591-BLK1)**

Prepared & Analyzed: 12/18/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l							
<i>Surr: 4-BFB</i>	45.0		"	50.0		90.0	50-150			

**LCS (1120591-BS1)**

Prepared & Analyzed: 12/18/01

Gasoline Range Hydrocarbons	1250	80.0	ug/l	1250		100	70-120			
<i>Surr: 4-BFB</i>	56.7		"	50.0		113	50-150			

**Duplicate (1120591-DUP1)**

Source: P1L0485-01

Prepared & Analyzed: 12/18/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l		ND				50	
<i>Surr: 4-BFB</i>	48.8		"	50.0		97.6	50-150			

**Duplicate (1120591-DUP2)**

Source: P1L0426-02

Prepared & Analyzed: 12/18/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l		ND				50	
<i>Surr: 4-BFB</i>	49.2		"	50.0		98.4	50-150			

**Batch 1120639 - EPA 5030B**

**Blank (1120639-BLK1)**

Prepared & Analyzed: 12/19/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l							
<i>Surr: 4-BFB</i>	44.7		"	50.0		89.4	50-150			

**LCS (1120639-BS1)**

Prepared & Analyzed: 12/19/01

Gasoline Range Hydrocarbons	840	80.0	ug/l	1000		84.0	70-120			
<i>Surr: 4-BFB</i>	50.3		"	50.0		101	50-150			

**Batch 1120640 - EPA 5030B**


**Blank (1120640-BLK1)**

Prepared & Analyzed: 12/19/01

Gasoline Range Hydrocarbons	ND	80.0	ug/l							
<i>Surr: 4-BFB</i>	46.8		"	50.0		93.6	50-150			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
 Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Amended Report</b> Issued: 01/24/02 15:45
---	--	---

**Gasoline Hydrocarbons per NW TPH-Gx Method - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1120640 - EPA 5030B**

**LCS (1120640-BS1)**

Prepared & Analyzed: 12/19/01

Gasoline Range Hydrocarbons	1070	80.0	ug/l	1000		107	70-120			
<i>Surr: 4-BFB</i>	<i>59.4</i>		<i>"</i>	<i>50.0</i>		<i>119</i>	<i>50-150</i>			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

**Amended Report**  
 Issued: 01/24/02 15:45

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1120663 - EPA 5030B**

**Blank (1120663-BLK1)**

Prepared & Analyzed: 12/20/01

n-Butylbenzene	ND	5.00	ug/l							
p-Isopropyltoluene	ND	2.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Naphthalene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
Surr: 4-BFB	19.1		"	20.0		95.5	84-118			
Surr: 1,2-DCA-d4	22.3		"	20.0		112	79-123			
Surr: Dibromofluoromethane	20.4		"	20.0		102	81-121			
Surr: Toluene-d8	20.3		"	20.0		102	87-111			

**LCS (1120663-BS1)**

Prepared & Analyzed: 12/20/01

Benzene	21.6	0.500	ug/l	20.0		108	80-125			
Toluene	21.8	0.500	"	20.0		109	80-125			
Ethylbenzene	20.5	0.500	"	20.0		102	80-125			
Xylenes (total)	61.4	1.00	"	60.0		102	80-125			
Surr: 4-BFB	20.6		"	20.0		103	84-118			
Surr: 1,2-DCA-d4	22.3		"	20.0		112	79-123			
Surr: Dibromofluoromethane	21.0		"	20.0		105	81-121			
Surr: Toluene-d8	20.6		"	20.0		103	87-111			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network

Page 7 of 9



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

**Amended Report**  
 Issued: 01/24/02 15:45

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 1120663 - EPA 5030B**

**Matrix Spike (1120663-MS1)**

Source: P1L0476-04

Prepared & Analyzed: 12/20/01

Benzene	26.9	0.500	ug/l	20.0	7.77	95.6	80-125			
Toluene	18.7	0.500	"	20.0	ND	92.7	80-125			
Ethylbenzene	18.8	0.500	"	20.0	ND	94.0	80-125			
Xylenes (total)	99.3	1.00	"	60.0	50.7	81.0	80-125			
Surr: 4-BFB	20.6		"	20.0		103	84-118			
Surr: 1,2-DCA-d4	21.7		"	20.0		108	79-123			
Surr: Dibromofluoromethane	21.4		"	20.0		107	81-121			
Surr: Toluene-d8	19.5		"	20.0		97.5	87-111			

**Matrix Spike Dup (1120663-MSD1)**

Source: P1L0476-04

Prepared & Analyzed: 12/20/01

Benzene	27.8	0.500	ug/l	20.0	7.77	100	80-125	3.29	25	
Toluene	20.2	0.500	"	20.0	ND	100	80-125	7.71	25	
Ethylbenzene	20.5	0.500	"	20.0	ND	102	80-125	8.65	25	
Xylenes (total)	107	1.00	"	60.0	50.7	93.8	80-125	7.46	25	
Surr: 4-BFB	20.3		"	20.0		102	84-118			
Surr: 1,2-DCA-d4	22.0		"	20.0		110	79-123			
Surr: Dibromofluoromethane	20.6		"	20.0		103	81-121			
Surr: Toluene-d8	20.0		"	20.0		100	87-111			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Amended Report</b> Issued: 01/24/02 15:45
---	--	---

**Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**





ENVIRONMENTAL CHEMISTRY LABORATORY  
7477 SW Tech Center Drive  
Portland, Oregon, U.S.A. 97223-8025  
Tel (503)639-3400 Fax (503) 620-7892

P120426

1562

**CHAIN OF CUSTODY**

PROJECT <b>Port Orchard Fred Meyer</b>		PROJECT No. <b>9-649-10282</b>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)																
REPORT TO: <b>P. Stull</b>		PHONE No. <b>639 3400</b>																		
PROJECT MANGER <b>J. Kuiper</b>		PHONE No. <b>↓</b>																		
SAMPLER'S NAME (please print) <b>McFarland</b>		PHONE No. <b>↓</b>																		
SAMPLER'S SIGNATURE <b>ym</b>																				
SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS															
					No.	VOL.														
1. <b>max</b>	<b>12-11-01</b>	<b>8:00</b>	<b>H2O</b>	<b>HCl</b>	<b>2</b>	<b>500</b>														
2. <b>EB</b>	<b>12-11-01</b>	<b>11:00</b>	<b>H2O</b>	<b>HCl</b>	<b>2</b>	<b>500</b>														
3. <b>max 105</b>	<b>12-11-01</b>	<b>12:00</b>	<b>H2O</b>	<b>HCl</b>	<b>5/2</b>	<b>500 liter</b>														
4. <b>max 103</b>	<b>12-11-01</b>	<b>13:00</b>	<b>H2O</b>	<b>HCl</b>	<b>5/2</b>	<b>500 liter</b>														
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

SAMPLE RECEIPT		LABORATORY			TURNAROUND TIME		QC Reporting Requirements (Add'l charges may apply)		COMMENTS / INSTRUCTIONS	
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #			<input type="checkbox"/> 8 HOUR		<input type="checkbox"/> LEVEL I			
CONDITION OF CONTAINERS		CARRIER			<input type="checkbox"/> 24 HOUR		<input checked="" type="checkbox"/> LEVEL II			
CONDITION OF SEALS		DOT DESIGNATION			<input type="checkbox"/> 1 WEEK		<input type="checkbox"/> LEVEL II w/project specific Duplicates/Spikes			
					<input checked="" type="checkbox"/> 2 WEEK (standard)		<input type="checkbox"/> Level III & IV (Full validation package)			
					<input type="checkbox"/> OTHER _____					
RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME			
1. <b>upmilled amec</b>		<b>12-13-01</b>	<b>9:00</b>	1. <b>[Signature]</b>		<b>12/13/01</b>	<b>12:50</b>			
2. <b>[Signature]</b>				2. <b>[Signature]</b>		<b>12/13/01</b>	<b>1400</b>			
3.										

1.9

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

**Reported:**  
04/02/02 17:03

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MWX	P2C0728-01	Water	03/20/02 12:00	03/25/02 14:00
EB	P2C0728-02	Water	03/20/02 12:00	03/25/02 14:00
MW 103	P2C0728-03	Water	03/20/02 12:00	03/25/02 14:00
MW 105	P2C0728-04	Water	03/20/02 12:00	03/25/02 14:00

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW 103 (P2C0728-03) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
<b>Gasoline Range Hydrocarbons</b>	<b>10700</b>	800	ug/l	10	NW TPH-Gx	03/27/02	03/28/02	2030864	
<i>Surr: 4-BFB</i>	<i>84.2 %</i>	<i>50-150</i>							
<b>MW 105 (P2C0728-04) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
<b>Gasoline Range Hydrocarbons</b>	<b>ND</b>	80.0	ug/l	1	NW TPH-Gx	03/27/02	03/28/02	2030864	
<i>Surr: 4-BFB</i>	<i>79.6 %</i>	<i>50-150</i>							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

2 of 11

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**BTEX per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MWX (P2C0728-01RE1) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
Benzene	ND	0.500	ug/l	1	EPA 8021B	03/28/02	03/28/02	2030916	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	99.8 %	75-120							
<b>EB (P2C0728-02RE1) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
Benzene	ND	0.500	ug/l	1	EPA 8021B	03/28/02	03/28/02	2030916	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	102 %	75-120							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

3 of 11

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW 103 (P2C0728-03) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
n-Butylbenzene	ND	25.0	ug/l	5	EPA 8260B	03/27/02	03/27/02	2030877	
<b>p-Isopropyltoluene</b>	<b>10.1</b>	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.50	"	"	"	"	"	"	
Benzene	ND	2.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>10.0</b>	2.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>97.3</b>	2.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1130</b>	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>82.8</b>	10.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>948</b>	5.00	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>389</b>	2.50	"	"	"	"	"	"	
Isopropylbenzene	ND	10.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>19.1</b>	2.50	"	"	"	"	"	"	
<i>Surr: 4-BFB</i>	<i>107 %</i>	<i>84-118</i>							
<i>Surr: 1,2-DCA-d4</i>	<i>90.5 %</i>	<i>79-123</i>							
<i>Surr: Dibromofluoromethane</i>	<i>89.0 %</i>	<i>81-121</i>							
<i>Surr: Toluene-d8</i>	<i>90.0 %</i>	<i>87-111</i>							
<b>MW 105 (P2C0728-04) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
n-Butylbenzene	ND	5.00	ug/l	1	EPA 8260B	03/27/02	03/27/02	2030877	
p-Isopropyltoluene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>2.84</b>	1.00	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.700</b>	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

AMBC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW 105 (P2C0728-04) Water</b>						Sampled: 03/20/02 Received: 03/25/02			
n-Propylbenzene	ND	0.500	ug/l	1	EPA 8260B	03/27/02	03/27/02	2030877	
Surr: 4-BFB	98.0 %	84-118							
Surr: 1,2-DCA-d4	92.0 %	79-123							
Surr: Dibromofluoromethane	93.0 %	81-121							
Surr: Toluene-d8	81.0 %	87-111							S-03

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

5 of 11

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

Reported:  
 04/02/02 17:03

**Gasoline Hydrocarbons per NW TPH-Gx Method - Quality Control**

**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2030864 - EPA 5030B</b>										
<b>Blank (2030864-BLK1)</b>					Prepared & Analyzed: 03/27/02					
Gasoline Range Hydrocarbons	ND	80.0	ug/l							
<i>Surr: 4-BFB</i>	39.5		"	50.0		79.0	50-150			
<b>LCS (2030864-BS1)</b>					Prepared & Analyzed: 03/27/02					
Gasoline Range Hydrocarbons	778	80.0	ug/l	1000		77.8	70-130			
<i>Surr: 4-BFB</i>	46.2		"	50.0		92.4	50-150			
<b>Duplicate (2030864-DUP1)</b>					Source: P2C0728-03		Prepared: 03/27/02 Analyzed: 03/28/02			
Gasoline Range Hydrocarbons	10500	800	ug/l		10700			1.89	40	
<i>Surr: 4-BFB</i>	38.2		"	50.0		76.4	50-150			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**BTEX per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2030864 - EPA 5030B**

**Blank (2030864-BLK1)**

Prepared & Analyzed: 03/27/02

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
<i>Surr: 4-BFB (PID)</i>	<i>38.1</i>		<i>"</i>	<i>50.0</i>		<i>76.2</i>	<i>75-120</i>			

**LCS (2030864-BS2)**

Prepared & Analyzed: 03/27/02

Benzene	19.6	0.500	ug/l	20.0		98.0	70-130			
Toluene	18.4	0.500	"	20.0		92.0	70-130			
Ethylbenzene	19.7	0.500	"	20.0		98.5	70-130			
Xylenes (total)	57.1	1.00	"	60.0		95.2	70-130			
<i>Surr: 4-BFB (PID)</i>	<i>40.0</i>		<i>"</i>	<i>50.0</i>		<i>80.0</i>	<i>75-120</i>			

**Matrix Spike (2030864-MS1)**

Source: P2C0816-06

Prepared & Analyzed: 03/27/02

Benzene	392	5.00	ug/l	200	191	100	70-130			
Toluene	705	5.00	"	200	560	72.5	70-130			
Ethylbenzene	309	5.00	"	200	116	96.5	70-130			
Xylenes (total)	1160	10.0	"	600	667	82.2	70-130			
<i>Surr: 4-BFB (PID)</i>	<i>44.8</i>		<i>"</i>	<i>50.0</i>		<i>89.6</i>	<i>75-120</i>			

**Matrix Spike Dup (2030864-MSD1)**

Source: P2C0816-06

Prepared & Analyzed: 03/27/02

Benzene	378	5.00	ug/l	200	191	93.5	70-130	3.64	15	
Toluene	694	5.00	"	200	560	67.0	70-130	1.57	15	Q-01
Ethylbenzene	302	5.00	"	200	116	93.0	70-130	2.29	15	
Xylenes (total)	1150	10.0	"	600	667	80.5	70-130	0.866	15	
<i>Surr: 4-BFB (PID)</i>	<i>43.7</i>		<i>"</i>	<i>50.0</i>		<i>87.4</i>	<i>75-120</i>			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager



AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

Reported:  
 04/02/02 17:03

**BTEX per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2030916 - EPA 5030B**

**Blank (2030916-BLK1)**

Prepared & Analyzed: 03/28/02

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
<i>Surr: 4-BFB (PID)</i>	<i>50.2</i>		<i>"</i>	<i>50.0</i>		<i>100</i>	<i>75-120</i>			

**LCS (2030916-BS2)**

Prepared & Analyzed: 03/28/02

Benzene	21.8	0.500	ug/l	20.0		109	70-130			
Toluene	20.4	0.500	"	20.0		102	70-130			
Ethylbenzene	21.1	0.500	"	20.0		106	70-130			
Xylenes (total)	60.6	1.00	"	60.0		101	70-130			
<i>Surr: 4-BFB (PID)</i>	<i>46.2</i>		<i>"</i>	<i>50.0</i>		<i>92.4</i>	<i>75-120</i>			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

AMBC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2030877 - EPA 5030B**

**Blank (2030877-BLK1)**

Prepared & Analyzed: 03/27/02

n-Butylbenzene	ND	5.00	ug/l							
p-Isopropyltoluene	ND	2.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Naphthalene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
<i>Surr: 4-BFB</i>	19.0		"	20.0		95.0	84-118			
<i>Surr: 1,2-DCA-d4</i>	18.2		"	20.0		91.0	79-123			
<i>Surr: Dibromofluoromethane</i>	17.9		"	20.0		89.5	81-121			
<i>Surr: Toluene-d8</i>	17.8		"	20.0		89.0	87-111			

**LCS (2030877-BS1)**

Prepared & Analyzed: 03/27/02

Benzene	17.8	0.500	ug/l	20.0		89.0	80-125			
Toluene	18.3	0.500	"	20.0		91.5	80-125			
Ethylbenzene	21.3	0.500	"	20.0		106	80-125			
Xylenes (total)	64.5	1.00	"	60.0		108	80-125			
<i>Surr: 4-BFB</i>	20.2		"	20.0		101	84-118			
<i>Surr: 1,2-DCA-d4</i>	17.6		"	20.0		88.0	79-123			
<i>Surr: Dibromofluoromethane</i>	17.7		"	20.0		88.5	81-121			
<i>Surr: Toluene-d8</i>	18.1		"	20.0		90.5	87-111			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/02/02 17:03

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2030877 - EPA 5030B**

<b>Matrix Spike (2030877-MS1)</b>	<b>Source: P2C0749-01</b>			<b>Prepared &amp; Analyzed: 03/27/02</b>						
Benzene	19.4	0.500	ug/l	20.0	ND	97.0	80-125			
Toluene	19.4	0.500	"	20.0	ND	97.0	80-125			
Ethylbenzene	22.5	0.500	"	20.0	ND	112	80-125			
Xylenes (total)	67.7	1.00	"	60.0	ND	113	80-125			
<i>Surr: 4-BFB</i>	<i>20.1</i>		<i>"</i>	<i>20.0</i>		<i>100</i>	<i>84-118</i>			
<i>Surr: 1,2-DCA-d4</i>	<i>18.1</i>		<i>"</i>	<i>20.0</i>		<i>90.5</i>	<i>79-123</i>			
<i>Surr: Dibromofluoromethane</i>	<i>18.2</i>		<i>"</i>	<i>20.0</i>		<i>91.0</i>	<i>81-121</i>			
<i>Surr: Toluene-d8</i>	<i>18.5</i>		<i>"</i>	<i>20.0</i>		<i>92.5</i>	<i>87-111</i>			

<b>Matrix Spike Dup (2030877-MSD1)</b>	<b>Source: P2C0749-01</b>			<b>Prepared &amp; Analyzed: 03/27/02</b>						
Benzene	19.1	0.500	ug/l	20.0	ND	95.5	80-125	1.56	25	
Toluene	19.1	0.500	"	20.0	ND	95.5	80-125	1.56	25	
Ethylbenzene	22.4	0.500	"	20.0	ND	112	80-125	0.445	25	
Xylenes (total)	67.7	1.00	"	60.0	ND	113	80-125	0.00	25	
<i>Surr: 4-BFB</i>	<i>19.9</i>		<i>"</i>	<i>20.0</i>		<i>99.5</i>	<i>84-118</i>			
<i>Surr: 1,2-DCA-d4</i>	<i>18.0</i>		<i>"</i>	<i>20.0</i>		<i>90.0</i>	<i>79-123</i>			
<i>Surr: Dibromofluoromethane</i>	<i>18.0</i>		<i>"</i>	<i>20.0</i>		<i>90.0</i>	<i>81-121</i>			
<i>Surr: Toluene-d8</i>	<i>18.2</i>		<i>"</i>	<i>20.0</i>		<i>91.0</i>	<i>87-111</i>			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

**Reported:**  
04/02/02 17:03

#### Notes and Definitions

- Q-01 The spike recovery, and/or RPD, for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- S-03 Surrogate recovery is outside of NCA established control limits.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	Reported: 06/20/02 11:58
---	---	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P2F0425-01	Water	06/11/02 07:50	06/14/02 17:00
MW105	P2F0425-02	Water	06/11/02 08:25	06/14/02 17:00
MWX	P2F0425-03	Water	06/11/02 07:20	06/14/02 17:00
EB	P2F0425-04	Water	06/11/02 07:25	06/14/02 17:00

One liter amber bottles were not recieved for NWTPH-Dx analysis.

North Creek Analytical - Portland

Crystal Burkholder, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.  
Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	<b>Reported:</b> 06/20/02 11:58
---	---	------------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P2F0425-01) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
Gasoline Range Hydrocarbons	2020	80.0	ug/l	1	NW TPH-Gx	06/17/02	06/17/02	2060532	
Surr: 4-BFB	97.8 %	50-150							
<b>MW105 (P2F0425-02) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
Gasoline Range Hydrocarbons	ND	80.0	ug/l	1	NW TPH-Gx	06/17/02	06/17/02	2060532	
Surr: 4-BFB	93.8 %	50-150							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: None  
 Project Manager: Paul Stull

Reported:  
 06/20/02 11:58

**BTEX per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MWX (P2F0425-03) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
Benzene	ND	0.500	ug/l	1	EPA 8021B	06/17/02	06/17/02	2060532	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>91.2 %</i>	<i>75-120</i>							
<b>EB (P2F0425-04) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
Benzene	ND	0.500	ug/l	1	EPA 8021B	06/17/02	06/17/02	2060532	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>90.6 %</i>	<i>75-120</i>							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: None  
 Project Manager: Paul Stull

Reported:  
 06/20/02 11:58

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P2F0425-01) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
n-Butylbenzene	ND	25.0	ug/l	5	EPA 8260B	06/17/02	06/17/02	2060555	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.50	"	"	"	"	"	"	
Benzene	ND	2.50	"	"	"	"	"	"	
<b>Toluene</b>	<b>3.05</b>	2.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>32.4</b>	2.50	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>250</b>	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>25.3</b>	10.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>141</b>	5.00	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>51.8</b>	2.50	"	"	"	"	"	"	
Isopropylbenzene	ND	10.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>6.10</b>	2.50	"	"	"	"	"	"	
<i>Surr: 4-BFB</i>	<i>104 %</i>	<i>84-118</i>							
<i>Surr: 1,2-DCA-d4</i>	<i>98.0 %</i>	<i>79-123</i>							
<i>Surr: Dibromofluoromethane</i>	<i>107 %</i>	<i>81-121</i>							
<i>Surr: Toluene-d8</i>	<i>108 %</i>	<i>87-111</i>							

<b>MW105 (P2F0425-02) Water</b>						Sampled: 06/11/02 Received: 06/14/02			
n-Butylbenzene	ND	5.00	ug/l	1	EPA 8260B	06/17/02	06/17/02	2060555	
p-Isopropyltoluene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>1.69</b>	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1.47</b>	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	<b>Reported:</b> 06/20/02 11:58
---	---	------------------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B**

**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
---------	--------	-----------------	-------	----------	--------	----------	----------	-------	-------

MW105 (P2F0425-02) Water

Sampled: 06/11/02 Received: 06/14/02

Surr: 4-BFB	104 %	84-118							
Surr: 1,2-DCA-d4	99.5 %	79-123							
Surr: Dibromofluoromethane	108 %	81-121							
Surr: Toluene-d8	98.0 %	87-111							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**

5 of 10



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	<b>Reported:</b> 06/20/02 11:58
---	---	------------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2060532 - EPA 5030B**

<b>Duplicate (2060532-DUP1)</b>	<b>Source: P2F0426-03</b>			<b>Prepared &amp; Analyzed: 06/17/02</b>						
Gasoline Range Hydrocarbons	ND	80.0	ug/l		ND				40	
<i>Surr: 4-BFB</i>	50.3		"	50.0		101	50-150			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	Reported: 06/20/02 11:58
---	---	-----------------------------

**BTEX per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2060532 - EPA 5030B**

Matrix Spike (2060532-MS1)	Source: P2F0425-04			Prepared & Analyzed: 06/17/02						
Benzene	20.2	0.500	ug/l	20.0	ND	101	70-130			
Toluene	20.1	0.500	"	20.0	ND	100	70-130			
Ethylbenzene	20.5	0.500	"	20.0	ND	101	70-130			
Xylenes (total)	58.3	1.00	"	60.0	ND	95.6	70-130			
Surr: 4-BFB (PID)	44.9		"	50.0		89.8	75-120			

Matrix Spike Dup (2060532-MSD1)	Source: P2F0425-04			Prepared & Analyzed: 06/17/02						
Benzene	19.2	0.500	ug/l	20.0	ND	96.0	70-130	5.08	15	
Toluene	19.0	0.500	"	20.0	ND	95.0	70-130	5.63	15	
Ethylbenzene	19.6	0.500	"	20.0	ND	96.3	70-130	4.49	15	
Xylenes (total)	55.6	1.00	"	60.0	ND	91.1	70-130	4.74	15	
Surr: 4-BFB (PID)	44.7		"	50.0		89.4	75-120			

North Creek Analytical - Portland

Crystal Burkholder, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.  
Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	Reported: 06/20/02 11:58
---	---	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2060555 - EPA 5030B**

**Blank (2060555-BLK1)** Prepared & Analyzed: 06/17/02

n-Butylbenzene	ND	5.00	ug/l							
p-Isopropyltoluene	ND	2.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Naphthalene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
Surr: 4-BFB	20.2		"	20.0		101	84-118			
Surr: 1,2-DCA-d4	19.6		"	20.0		98.0	79-123			
Surr: Dibromofluoromethane	21.0		"	20.0		105	81-121			
Surr: Toluene-d8	20.9		"	20.0		104	87-111			

**LCS (2060555-BS1)** Prepared & Analyzed: 06/17/02

Benzene	17.8	0.500	ug/l	20.0		89.0	80-125			
Toluene	19.6	0.500	"	20.0		98.0	80-125			
Ethylbenzene	19.7	0.500	"	20.0		98.5	80-125			
Xylenes (total)	61.0	1.00	"	60.0		102	80-125			
Surr: 4-BFB	20.5		"	20.0		102	84-118			
Surr: 1,2-DCA-d4	19.1		"	20.0		95.5	79-123			
Surr: Dibromofluoromethane	21.2		"	20.0		106	81-121			
Surr: Toluene-d8	22.0		"	20.0		110	87-111			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: None Project Manager: Paul Stull	Reported: 06/20/02 11:58
---	---	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 2060555 - EPA 5030B**

Matrix Spike (2060555-MS1)	Source: P2F0315-01			Prepared & Analyzed: 06/17/02						
Benzene	20.7	0.500	ug/l	20.0	ND	104	80-125			
Toluene	22.3	0.500	"	20.0	ND	112	80-125			
Ethylbenzene	22.9	0.500	"	20.0	ND	114	80-125			
Xylenes (total)	70.3	1.00	"	60.0	ND	117	80-125			
Surr: 4-BFB	20.5		"	20.0		102	84-118			
Surr: 1,2-DCA-d4	18.9		"	20.0		94.5	79-123			
Surr: Dibromofluoromethane	21.4		"	20.0		107	81-121			
Surr: Toluene-d8	22.0		"	20.0		110	87-111			

Matrix Spike Dup (2060555-MSD1)	Source: P2F0315-01			Prepared & Analyzed: 06/17/02						
Benzene	20.6	0.500	ug/l	20.0	ND	103	80-125	0.484	25	
Toluene	21.9	0.500	"	20.0	ND	110	80-125	1.81	25	
Ethylbenzene	22.9	0.500	"	20.0	ND	114	80-125	0.00	25	
Xylenes (total)	69.2	1.00	"	60.0	ND	115	80-125	1.58	25	
Surr: 4-BFB	20.6		"	20.0		103	84-118			
Surr: 1,2-DCA-d4	18.6		"	20.0		93.0	79-123			
Surr: Dibromofluoromethane	20.8		"	20.0		104	81-121			
Surr: Toluene-d8	21.5		"	20.0		108	87-111			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Burkholder, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: None  
Project Manager: Paul Stull

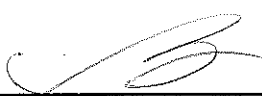
**Reported:**  
06/20/02 11:58

### Notes and Definitions

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

  
Crystal Burkholder, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**

10 of 10

# CHAIN OF CUSTODY REPORT

Work Order #: **P2F0425**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Please Specify... <input type="checkbox"/> <b>OTHER</b> _____ <small>*Turnaround Requests less than standard may incur Rush Charges.</small>										
REPORT TO: <b>P. Stull</b>		P.O. NUMBER:												
ADDRESS: <b>7376 SW Durham Port OR 97224</b>														
PHONE: <b>503 639 3400</b> FAX:														
PROJECT NAME: <b>East Orchard Food Meyer</b>		<b>REQUESTED ANALYSES</b>												
PROJECT NUMBER:		NW-TPH-GX	NW-TPH-DX	8260*	BTEX						MATRIX (W. S. O)	# OF CONT.	COMMENTS	NCA WO ID
SAMPLED BY: <b>McFarland</b>														
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME													
1. <b>MW103</b>	<b>6-11-02 7:50</b>	X	X	X							H2O	7		
2. <b>MW105</b>	↓ <b>8:25</b>	X	X	X							↓	↓		
3. <b>MW0K</b>	↓ <b>7:20</b>				X						↓	2		
4. <b>EB</b>	↓ <b>7:25</b>				X						↓	↓		
5.														
6.														
7.														
8.														
9.														
10.														
11.														
12.														
13.														
14.														
15.														

RELINQUISHED BY: <b>Wes McFarland</b>	FIRM: <b>AMEC</b>	DATE: <b>6-11-02</b>	TIME: <b>14:30</b>	RECEIVED BY: <b>Bob [Signature]</b>	FIRM: <b>NCA</b>	DATE: <b>6/14/02</b>	TIME: <b>15:25</b>
RELINQUISHED BY: <b>Bob [Signature]</b>	FIRM: <b>AMEC</b>	DATE:	TIME:	RECEIVED BY: <b>Tammy Elstol</b>	FIRM: <b>NCA</b>	DATE: <b>6/14/02</b>	TIME: <b>17:00</b>

ADDITIONAL REMARKS: **\* 8260 = BTEX, MTBE, EDB/EDC, Naphthalene, Alkylbenzene Suite**

TEMP: **-1.0°C** PAGE **1** OF **1**

11 October 2002

Paul Stull  
Amec - Portland  
7477 SW Tech Center Dr  
Portland, OR/USA 97223  
RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 09/27/02 09:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Jeanne Garthwaite".

Jeanne Garthwaite  
Project Manager



Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-103	B2I0637-01	Water	09/25/02 15:20	09/27/02 09:15
MW-105	B2I0637-02	Water	09/25/02 14:45	09/27/02 09:15

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Petroleum Products by NWTPH-Gx**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B2I0637-01) Water</b> Sampled: 09/25/02 15:20 Received: 09/27/02 09:15									
Gasoline Range Hydrocarbons	5190	500	ug/l	10	2J04048	10/04/02	10/05/02	NWTPH-Gx	
Surrogate: 4-BFB (FID)	95.8 %	57-125			"	"	"	"	
<b>MW-105 (B2I0637-02) Water</b> Sampled: 09/25/02 14:45 Received: 09/27/02 09:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2J04048	10/04/02	10/05/02	NWTPH-Gx	
Surrogate: 4-BFB (FID)	88.1 %	57-125			"	"	"	"	

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B2I0637-01) Water</b> Sampled: 09/25/02 15:20 Received: 09/27/02 09:15									
Methyl tert-butyl ether	ND	2.00	ug/l	1	2J08046	10/08/02	10/08/02	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>6.23</b>	1.00	"	"	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>1.74</b>	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>51.0</b>	1.00	"	"	"	"	"	"	E
<b>Isopropylbenzene</b>	<b>5.07</b>	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>152</b>	1.00	"	"	"	"	"	"	E
<b>n-Propylbenzene</b>	<b>12.3</b>	1.00	"	"	"	"	"	"	
<b>Toluene</b>	<b>1.89</b>	1.00	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>53.8</b>	1.00	"	"	"	"	"	"	E
<b>1,3,5-Trimethylbenzene</b>	<b>7.43</b>	1.00	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>48.0</b>	2.00	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>17.2</b>	1.00	"	"	"	"	"	"	

Surrogate: 1,2-DCA-d4	104 %	77-122			"	"	"	"	
Surrogate: Toluene-d8	96.0 %	75-124			"	"	"	"	
Surrogate: 4-BFB	102 %	77-120			"	"	"	"	

<b>MW-103 (B2I0637-01RE1) Water</b> Sampled: 09/25/02 15:20 Received: 09/27/02 09:15									
Benzene	ND	10.0	ug/l	10	2J07028	10/08/02	10/09/02	EPA 8260B	
<b>n-Butylbenzene</b>	<b>18.2</b>	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>164</b>	10.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>12.6</b>	10.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>146</b>	10.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>34.8</b>	10.0	"	"	"	"	"	"	
Toluene	ND	10.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>320</b>	10.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>31.5</b>	10.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B2I0637-01RE1) Water</b> Sampled: 09/25/02 15:20 Received: 09/27/02 09:15									
m,p-Xylene	403	20.0	ug/l	10	2J07028	10/08/02	10/09/02	"	
o-Xylene	147	10.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	93.0 %	77-122			"	"	"	"	
Surrogate: Toluene-d8	97.5 %	75-124			"	"	"	"	
Surrogate: 4-BFB	99.0 %	77-120			"	"	"	"	
<b>MW-105 (B2I0637-02) Water</b> Sampled: 09/25/02 14:45 Received: 09/27/02 09:15									
Methyl tert-butyl ether	ND	2.00	ug/l	1	2J07028	10/09/02	10/09/02	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
Isopropylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
Naphthalene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	94.5 %	77-122			"	"	"	"	
Surrogate: Toluene-d8	95.0 %	75-124			"	"	"	"	
Surrogate: 4-BFB	99.5 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
 7477 SW Tech Center Dr  
 Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 10/11/02 14:54

**Volatile Petroleum Products by NWTPH-Gx - Quality Control  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2J04048: Prepared 10/04/02 Using EPA 5030B (P/T)</b>										
<b>Blank (2J04048-BLK1)</b>										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	43.6		"	48.0		90.8	57-125			
<b>LCS (2J04048-BS1)</b>										
Gasoline Range Hydrocarbons	464	50.0	ug/l	502		92.4	80-120			
Surrogate: 4-BFB (FID)	46.1		"	48.0		96.0	57-125			
<b>LCS Dup (2J04048-BSD1)</b>										
Gasoline Range Hydrocarbons	446	50.0	ug/l	502		88.8	80-120	3.96	25	
Surrogate: 4-BFB (FID)	45.0		"	48.0		93.8	57-125			
<b>Matrix Spike (2J04048-MS1) Source: B2I0628-04</b>										
Gasoline Range Hydrocarbons	443	50.0	ug/l	502	ND	86.2	70-130			
Surrogate: 4-BFB (FID)	46.2		"	48.0		96.2	57-125			
<b>Matrix Spike Dup (2J04048-MSD1) Source: B2I0628-04</b>										
Gasoline Range Hydrocarbons	430	50.0	ug/l	502	ND	83.6	70-130	2.98	25	
Surrogate: 4-BFB (FID)	45.4		"	48.0		94.6	57-125			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2J07028: Prepared 10/09/02 Using EPA 5030B**

**Blank (2J07028-BLK1)**

Acetone	ND	25.0	ug/l							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Carbon tetrachloride	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroethane	ND	1.00	"							
Chloroform	ND	1.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	1.00	"							
4-Chlorotoluene	ND	1.00	"							
Dibromochloromethane	ND	1.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane	ND	1.00	"							
Dibromomethane	ND	1.00	"							
1,2-Dichlorobenzene	ND	1.00	"							
1,3-Dichlorobenzene	ND	1.00	"							
1,4-Dichlorobenzene	ND	1.00	"							
Dichlorodifluoromethane	ND	1.00	"							
1,1-Dichloroethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
1,1-Dichloroethene	ND	1.00	"							
cis-1,2-Dichloroethene	ND	1.00	"							
trans-1,2-Dichloroethene	ND	1.00	"							
1,2-Dichloropropane	ND	1.00	"							
1,3-Dichloropropane	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2J07028: Prepared 10/09/02 Using EPA 5030B**

**Blank (2J07028-BLK1)**

2,2-Dichloropropane	ND	1.00	ug/l							
1,1-Dichloropropene	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
Surrogate: 1,2-DCA-d4	38.8		"	40.0		97.0	77-122			
Surrogate: Toluene-d8	40.5		"	40.0		101	75-124			
Surrogate: 4-BFB	38.6		"	40.0		96.5	77-120			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2J07028: Prepared 10/09/02 Using EPA 5030B**

**LCS (2J07028-BS1)**

Benzene	9.33	1.00	ug/l	10.0		93.3	80-120			
Chlorobenzene	10.7	1.00	"	10.0		107	77-120			
1,1-Dichloroethene	9.23	1.00	"	10.0		92.3	80-120			
Toluene	9.45	1.00	"	10.0		94.5	80-120			
Trichloroethene	9.14	1.00	"	10.0		91.4	80-120			
Surrogate: 1,2-DCA-d4	19.4		"	20.0		97.0	77-122			
Surrogate: Toluene-d8	20.3		"	20.0		102	75-124			
Surrogate: 4-BFB	19.3		"	20.0		96.5	77-120			

**LCS Dup (2J07028-BSD1)**

Benzene	9.59	1.00	ug/l	10.0		95.9	80-120	2.75	20	
Chlorobenzene	11.0	1.00	"	10.0		110	77-120	2.76	20	
1,1-Dichloroethene	10.9	1.00	"	10.0		109	80-120	16.6	20	
Toluene	9.98	1.00	"	10.0		99.8	80-120	5.46	20	
Trichloroethene	9.77	1.00	"	10.0		97.7	80-120	6.66	20	
Surrogate: 1,2-DCA-d4	19.8		"	20.0		99.0	77-122			
Surrogate: Toluene-d8	20.3		"	20.0		102	75-124			
Surrogate: 4-BFB	19.8		"	20.0		99.0	77-120			

**Batch 2J08046: Prepared 10/08/02 Using EPA 5030B**

**Blank (2J08046-BLK1)**

Methyl tert-butyl ether	ND	2.00	ug/l							
Benzene	ND	1.00	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Jeanne Garthwaite, Project Manager



Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/11/02 14:54

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2J08046: Prepared 10/08/02 Using EPA 5030B</b>										
<b>Blank (2J08046-BLK1)</b>										
1,3,5-Trimethylbenzene	ND	1.00	ug/l							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
Surrogate: 1,2-DCA-d4	20.9		"	20.0		104	77-122			
Surrogate: Toluene-d8	18.7		"	20.0		93.5	75-124			
Surrogate: 4-BFB	20.4		"	20.0		102	77-120			
<b>LCS (2J08046-BS1)</b>										
Benzene	9.28	1.00	ug/l	10.0		92.8	80-120			
Toluene	9.18	1.00	"	10.0		91.8	80-120			
Surrogate: 1,2-DCA-d4	20.6		"	20.0		103	77-122			
Surrogate: Toluene-d8	19.2		"	20.0		96.0	75-124			
Surrogate: 4-BFB	20.3		"	20.0		102	77-120			
<b>LCS Dup (2J08046-BSD1)</b>										
Benzene	8.61	1.00	ug/l	10.0		86.1	80-120	7.49	20	
Toluene	8.48	1.00	"	10.0		84.8	80-120	7.93	20	
Surrogate: 1,2-DCA-d4	20.2		"	20.0		101	77-122			
Surrogate: Toluene-d8	18.6		"	20.0		93.0	75-124			
Surrogate: 4-BFB	20.6		"	20.0		103	77-120			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

Amec - Portland  
7477 SW Tech Center Dr  
Portland OR/USA, 97223

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
10/11/02 14:54

### Notes and Definitions

E Estimated value. The reported value exceeds the calibration range of the analysis.  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference

---

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



---

Jeanne Garthwaite, Project Manager



11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244 (425) 420-9200 FAX 420-9210  
 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 (509) 924-9200 FAX 924-9290  
 9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 906-9200 FAX 906-9210  
 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

# CHAIN OF CUSTODY REPORT

Work Order #: **B2F0637**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Please Specify <input type="checkbox"/> OTHER _____ <small>*Turnaround Requests less than standard may incur Rush Charges.</small>							
REPORT TO: <b>Paul Stall</b>		P.O. NUMBER:									
ADDRESS: <b>7376 SW Durham Rd. Portland, OR 97224</b>											
PHONE: <b>503-639-3400</b>		FAX: <b>503-620-7892</b>									
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		REQUESTED ANALYSES									
PROJECT NUMBER: <b>9-61M-10282-0</b>											
SAMPLED BY: <b>Joe Rock</b>											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MUSTH-GX 9260-01	EPA 801B *	STEX/MTBE				MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW-103	9-25-02 15:20	X	X							* 8260 = BTEX,	01
2. MW-105	9-25-02 14:45	X	X							MTBE, EX, EPB,	02
3.										Naphthalene,	
4.										Alkylbenzene suite	
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											
15.											
RELINQUISHED BY: <i>[Signature]</i>		DATE: <b>9-27-02</b>		RECEIVED BY: <i>[Signature]</i>		DATE: <b>9/27/02</b>					
PRINT NAME: <b>Joe Rock</b>		FIRM: <b>AMEC</b>		TIME: <b>9:15</b>		PRINT NAME: <b>DAN WINT</b>		FIRM: <b>NA</b>		TIME: <b>0915</b>	
RELINQUISHED BY:		DATE:		RECEIVED BY:		DATE:					
PRINT NAME:		FIRM:		TIME:		PRINT NAME:		FIRM:		TIME:	
ADDITIONAL REMARKS:										w/o	
										TEMP: <b>3.7</b>	
										PAGE <b>1</b> OF <b>1</b>	

# CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: <b>AMEC</b>			INVOICE TO:										<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <span style="border: 1px solid black; padding: 2px;">OTHER</span> Please Specify _____ <small>*Turnaround Requests less than standard may incur Rush Charges.</small>						
REPORT TO: <b>Paul Stull</b>			P.O. NUMBER:																
ADDRESS: <b>7376 SW Durham Rd. Portland, OR 97224</b>																			
PHONE: <b>503-639-3400</b>			FAX: <b>503-620-7892</b>																
PROJECT NAME: <b>Fred Meyer Port Orchard</b>			REQUESTED ANALYSES																
PROJECT NUMBER: <b>9-61M-10282-0</b>																			
SAMPLED BY: <b>Joe Rock</b>																			
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		NAPTH-GX	EPA 8210-B	BTEX/HIPE										MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW-103		9-25-02 15:20		X	X													* 8260 = BTEX,	
2. MW-105		9-25-02 14:45		X	X													MIB, EX, EDB,	
3.																		Naphthalene	
4.																		Alkylbenzene suite	
5.																			
6.																			
7.																			
8.																			
9.																			
10.																			
11.																			
12.																			
13.																			
14.																			
15.																			
RELINQUISHED BY: <i>[Signature]</i>			DATE: <b>9-27-02</b>			RECEIVED BY: <i>[Signature]</i>			DATE: <b>9/27/02</b>										
PRINT NAME: <b>Joe Rock</b>			FIRM: <b>AMEC</b>			TIME: <b>9:15</b>			PRINT NAME: <b>DAN WYNT</b>			FIRM: <b>1/14</b>							
RELINQUISHED BY:			DATE:			RECEIVED BY:			DATE:										
PRINT NAME:			FIRM:			PRINT NAME:			FIRM:										
ADDITIONAL REMARKS:										TEMP:		PAGE 1 OF 1							



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
Anchorage 3209 Denali Street, Anchorage, AK 99503  
907.334.9338 fax 907.334.9339

23 December 2002

Paul Stull  
Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224  
RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 12/13/02 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite  
Project Manager



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 12/23/02 16:29

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-103	B2L0323-01	Water	12/12/02 13:45	12/13/02 14:00
MW-105	B2L0323-02	Water	12/12/02 14:30	12/13/02 14:00

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Petroleum Products by NWTPH-Gx  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW-103 (B2L0323-01) Water Sampled: 12/12/02 13:45 Received: 12/13/02 14:00</b>										
Gasoline Range Hydrocarbons	15200	1000		ug/l	20	2L17005	12/17/02	12/17/02	NWTPH-Gx	
Surrogate: 4-BFB (FID)	89.8 %	57-125				"	"	"	"	
<b>MW-105 (B2L0323-02) Water Sampled: 12/12/02 14:30 Received: 12/13/02 14:00</b>										
Gasoline Range Hydrocarbons	ND	50.0		ug/l	1	2L17005	12/17/02	12/17/02	NWTPH-Gx	
Surrogate: 4-BFB (FID)	86.9 %	57-125				"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97006-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B2L0323-01) Water Sampled: 12/12/02 13:45 Received: 12/13/02 14:00</b>									
Methyl tert-butyl ether	ND	2.00	ug/l	1	2L19026	12/19/02	12/20/02	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>54.2</b>	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>395</b>	1.00	"	"	"	"	"	"	E-01
<b>Isopropylbenzene</b>	<b>34.1</b>	1.00	"	"	"	"	"	"	
<b>p-Isopropyltoluene</b>	<b>49.4</b>	1.00	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>183</b>	1.00	"	"	"	"	"	"	E
<b>n-Propylbenzene</b>	<b>157</b>	1.00	"	"	"	"	"	"	E
<b>Toluene</b>	<b>6.64</b>	1.00	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>869</b>	1.00	"	"	"	"	"	"	E-01
<b>1,3,5-Trimethylbenzene</b>	<b>452</b>	1.00	"	"	"	"	"	"	E
<b>m,p-Xylene</b>	<b>754</b>	2.00	"	"	"	"	"	"	E-01
<b>o-Xylene</b>	<b>241</b>	1.00	"	"	"	"	"	"	E
<i>Surrogate: 1,2-DCA-d4</i>	<i>107 %</i>	<i>77-122</i>			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	<i>104 %</i>	<i>75-124</i>			"	"	"	"	
<i>Surrogate: 4-BFB</i>	<i>146 %</i>	<i>77-120</i>			"	"	"	"	S-04

<b>MW-103 (B2L0323-01RE1) Water Sampled: 12/12/02 13:45 Received: 12/13/02 14:00</b>									
Methyl tert-butyl ether	ND	100	ug/l	50	2L20013	12/20/02	12/20/02	EPA 8260B	
Benzene	ND	50.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>65.3</b>	50.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	50.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	50.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	50.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>473</b>	50.0	"	"	"	"	"	"	
Isopropylbenzene	ND	50.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	50.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>163</b>	50.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>115</b>	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*  
 Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B2L0323-01RE1) Water</b> Sampled: 12/12/02 13:45 Received: 12/13/02 14:00									
1,2,4-Trimethylbenzene	1710	50.0	ug/l	50	2L20013	12/20/02	12/20/02	"	
1,3,5-Trimethylbenzene	495	50.0	"	"	"	"	"	"	
m,p-Xylene	1730	100	"	"	"	"	"	"	
o-Xylene	291	50.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	108 %	77-122			"	"	"	"	
Surrogate: Toluene-d8	105 %	75-124			"	"	"	"	
Surrogate: 4-BFB	90.8 %	77-120			"	"	"	"	
<b>MW-105 (B2L0323-02) Water</b> Sampled: 12/12/02 14:30 Received: 12/13/02 14:00									
Methyl tert-butyl ether	ND	2.00	ug/l	1	2L20013	12/20/02	12/20/02	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
Isopropylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
Naphthalene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	108 %	77-122			"	"	"	"	
Surrogate: Toluene-d8	105 %	75-124			"	"	"	"	
Surrogate: 4-BFB	92.8 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Petroleum Products by NWTPH-Gx - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2L17005: Prepared 12/17/02 Using EPA 5030B (P/T)</b>										
<b>Blank (2L17005-BLK1)</b>										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	40.1		"	48.0		83.5	57-125			
<b>LCS (2L17005-BS1)</b>										
Gasoline Range Hydrocarbons	489	50.0	ug/l	502		97.4	80-120			
Surrogate: 4-BFB (FID)	42.7		"	48.0		89.0	57-125			
<b>LCS Dup (2L17005-BSD1)</b>										
Gasoline Range Hydrocarbons	489	50.0	ug/l	502		97.4	80-120	0.00	25	
Surrogate: 4-BFB (FID)	43.4		"	48.0		90.4	57-125			
<b>Matrix Spike (2L17005-MS1) Source: B2L0324-11</b>										
Gasoline Range Hydrocarbons	484	50.0	ug/l	502	ND	96.4	70-130			
Surrogate: 4-BFB (FID)	46.0		"	48.0		95.8	57-125			
<b>Matrix Spike Dup (2L17005-MSD1) Source: B2L0324-11</b>										
Gasoline Range Hydrocarbons	453	50.0	ug/l	502	ND	90.2	70-130	6.62	25	
Surrogate: 4-BFB (FID)	45.6		"	48.0		95.0	57-125			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2L19026: Prepared 12/19/02 Using EPA 5030B**

**Blank (2L19026-BLK1)**

Methyl tert-butyl ether	ND	2.00	ug/l							
Acetone	ND	25.0	"							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Carbon tetrachloride	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroethane	ND	1.00	"							
Chloroform	ND	1.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	1.00	"							
4-Chlorotoluene	ND	1.00	"							
Dibromochloromethane	ND	1.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane	ND	1.00	"							
Dibromomethane	ND	1.00	"							
1,2-Dichlorobenzene	ND	1.00	"							
1,3-Dichlorobenzene	ND	1.00	"							
1,4-Dichlorobenzene	ND	1.00	"							
Dichlorodifluoromethane	ND	1.00	"							
1,1-Dichloroethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
1,1-Dichloroethene	ND	1.00	"							
cis-1,2-Dichloroethene	ND	1.00	"							
trans-1,2-Dichloroethene	ND	1.00	"							
1,2-Dichloropropane	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

Batch 2L19026: Prepared 12/19/02 Using EPA 5030B

**Blank (2L19026-BLK1)**

1,3-Dichloropropane	ND	1.00	ug/l							
2,2-Dichloropropane	ND	1.00	"							
1,1-Dichloropropene	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							

Surrogate: 1,2-DCA-d4	42.2	"		40.0		106	77-122			
Surrogate: Toluene-d8	41.7	"		40.0		104	75-124			
Surrogate: 4-BFB	37.1	"		40.0		92.8	77-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2L19026: Prepared 12/19/02 Using EPA 5030B**

**LCS (2L19026-BS1)**

Benzene	19.1	1.00	ug/l	20.0		95.5	80-120			
Chlorobenzene	19.2	1.00	"	20.0		96.0	77-120			
1,1-Dichloroethene	22.3	1.00	"	20.0		112	80-120			
Toluene	19.6	1.00	"	20.0		98.0	80-120			
Trichloroethene	17.9	1.00	"	20.0		89.5	80-120			
Surrogate: 1,2-DCA-d4	42.6		"	40.0		106	77-122			
Surrogate: Toluene-d8	42.2		"	40.0		106	75-124			
Surrogate: 4-BFB	36.7		"	40.0		91.8	77-120			

**LCS Dup (2L19026-BSD1)**

Benzene	18.4	1.00	ug/l	20.0		92.0	80-120	3.73	20	
Chlorobenzene	18.3	1.00	"	20.0		91.5	77-120	4.80	20	
1,1-Dichloroethene	20.2	1.00	"	20.0		101	80-120	9.88	20	
Toluene	18.6	1.00	"	20.0		93.0	80-120	5.24	20	
Trichloroethene	17.0	1.00	"	20.0		85.0	80-120	5.16	20	
Surrogate: 1,2-DCA-d4	43.0		"	40.0		108	77-122			
Surrogate: Toluene-d8	42.6		"	40.0		106	75-124			
Surrogate: 4-BFB	37.0		"	40.0		92.5	77-120			

**Batch 2L20013: Prepared 12/20/02 Using EPA 5030B**

**Blank (2L20013-BLK1)**

Methyl tert-butyl ether	ND	2.00	ug/l							
Acetone	ND	25.0	"							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2L20013: Prepared 12/20/02 Using EPA 5030B**

**Blank (2L20013-BLK1)**

Carbon tetrachloride	ND	1.00	ug/l							
Chlorobenzene	ND	1.00	"							
Chloroethane	ND	1.00	"							
Chloroform	ND	1.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	1.00	"							
4-Chlorotoluene	ND	1.00	"							
Dibromochloromethane	ND	1.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane	ND	1.00	"							
Dibromomethane	ND	1.00	"							
1,2-Dichlorobenzene	ND	1.00	"							
1,3-Dichlorobenzene	ND	1.00	"							
1,4-Dichlorobenzene	ND	1.00	"							
Dichlorodifluoromethane	ND	1.00	"							
1,1-Dichloroethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
1,1-Dichloroethene	ND	1.00	"							
cis-1,2-Dichloroethene	ND	1.00	"							
trans-1,2-Dichloroethene	ND	1.00	"							
1,2-Dichloropropane	ND	1.00	"							
1,3-Dichloropropane	ND	1.00	"							
2,2-Dichloropropane	ND	1.00	"							
1,1-Dichloropropene	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2L20013: Prepared 12/20/02 Using EPA 5030B**

**Blank (2L20013-BLK1)**

n-Propylbenzene	ND	1.00	ug/l							
Styrene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
Surrogate: 1,2-DCA-d4	43.1		"	40.0		108	77-122			
Surrogate: Toluene-d8	41.8		"	40.0		104	75-124			
Surrogate: 4-BFB	37.0		"	40.0		92.5	77-120			

**LCS (2L20013-BS1)**

Benzene	20.1	1.00	ug/l	20.0		100	80-120			
Chlorobenzene	19.8	1.00	"	20.0		99.0	77-120			
1,1-Dichloroethene	22.1	1.00	"	20.0		110	80-120			
Toluene	20.0	1.00	"	20.0		100	80-120			
Trichloroethene	18.7	1.00	"	20.0		93.5	80-120			
Surrogate: 1,2-DCA-d4	43.3		"	40.0		108	77-122			
Surrogate: Toluene-d8	42.2		"	40.0		106	75-124			
Surrogate: 4-BFB	36.6		"	40.0		91.5	77-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 12/23/02 16:29

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 2L20013: Prepared 12/20/02 Using EPA 5030B**

**LCS Dup (2L20013-BSD1)**

Benzene	19.5	1.00	ug/l	20.0		97.5	80-120	3.03	20	
Chlorobenzene	19.2	1.00	"	20.0		96.0	77-120	3.08	20	
1,1-Dichloroethene	20.9	1.00	"	20.0		104	80-120	5.58	20	
Toluene	19.3	1.00	"	20.0		96.5	80-120	3.56	20	
Trichloroethene	18.0	1.00	"	20.0		90.0	80-120	3.81	20	
Surrogate: 1,2-DCA-d4	43.2		"	40.0		108	77-122			
Surrogate: Toluene-d8	41.9		"	40.0		105	75-124			
Surrogate: 4-BFB	36.8		"	40.0		92.0	77-120			

**Matrix Spike (2L20013-MS1)**

Source: B2L0349-03

Benzene	19.8	1.00	ug/l	20.0	ND	99.0	63-148			
Chlorobenzene	19.5	1.00	"	20.0	ND	97.5	80-128			
1,1-Dichloroethene	22.9	1.00	"	20.0	ND	114	59-158			
Toluene	19.9	1.00	"	20.0	ND	99.5	72-127			
Trichloroethene	18.6	1.00	"	20.0	ND	93.0	80-126			
Surrogate: 1,2-DCA-d4	43.0		"	40.0		108	77-122			
Surrogate: Toluene-d8	42.1		"	40.0		105	75-124			
Surrogate: 4-BFB	36.5		"	40.0		91.2	77-120			

**Matrix Spike Dup (2L20013-MSD1)**

Source: B2L0349-03

Benzene	19.1	1.00	ug/l	20.0	ND	95.5	63-148	3.60	20	
Chlorobenzene	19.2	1.00	"	20.0	ND	96.0	80-128	1.55	20	
1,1-Dichloroethene	21.2	1.00	"	20.0	ND	106	59-158	7.71	30	
Toluene	19.4	1.00	"	20.0	ND	97.0	72-127	2.54	20	
Trichloroethene	17.8	1.00	"	20.0	ND	89.0	80-126	4.40	20	
Surrogate: 1,2-DCA-d4	42.6		"	40.0		106	77-122			
Surrogate: Toluene-d8	41.8		"	40.0		104	75-124			
Surrogate: 4-BFB	36.5		"	40.0		91.2	77-120			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 3209 Denali Street, Anchorage, AK 99503  
 907.334.9338 fax 907.334.9339

Amec - Portland  
 7376 SW Durham Road  
 Portland OR/USA, 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 12/23/02 16:29

**Notes and Definitions**

- E Estimated value. The reported value exceeds the calibration range of the analysis.
- E-01 Estimated value. The reported value exceeds the capacity of the detector and therefore is unreliable.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

# CHAIN OF CUSTODY REPORT

Work Order #: **B2W0323**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 STD. <input type="checkbox"/> OTHER _____ Please Specify											
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:													
ADDRESS: <b>7376 SW Durham Rd. Portland, OR 97224</b>				*Turnaround Requests less than standard may incur Rush Charges.											
PHONE: <b>503-639-3400</b> FAX: <b>503-620-7842</b>															
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		REQUESTED ANALYSES													
PROJECT NUMBER: <b>9-61M-10252-0</b>															
SAMPLED BY: <b>Joe Rock</b>															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	N/A	* 0728	8260								MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. <b>MW-103</b>	<b>12-12-02 13:45</b>	<b>X</b>	<b>X</b>									<b>W</b>	<b>4</b>	<b>8260 = BTEX,</b>	<b>01</b>
2. <b>MW-105</b>	<b>12-12-02 14:30</b>	<b>X</b>	<b>X</b>									<b>W</b>	<b>4</b>	<b>MTBE, EDC, EDB,</b>	<b>02</b>
3.														<b>Naphthalene,</b>	
4.														<b>Alkylbenzene suite</b>	
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
RELINQUISHED BY: <b>Joe Rock</b>		FIRM: <b>AMEC</b>		DATE: <b>12-13-02</b>		TIME: <b>14:00</b>		RECEIVED BY: <b>Don Wynn</b>		FIRM: <b>NCA</b>		DATE: <b>12/13/02</b>		TIME: <b>14:00</b>	
RELINQUISHED BY:		FIRM:		DATE:		TIME:		RECEIVED BY:		FIRM:		DATE:		TIME:	
PRINT NAME:		FIRM:		DATE:		TIME:		PRINT NAME:		FIRM:		DATE:		TIME:	
ADDITIONAL REMARKS:															
COC REV 3/99															



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

**Reported:**  
 04/09/03 16:34

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MWX	P3D0161-01	Water	04/01/03 17:30	04/03/03 11:40
EB	P3D0161-02	Water	04/01/03 17:45	04/03/03 11:40
MW103	P3D0161-03	Water	04/01/03 18:40	04/03/03 11:40
MW105	P3D0161-04	Water	04/01/03 19:20	04/03/03 11:40

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282  
 Project Manager: Paul Stull

Reported:  
 04/09/03 16:34

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P3D0161-03) Water</b>					Sampled: 04/01/03 Received: 04/03/03				
Benzene	ND	2.50	ug/l	5	NW-G, 8021B	04/04/03	04/05/03	3040153	
Toluene	ND	2.50	"	"	"	"	"	"	
Ethylbenzene	12.9	2.50	"	"	"	"	"	"	
Xylenes (total)	244	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>2270</b>	<b>400</b>	"	"	"	"	"	"	
Surr: 4-BFB (FID)	110 %	50-150							
Surr: 4-BFB (PID)	106 %	75-125							
<b>MW105 (P3D0161-04) Water</b>					Sampled: 04/01/03 Received: 04/03/03				
Benzene	ND	0.500	ug/l	1	NW-G, 8021B	04/04/03	04/05/03	3040153	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>ND</b>	<b>80.0</b>	"	"	"	"	"	"	
Surr: 4-BFB (FID)	106 %	50-150							
Surr: 4-BFB (PID)	104 %	75-125							

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	<b>Reported:</b> 04/09/03 16:34
---	--	------------------------------------

**BTEX and MTBE per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MWX (P3D0161-01) Water</b>						Sampled: 04/01/03 Received: 04/03/03			
Benzene	ND	0.500	ug/l	1	EPA 8021B	04/04/03	04/05/03	3040153	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>107 %</i>	<i>75-120</i>							
<b>EB (P3D0161-02) Water</b>						Sampled: 04/01/03 Received: 04/03/03			
Benzene	ND	0.500	ug/l	1	EPA 8021B	04/04/03	04/05/03	3040153	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>106 %</i>	<i>75-120</i>							

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	Reported: 04/09/03 16:34
---	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3040153 - EPA 5030B</b>										
<b>Blank (3040153-BLK1)</b>					Prepared & Analyzed: 04/04/03					
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Gasoline Range Hydrocarbons	ND	80.0	"							
Surr: 4-BFB (FID)	48.5		"	50.0		97.0	50-150			
Surr: 4-BFB (PID)	47.2		"	50.0		94.4	75-125			
<b>LCS (3040153-BS1)</b>					Prepared & Analyzed: 04/04/03					
Gasoline Range Hydrocarbons	1200	80.0	ug/l	1250		96.0	50-150			
Surr: 4-BFB (FID)	51.6		"	50.0		103	50-150			
<b>LCS (3040153-BS2)</b>					Prepared & Analyzed: 04/04/03					
Benzene	19.0	0.500	ug/l	20.0		95.0	70-130			
Toluene	21.8	0.500	"	20.0		109	70-130			
Ethylbenzene	20.2	0.500	"	20.0		101	70-130			
Xylenes (total)	61.5	1.00	"	60.0		102	70-130			
Methyl tert-butyl ether	17.4	2.00	"	20.0		87.0	70-130			
Surr: 4-BFB (PID)	49.2		"	50.0		98.4	75-125			
<b>Duplicate (3040153-DUP1)</b>					Source: P3D0143-01		Prepared & Analyzed: 04/04/03			
Gasoline Range Hydrocarbons	2930	80.0	ug/l		2890			1.37	50	
Surr: 4-BFB (FID)	57.5		"	50.0		115	50-150			
<b>Duplicate (3040153-DUP2)</b>					Source: P3D0173-03		Prepared: 04/04/03 Analyzed: 04/05/03			
Gasoline Range Hydrocarbons	ND	1600	ug/l		ND				50	
Surr: 4-BFB (FID)	50.9		"	50.0		102	50-150			

North Creek Analytical - Portland

Crystal Jones, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	Reported: 04/09/03 16:34
---	--	-----------------------------

**Gasoline Hydrocarbons per NW-TPH-Gx Method and BTEX/MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 3040153 - EPA 5030B**

Matrix Spike (3040153-MS1)	Source: P3D0161-03			Prepared: 04/04/03	Analyzed: 04/05/03					
Benzene	99.8	2.50	ug/l	100	ND	99.8	70-130			
Toluene	105	2.50	"	100	ND	105	70-130			
Ethylbenzene	123	2.50	"	100	12.9	110	70-130			
Xylenes (total)	547	5.00	"	300	244	101	70-130			
Methyl tert-butyl ether	92.5	10.0	"	100	ND	92.5	70-130			
Surr: 4-BFB (PID)	50.6		"	50.0		101	75-125			

Matrix Spike Dup (3040153-MSD1)	Source: P3D0161-03			Prepared: 04/04/03	Analyzed: 04/05/03					
Benzene	102	2.50	ug/l	100	ND	102	70-130	2.18	15	
Toluene	107	2.50	"	100	ND	107	70-130	1.89	15	
Ethylbenzene	125	2.50	"	100	12.9	112	70-130	1.61	15	
Xylenes (total)	559	5.00	"	300	244	105	70-130	2.17	15	
Methyl tert-butyl ether	92.6	10.0	"	100	ND	92.6	70-130	0.108	15	
Surr: 4-BFB (PID)	49.9		"	50.0		99.8	75-125			

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282  
Project Manager: Paul Stull

Reported:  
04/09/03 16:34

**BTEX and MTBE per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 3040153 - EPA 5030B**

**Blank (3040153-BLK1)**

Prepared & Analyzed: 04/04/03

Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
<i>Surr: 4-BFB (PID)</i>	47.2		"	50.0		94.4	75-120			

**LCS (3040153-BS2)**

Prepared & Analyzed: 04/04/03

Benzene	19.0	0.500	ug/l	20.0		95.0	70-130			
Toluene	21.8	0.500	"	20.0		109	70-130			
Ethylbenzene	20.2	0.500	"	20.0		101	70-130			
Xylenes (total)	61.5	1.00	"	60.0		102	70-130			
Methyl tert-butyl ether	17.4	2.00	"	20.0		87.0	70-130			
<i>Surr: 4-BFB (PID)</i>	49.2		"	50.0		98.4	75-120			

**Matrix Spike (3040153-MS1)**

Source: P3D0161-03

Prepared: 04/04/03 Analyzed: 04/05/03

Benzene	99.8	2.50	ug/l	100	ND	99.8	70-130			
Toluene	105	2.50	"	100	ND	105	70-130			
Ethylbenzene	123	2.50	"	100	12.9	110	70-130			
Xylenes (total)	547	5.00	"	300	244	101	70-130			
Methyl tert-butyl ether	92.5	10.0	"	100	ND	92.5	70-130			
<i>Surr: 4-BFB (PID)</i>	50.6		"	50.0		101	75-120			

**Matrix Spike Dup (3040153-MSD1)**

Source: P3D0161-03

Prepared: 04/04/03 Analyzed: 04/05/03

Benzene	102	2.50	ug/l	100	ND	102	70-130	2.18	15	
Toluene	107	2.50	"	100	ND	107	70-130	1.89	15	
Ethylbenzene	125	2.50	"	100	12.9	112	70-130	1.61	15	
Xylenes (total)	559	5.00	"	300	244	105	70-130	2.17	15	
Methyl tert-butyl ether	92.6	10.0	"	100	ND	92.6	70-130	0.108	15	
<i>Surr: 4-BFB (PID)</i>	49.9		"	50.0		99.8	75-120			

North Creek Analytical - Portland

Crystal Jones, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

North Creek Analytical, Inc.  
Environmental Laboratory Network





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282 Project Manager: Paul Stull	Reported: 04/09/03 16:34
---	--	-----------------------------

**Notes and Definitions**

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/09/03 13:37
---	--	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	P3F0796-01	Water	06/22/03 14:00	06/24/03 11:00
Equip Blank	P3F0796-02	Water	06/22/03 14:10	06/24/03 11:00
MW103	P3F0796-03	Water	06/22/03 15:00	06/24/03 11:00
MW105	P3F0796-04	Water	06/22/03 15:50	06/24/03 11:00

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 07/09/03 13:37
---	--	------------------------------------

**BTEX per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>Trip Blank (P3F0796-01) Water</b>						Sampled: 06/22/03 Received: 06/24/03			
Benzene	ND	0.500	ug/l	1	EPA 8021B	06/26/03	06/26/03	3061045	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>100 %</i>	<i>75-120</i>							
<b>Equip Blank (P3F0796-02) Water</b>						Sampled: 06/22/03 Received: 06/24/03			
Benzene	ND	0.500	ug/l	1	EPA 8021B	06/26/03	06/26/03	3061045	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>102 %</i>	<i>75-120</i>							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/09/03 13:37
---	--	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
---------	--------	-----------------	-------	----------	--------	----------	----------	-------	-------

**MW105 (P3F0796-04) Water**

Sampled: 06/22/03 Received: 06/24/03

Surr: 4-BFB	82.5 %	80-120							
Surr: 1,2-DCA-d4	105 %	77-135							
Surr: Dibromofluoromethane	102 %	80-122							
Surr: Toluene-d8	98.5 %	80-120							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 5 of 11



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/09/03 13:37
---	--	-----------------------------

**BTEX per EPA Method 8021B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 3061045 - EPA 5030B**

<b>Blank (3061045-BLK1)</b>				Prepared & Analyzed: 06/26/03						
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
<i>Surr: 4-BFB (PID)</i>	<i>49.8</i>		"	<i>50.0</i>		<i>99.6</i>	<i>75-120</i>			

<b>LCS (3061045-BS2)</b>				Prepared & Analyzed: 06/26/03						
Benzene	23.2	0.500	ug/l	20.0		116	70-130			
Toluene	22.1	0.500	"	20.0		110	70-130			
Ethylbenzene	22.7	0.500	"	20.0		114	70-130			
Xylenes (total)	66.4	1.00	"	60.0		111	70-130			
<i>Surr: 4-BFB (PID)</i>	<i>47.4</i>		"	<i>50.0</i>		<i>94.8</i>	<i>75-120</i>			

<b>Matrix Spike (3061045-MS1)</b>				Source: P3F0557-01RE1		Prepared & Analyzed: 06/26/03				
Benzene	15900	25.0	ug/l	1000	15000	90.0	70-130			
Toluene	22100	25.0	"	1000	21200	90.0	70-130			
Ethylbenzene	4440	25.0	"	1000	3130	131	70-130			Q-03
Xylenes (total)	22600	50.0	"	3000	18900	123	70-130			
<i>Surr: 4-BFB (PID)</i>	<i>44.1</i>		"	<i>50.0</i>		<i>88.2</i>	<i>75-120</i>			

<b>Matrix Spike Dup (3061045-MSD1)</b>				Source: P3F0557-01RE1		Prepared: 06/26/03		Analyzed: 06/27/03		
Benzene	15500	25.0	ug/l	1000	15000	50.0	70-130	2.55	15	Q-03
Toluene	21700	25.0	"	1000	21200	50.0	70-130	1.83	15	Q-03
Ethylbenzene	4290	25.0	"	1000	3130	116	70-130	3.44	15	
Xylenes (total)	22100	50.0	"	3000	18900	107	70-130	2.24	15	
<i>Surr: 4-BFB (PID)</i>	<i>41.6</i>		"	<i>50.0</i>		<i>83.2</i>	<i>75-120</i>			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
07/09/03 13:37

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 3070012 - EPA 5030B**

Matrix Spike Dup (3070012-MSD1)	Source: P3F0918-01			Prepared & Analyzed: 07/01/03						
Benzene	20.5	0.500	ug/l	20.0	ND	102	80-124	0.489	25	
Toluene	21.2	0.500	"	20.0	ND	106	79.7-131	0.473	25	
Ethylbenzene	18.4	0.500	"	20.0	ND	92.0	80-124	5.80	25	
Xylenes (total)	51.2	1.00	"	60.0	ND	85.3	44.6-154	7.70	25	
Surr: 4-BFB	16.5		"	20.0		82.5	80-120			
Surr: 1,2-DCA-d4	21.4		"	20.0		107	77-135			
Surr: Dibromofluoromethane	20.6		"	20.0		103	80-122			
Surr: Toluene-d8	19.7		"	20.0		98.5	80-120			

**Batch 3070090 - EPA 5030B**

Blank (3070090-BLK1)	Prepared & Analyzed: 07/02/03									
1,2-Dibromoethane	ND	0.500	ug/l							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Naphthalene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
Surr: 4-BFB	20.1		"	20.0		100	80-120			
Surr: 1,2-DCA-d4	20.3		"	20.0		102	77-135			
Surr: Dibromofluoromethane	19.3		"	20.0		96.5	80-122			
Surr: Toluene-d8	20.1		"	20.0		100	80-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/09/03 13:37
---	--	-----------------------------

**Notes and Definitions**

- E Estimated value. The reported value exceeds the calibration range of the analysis.
- Q-01 The spike recovery, and/or RPD, for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- Q-03 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte already present in the sample.
- S-09 Surrogate recovery is outside control limits due to matrix interference.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Mary A. Fritzmann Smith*

Mary A. Fritzmann Smith For Crystal Jones, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**

NORTH CREEK ANALYTICAL COOLER RECEIPT FORM

(Army Corp. compliant)

Client: AMEC

1. Please sign for receipt and opening of 2 cooler or other

By (print) Sarah Passage (sign) [Signature]

2. Date samples received 6/24/03 Date opened: Same  or 1/1

3. Delivered by:  NCA courier  FedEx  UPS  Courier  Client  Other  
Airbill # if applicable \_\_\_\_\_ (Put copy of shipping papers in file)

4. There were 0 custody seals present, signed by \_\_\_\_\_ date 1/1

5. Were the custody seals unbroken and intact at the date and time of arrival?  Yes  No

6. Was ice used?  yes  no Type of ice:  blue ice  gel ice  real ice  
Temperature (degrees C) 3.6 Raytek thermometer 3.7 Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag and taped inside to lid?  Yes  No

8. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No  
If "no" please specify: \_\_\_\_\_

9. Was project identifiable from custody papers?  Yes  No  
Name of project BP Mill Creek (if applicable)

10. Initial and date for unpacking: CF (initials) date 6/24/03

11. Packing material: N/A bubble wrap/bag  styrofoam  cardboard  other

12. Were samples in bags?  Yes  No

13. Did all containers indicated on the COC arrive?  Yes  No  
If "no" please indicate which containers were absent \_\_\_\_\_

14. Were all containers unbroken and labels in good condition?  Yes  No  
If "no" please indicate which containers \_\_\_\_\_

15. Were all bottle labels complete (ID, date, time, signature, etc.)?  Yes  No  
Do the IDs, times, etc. agree with the COC?  Yes  No  
If "no" please indicate which containers \_\_\_\_\_

16. Are containers properly preserved for indicated analysis?  Yes  No

17. Is there adequate volume for the test(s) requested?  Yes  No

18. If voa vials were submitted, are they free of bubbles? N/A  Yes  No

19. Log-in phase: Date samples were logged in: 6/24/03 Elm Project # P3F0796

20. Logged in by (print) Carrie Fahsoltz (sign) [Signature]

21. Was the project manager notified of status? (Use back of form as a record)  Yes  No





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

08 October 2003

Paul Stull

Amec - Portland

7376 SW Durham Road

Portland, OR/USA 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 09/24/03 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kortland Orr For Jeanne Garthwaite  
Project Manager



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 10/08/03 22:13
--	--	------------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-103	B3I0720-01	Water	09/23/03 13:30	09/24/03 15:00
MW-105	B3I0720-02	Water	09/23/03 14:15	09/24/03 15:00

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 10/08/03 22:13
--	--	------------------------------------

**Volatile Petroleum Products by NWTPH-Gx**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW-103 (B3I0720-01) Water</b> Sampled: 09/23/03 13:30 Received: 09/24/03 15:00										
Gasoline Range Hydrocarbons	12500	250		ug/l	5	3J01001	10/01/03	10/01/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	133 %	62-127				"	"	"	"	S-04
<b>MW-105 (B3I0720-02) Water</b> Sampled: 09/23/03 14:15 Received: 09/24/03 15:00										
Gasoline Range Hydrocarbons	ND	50.0		ug/l	1	3J01001	10/01/03	10/01/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	97.9 %	62-127				"	"	"	"	

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/08/03 22:13
--	--	-----------------------------

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW-103 (B310720-01) Water Sampled: 09/23/03 13:30 Received: 09/24/03 15:00</b>									
Methyl tert-butyl ether	ND	10.0	ug/l	10	3I30056	09/30/03	09/30/03	EPA 8260B	
Benzene	ND	10.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>14.8</b>	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>354</b>	10.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>27.0</b>	10.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>80.3</b>	10.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>70.9</b>	10.0	"	"	"	"	"	"	
Toluene	ND	10.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1060</b>	10.0	"	"	"	"	"	"	E
<b>1,3,5-Trimethylbenzene</b>	<b>323</b>	10.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>170</b>	10.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>898</b>	20.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	111 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-BFB	104 %	70-130			"	"	"	"	

<b>MW-103 (B310720-01RE1) Water Sampled: 09/23/03 13:30 Received: 09/24/03 15:00</b>									
Methyl tert-butyl ether	ND	20.0	ug/l	20	3J01020	09/30/03	10/01/03	EPA 8260B	
Benzene	ND	20.0	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>22.6</b>	20.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	20.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	20.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	20.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	20.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>369</b>	20.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>32.4</b>	20.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>85.8</b>	20.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>81.0</b>	20.0	"	"	"	"	"	"	
Toluene	ND	20.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1210</b>	20.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>342</b>	20.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>188</b>	20.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**MW-103 (B3I0720-01RE1) Water** Sampled: 09/23/03 13:30 Received: 09/24/03 15:00

<b>m,p-Xylene</b>	<b>964</b>	40.0		ug/l	20	3J01020	09/30/03	10/01/03	EPA 8260B	
Surrogate: 1,2-DCA-d4	99.0 %	70-130				"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130				"	"	"	"	
Surrogate: 4-BFB	98.2 %	70-130				"	"	"	"	

**MW-105 (B3I0720-02) Water** Sampled: 09/23/03 14:15 Received: 09/24/03 15:00

Methyl tert-butyl ether	ND	1.00		ug/l	1	3I30056	09/30/03	09/30/03	EPA 8260B	
Benzene	ND	1.00		"	"	"	"	"	"	
n-Butylbenzene	ND	1.00		"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00		"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00		"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00		"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00		"	"	"	"	"	"	
Ethylbenzene	ND	1.00		"	"	"	"	"	"	
Isopropylbenzene	ND	1.00		"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00		"	"	"	"	"	"	
Naphthalene	ND	1.00		"	"	"	"	"	"	
n-Propylbenzene	ND	1.00		"	"	"	"	"	"	
Toluene	ND	1.00		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00		"	"	"	"	"	"	
o-Xylene	ND	1.00		"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>ND</b>	<b>2.00</b>		"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	110 %	70-130				"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130				"	"	"	"	
Surrogate: 4-BFB	106 %	70-130				"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 10/08/03 22:13
--	--	-----------------------------

**Volatile Petroleum Products by NWTPH-Gx - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 3J01001: Prepared 10/01/03 Using EPA 5030B (P/T)</b>										
<b>Blank (3J01001-BLK1)</b>										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	48.1		"	48.0		100	62-127			
<b>LCS (3J01001-BS1)</b>										
Gasoline Range Hydrocarbons	465	50.0	ug/l	500		93.0	80-120			
Surrogate: 4-BFB (FID)	52.9		"	48.0		110	62-127			
<b>LCS Dup (3J01001-BSD1)</b>										
Gasoline Range Hydrocarbons	565	50.0	ug/l	500		113	80-120	19.4	25	
Surrogate: 4-BFB (FID)	59.9		"	48.0		125	62-127			
<b>Matrix Spike (3J01001-MS1) Source: B3I0720-02</b>										
Gasoline Range Hydrocarbons	432	50.0	ug/l	500	17.0	83.0	72-119			
Surrogate: 4-BFB (FID)	52.1		"	48.0		109	62-127			
<b>Matrix Spike Dup (3J01001-MSD1) Source: B3I0720-02</b>										
Gasoline Range Hydrocarbons	498	50.0	ug/l	500	17.0	96.2	72-119	14.2	25	
Surrogate: 4-BFB (FID)	54.7		"	48.0		114	62-127			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell.**

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

**Batch 3I30056: Prepared 09/30/03 Using EPA 5030B**

**Blank (3I30056-BLK1)**

Methyl tert-butyl ether	ND	1.00	ug/l							
Acetone	ND	25.0	"							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Carbon tetrachloride	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroethane	ND	1.00	"							
Chloroform	ND	1.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	1.00	"							
4-Chlorotoluene	ND	1.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
Dibromochloromethane	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
Dibromomethane	ND	1.00	"							
1,2-Dichlorobenzene	ND	1.00	"							
1,3-Dichlorobenzene	ND	1.00	"							
1,4-Dichlorobenzene	ND	1.00	"							
Dichlorodifluoromethane	ND	1.00	"							
1,1-Dichloroethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
1,1-Dichloroethene	ND	1.00	"							
cis-1,2-Dichloroethene	ND	1.00	"							
trans-1,2-Dichloroethene	ND	1.00	"							
1,2-Dichloropropane	ND	1.00	"							
1,3-Dichloropropane	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Emplre Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3I30056: Prepared 09/30/03 Using EPA 5030B**

**Blank (3I30056-BLK1)**

2,2-Dichloropropane	ND	1.00	ug/l							
1,1-Dichloropropane	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
Surrogate: 1,2-DCA-d4	43.6		"	40.0		109	70-130			
Surrogate: Toluene-d8	39.0		"	40.0		97.5	70-130			
Surrogate: 4-BFB	41.3		"	40.0		103	70-130			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 7 of 13





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Emplre Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3I30056: Prepared 09/30/03 Using EPA 5030B**

**LCS (3I30056-BS1)**

Benzene	22.2	1.00	ug/l	20.0		111	80-120			
Chlorobenzene	19.5	1.00	"	20.0		97.5	77-120			
1,1-Dichloroethene	20.2	1.00	"	20.0		101	80-120			
Toluene	19.6	1.00	"	20.0		98.0	80-120			
Trichloroethene	21.0	1.00	"	20.0		105	80-120			
Surrogate: 1,2-DCA-d4	44.3		"	40.0		111	70-130			
Surrogate: Toluene-d8	38.5		"	40.0		96.2	70-130			
Surrogate: 4-BFB	40.9		"	40.0		102	70-130			

**LCS Dup (3I30056-BSD1)**

Benzene	21.9	1.00	ug/l	20.0		110	80-120	1.36	20	
Chlorobenzene	19.4	1.00	"	20.0		97.0	77-120	0.514	20	
1,1-Dichloroethene	19.5	1.00	"	20.0		97.5	80-120	3.53	20	
Toluene	19.2	1.00	"	20.0		96.0	80-120	2.06	20	
Trichloroethene	20.4	1.00	"	20.0		102	80-120	2.90	20	
Surrogate: 1,2-DCA-d4	44.0		"	40.0		110	70-130			
Surrogate: Toluene-d8	38.9		"	40.0		97.2	70-130			
Surrogate: 4-BFB	40.8		"	40.0		102	70-130			

**Matrix Spike (3I30056-MS1)**

Source: B3I0719-01

Benzene	21.0	1.00	ug/l	20.0	ND	105	63-148			
Chlorobenzene	19.2	1.00	"	20.0	ND	96.0	80-128			
1,1-Dichloroethene	20.5	1.00	"	20.0	ND	102	59-158			
Toluene	19.5	1.00	"	20.0	ND	97.5	72-127			
Trichloroethene	20.3	1.00	"	20.0	ND	102	80-126			
Surrogate: 1,2-DCA-d4	44.4		"	40.0		111	70-130			
Surrogate: Toluene-d8	40.6		"	40.0		102	70-130			
Surrogate: 4-BFB	42.2		"	40.0		106	70-130			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 8 of 13



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3I30056: Prepared 09/30/03 Using EPA 5030B**

**Matrix Spike Dup (3I30056-MSD1)**

**Source: B3I0719-01**

Benzene	20.4	1.00	ug/l	20.0	ND	102	63-148	2.90	20	
Chlorobenzene	18.6	1.00	"	20.0	ND	93.0	80-128	3.17	20	
1,1-Dichloroethene	18.9	1.00	"	20.0	ND	94.5	59-158	8.12	30	
Toluene	18.8	1.00	"	20.0	ND	94.0	72-127	3.66	20	
Trichloroethene	19.4	1.00	"	20.0	ND	97.0	80-126	4.53	20	
Surrogate: 1,2-DCA-d4	43.7		"	40.0		109	70-130			
Surrogate: Toluene-d8	40.4		"	40.0		101	70-130			
Surrogate: 4-BFB	41.3		"	40.0		103	70-130			

**Batch 3J01020: Prepared 10/01/03 Using EPA 5030B**

**Blank (3J01020-BLK1)**

Methyl tert-butyl ether	ND	1.00	ug/l							
Acetone	ND	25.0	"							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Carbon tetrachloride	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroethane	ND	1.00	"							
Chloroform	ND	1.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	1.00	"							
4-Chlorotoluene	ND	1.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
Dibromochloromethane	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
Dibromomethane	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Sulte 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3J01020: Prepared 10/01/03 Using EPA 5030B**

**Blank (3J01020-BLK1)**

1,2-Dichlorobenzene	ND	1.00	ug/l							
1,3-Dichlorobenzene	ND	1.00	"							
1,4-Dichlorobenzene	ND	1.00	"							
Dichlorodifluoromethane	ND	1.00	"							
1,1-Dichloroethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
1,1-Dichloroethene	ND	1.00	"							
cis-1,2-Dichloroethene	ND	1.00	"							
trans-1,2-Dichloroethene	ND	1.00	"							
1,2-Dichloropropane	ND	1.00	"							
1,3-Dichloropropane	ND	1.00	"							
2,2-Dichloropropane	ND	1.00	"							
1,1-Dichloropropene	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3J01020: Prepared 10/01/03 Using EPA 5030B**

**Blank (3J01020-BLK1)**

1,2,3-Trichloropropane	ND	1.00	ug/l							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
<i>Surrogate: 1,2-DCA-d4</i>	44.2		"	40.0		110	70-130			
<i>Surrogate: Toluene-d8</i>	40.5		"	40.0		101	70-130			
<i>Surrogate: 4-BFB</i>	42.0		"	40.0		105	70-130			

**LCS (3J01020-BS1)**

Benzene	21.9	1.00	ug/l	20.0		110	80-120			
Chlorobenzene	22.3	1.00	"	20.0		112	77-120			
1,1-Dichloroethene	22.3	1.00	"	20.0		112	80-120			
Toluene	21.7	1.00	"	20.0		108	80-120			
Trichloroethene	22.7	1.00	"	20.0		114	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	39.4		"	40.0		98.5	70-130			
<i>Surrogate: Toluene-d8</i>	40.5		"	40.0		101	70-130			
<i>Surrogate: 4-BFB</i>	39.3		"	40.0		98.2	70-130			

**LCS Dup (3J01020-BSD1)**

Benzene	21.4	1.00	ug/l	20.0		107	80-120	2.31	20	
Chlorobenzene	21.4	1.00	"	20.0		107	77-120	4.12	20	
1,1-Dichloroethene	21.9	1.00	"	20.0		110	80-120	1.81	20	
Toluene	21.2	1.00	"	20.0		106	80-120	2.33	20	
Trichloroethene	22.0	1.00	"	20.0		110	80-120	3.13	20	
<i>Surrogate: 1,2-DCA-d4</i>	40.6		"	40.0		102	70-130			
<i>Surrogate: Toluene-d8</i>	39.6		"	40.0		99.0	70-130			
<i>Surrogate: 4-BFB</i>	39.8		"	40.0		99.5	70-130			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/08/03 22:13

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3J01020: Prepared 10/01/03 Using EPA 5030B**

**Matrix Spike (3J01020-MS1)**

**Source: B3I0719-11**

Benzene	18.8	1.00	ug/l	20.0	ND	94.0	63-148		
Chlorobenzene	19.1	1.00	"	20.0	ND	95.5	80-128		
1,1-Dichloroethene	19.0	1.00	"	20.0	ND	95.0	59-158		
Toluene	19.2	1.00	"	20.0	ND	96.0	72-127		
Trichloroethene	19.3	1.00	"	20.0	ND	96.5	80-126		
Surrogate: 1,2-DCA-d4	39.7		"	40.0		99.2	70-130		
Surrogate: Toluene-d8	40.2		"	40.0		100	70-130		
Surrogate: 4-BFB	38.7		"	40.0		96.8	70-130		

**Matrix Spike Dup (3J01020-MSD1)**

**Source: B3I0719-11**

Benzene	18.4	1.00	ug/l	20.0	ND	92.0	63-148	2.15	20
Chlorobenzene	18.8	1.00	"	20.0	ND	94.0	80-128	1.58	20
1,1-Dichloroethene	18.2	1.00	"	20.0	ND	91.0	59-158	4.30	30
Toluene	18.6	1.00	"	20.0	ND	93.0	72-127	3.17	20
Trichloroethene	18.7	1.00	"	20.0	ND	93.5	80-126	3.16	20
Surrogate: 1,2-DCA-d4	39.9		"	40.0		99.8	70-130		
Surrogate: Toluene-d8	40.4		"	40.0		101	70-130		
Surrogate: 4-BFB	39.2		"	40.0		98.0	70-130		

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 10/08/03 22:13
--	--	------------------------------------

**Notes and Definitions**

- E Estimated value. The reported value exceeds the calibration range of the analysis.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Kortland Orr For Jeanne Garthwaite, Project Manager

# CHAIN OF CUSTODY REPORT

Work Order #: **B310720**

CLIENT: **AMEC**  
 REPORT TO: **Paul Stull**  
 ADDRESS: **7326 SW Durham Rd. Portland, OR 97224**  
 PHONE: **503-639-3100** FAX: **503-620-7892**  
 INVOICE TO:  
 P.O. NUMBER:

**TURNAROUND REQUEST in Business Days\***

Organic & Inorganic Analyses  
 10  7  5  4  3  2  1  <1  
 STD.

Petroleum Hydrocarbon Analyses  
 5  4  3  2  1  <1  
 STD.

OTHER: \_\_\_\_\_  
 Please Specify \_\_\_\_\_

\*Turnaround Requests less than standard may incur Rush Charges.

PROJECT NAME: <b>Fred Meyer Port Orchard</b>		REQUESTED ANALYSES									
PROJECT NUMBER: <b>9-614-102820</b>		CHAIN OF CUSTODY									
SAMPLED BY: <b>Soe Rock</b>		CHAIN OF CUSTODY									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	CHAIN OF CUSTODY									
1. <b>Mw-103</b>	<b>9/23/03 13:30</b>	CHAIN OF CUSTODY									
2. <b>Mw-105</b>	<b>↓ 14:15</b>	CHAIN OF CUSTODY									
3.		CHAIN OF CUSTODY									
4.		CHAIN OF CUSTODY									
5.		CHAIN OF CUSTODY									
6.		CHAIN OF CUSTODY									
7.		CHAIN OF CUSTODY									
8.		CHAIN OF CUSTODY									
9.		CHAIN OF CUSTODY									
10.		CHAIN OF CUSTODY									
11.		CHAIN OF CUSTODY									
12.		CHAIN OF CUSTODY									
13.		CHAIN OF CUSTODY									
14.		CHAIN OF CUSTODY									
15.		CHAIN OF CUSTODY									

MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA W ID
<b>w</b>	<b>4</b>	<b>STEX, MTEC,</b>	<b>-01</b>
<b>b</b>	<b>4</b>	<b>EDX, EDB, Naphthalene,</b>	<b>-01</b>
		<b>Alkylbenzene Suite</b>	

RELINQUISHED BY: **Joe Rock** FIRM: **AMEC** DATE: **9-24-03** TIME: **1500**  
 RECEIVED BY: **Dennis Hardman** FIRM: **NCA** DATE: **9-24-03** TIME: **15:00**

RELINQUISHED BY: \_\_\_\_\_ FIRM: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_  
 RECEIVED BY: \_\_\_\_\_ FIRM: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

05 January 2004

RECEIVED JAN 13 2004

Paul Stull  
Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224  
RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 12/19/03 10:35. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeanne Garthwaite  
Project Manager





Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
 907.563.9200, fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 01/05/04 15:39

**Volatile Petroleum Products by NWTPH-Gx  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW 103 (B3L0685-01) Water</b> Sampled: 12/17/03 15:00 Received: 12/19/03 10:35									
Gasoline Range Hydrocarbons	4180	50.0	ug/l	1	3L22005	12/22/03	12/22/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	149 %	62-127			"	"	"	"	S-04
<b>MW 105 (B3L0685-02) Water</b> Sampled: 12/17/03 15:55 Received: 12/19/03 10:35									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3L22005	12/22/03	12/22/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	94.4 %	62-127			"	"	"	"	
<b>Trip Blank (B3L0685-03) Water</b> Sampled: 12/17/03 08:00 Received: 12/19/03 10:35									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3L22005	12/22/03	12/22/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	93.8 %	62-127			"	"	"	"	
<b>EB (B3L0685-04) Water</b> Sampled: 12/17/03 14:00 Received: 12/19/03 10:35									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	3L22005	12/22/03	12/22/03	NWTPH-Gx	
Surrogate: 4-BFB (FID)	92.9 %	62-127			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 28332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 01/05/04 15:39
--	--	-----------------------------

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>MW 105 (B3L0685-02) Water Sampled: 12/17/03 15:55 Received: 12/19/03 10:35</b>									
p-Isopropyltoluene	ND	0.200	ug/l	1	3L23013	12/22/03	12/22/03	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	99.0 %	70-130			"	"	"	"	
Surrogate: 4-BFB	106 %	70-130			"	"	"	"	

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 01/05/04 15:39
--	--	-----------------------------

**Volatile Organic Compounds by EPA Method 8260B - Quality Control  
 North Creek Analytical - Bothell**

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

**Batch 3L23013: Prepared 12/22/03 Using EPA 5030B**

**Blank (3L23013-BLK1)**

1,1,1,2-Tetrachloroethane	ND	0.200	ug/l							
1,1,1-Trichloroethane	ND	0.200	"							
1,1,2,2-Tetrachloroethane	ND	0.500	"							
1,1,2-Trichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloroethane	ND	0.200	"							
1,1-Dichloropropene	ND	0.200	"							
1,2,3-Trichlorobenzene	ND	0.200	"							
1,2,3-Trichloropropane	ND	0.500	"							
1,2,4-Trichlorobenzene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,2-Dibromo-3-chloropropane	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichlorobenzene	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
1,2-Dichloropropane	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
1,3-Dichlorobenzene	ND	0.200	"							
1,3-Dichloropropane	ND	0.200	"							
1,4-Dichlorobenzene	ND	0.200	"							
2,2-Dichloropropane	ND	0.500	"							
2-Butanone	ND	2.00	"							
2-Chlorotoluene	ND	0.500	"							
2-Hexanone	ND	2.00	"							
4-Chlorotoluene	ND	0.500	"							
4-Methyl-2-pentanone	ND	2.00	"							
Acetone	ND	10.0	"							
Benzene	ND	0.200	"							
Bromobenzene	ND	0.500	"							
Bromochloromethane	ND	0.200	"							
Bromodichloromethane	ND	0.200	"							
Bromoform	ND	0.200	"							
Bromomethane	ND	2.00	"							
Carbon disulfide	ND	0.500	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 01/05/04 15:39
--	--	-----------------------------

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3L23013: Prepared 12/22/03 Using EPA 5030B**

**LCS (3L23013-BS1)**

1,1-Dichloroethene	1.98	0.200	ug/l	2.00		99.0	80-120			
Benzene	2.02	0.200	"	2.00		101	80-130			
Chlorobenzene	1.97	0.200	"	2.00		98.5	80-120			
Toluene	2.13	0.200	"	2.00		106	80-120			
Trichloroethene	2.03	0.200	"	2.00		102	70-130			
Surrogate: 1,2-DCA-d4	3.83		"	4.00		95.8	70-130			
Surrogate: Toluene-d8	4.00		"	4.00		100	70-130			
Surrogate: 4-BFB	4.26		"	4.00		106	70-130			

**LCS Dup (3L23013-BSD1)**

1,1-Dichloroethene	1.95	0.200	ug/l	2.00		97.5	80-120	1.53	30	
Benzene	2.04	0.200	"	2.00		102	80-130	0.985	20	
Chlorobenzene	2.00	0.200	"	2.00		100	80-120	1.51	20	
Toluene	2.00	0.200	"	2.00		100	80-120	6.30	20	
Trichloroethene	2.04	0.200	"	2.00		102	70-130	0.491	20	
Surrogate: 1,2-DCA-d4	3.76		"	4.00		94.0	70-130			
Surrogate: Toluene-d8	3.95		"	4.00		98.8	70-130			
Surrogate: 4-BFB	4.30		"	4.00		108	70-130			

**Batch 3L23037: Prepared 12/23/03 Using EPA 5030B**

**Blank (3L23037-BLK1)**

2-Chloroethylvinyl ether	ND	5.00	ug/l							
Acrolein	ND	5.00	"							
Acrylonitrile	ND	5.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Acetone	ND	25.0	"							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 8 of 12



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
 Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 01/05/04 15:39

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 3L23037: Prepared 12/23/03 Using EPA 5030B**

**Blank (3L23037-BLK1)**

Methylene chloride	ND	5.00	ug/l							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							

Surrogate: 1,2-DCA-d4	20.1		"	20.0		100	70-130			
Surrogate: Toluene-d8	18.4		"	20.0		92.0	70-130			
Surrogate: 4-BFB	21.2		"	20.0		106	70-130			

**LCS (3L23037-BS1)**

Benzene	9.91	1.00	ug/l	10.0		99.1	80-120			
Chlorobenzene	10.6	1.00	"	10.0		106	77-120			
1,1-Dichloroethene	9.58	1.00	"	10.0		95.8	80-120			
Toluene	9.98	1.00	"	10.0		99.8	80-120			
Trichloroethene	10.5	1.00	"	10.0		105	80-120			
Surrogate: 1,2-DCA-d4	19.7		"	20.0		98.5	70-130			
Surrogate: Toluene-d8	19.7		"	20.0		98.5	70-130			
Surrogate: 4-BFB	20.1		"	20.0		100	70-130			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network

Page 10 of 12



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
Anchorage 2000 W. International Airport Road, Suite A10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
01/05/04 15:39

### Notes and Definitions

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 12 of 12



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 04/14/04 11:46
---	--	-----------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P4D0111-01	Water	03/31/04 11:05	04/01/04 10:21
MW105	P4D0111-02	Water	03/31/04 10:00	04/01/04 10:21
Trip Blank	P4D0111-03	Water	03/31/04 10:00	04/01/04 10:21

RECEIVED APR 16 2004

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 1 of 11



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 04/14/04 11:46
---	--	-----------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P4D0111-01RE1) Water</b>						Sampled: 03/31/04 Received: 04/01/04			
Gasoline Range Hydrocarbons	623	80.0	ug/l	1	NW TPH-Gx	04/12/04	04/12/04	4040429	
Surr: 4-BFB	107 %	50-150							
<b>MW105 (P4D0111-02RE1) Water</b>						Sampled: 03/31/04 Received: 04/01/04			
Gasoline Range Hydrocarbons	ND	80.0	ug/l	1	NW TPH-Gx	04/12/04	04/12/04	4040429	
Surr: 4-BFB	91.2 %	50-150							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 04/14/04 11:46

**BTEX per EPA Method 8021B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>Trip Blank (P4D0111-03) Water</b>						Sampled: 03/31/04 Received: 04/01/04			
Benzene	ND	0.500	ug/l	1	EPA 8021B	04/06/04	04/06/04	4040223	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
<i>Surr: 4-BFB (PID)</i>	<i>105 %</i>	<i>70-130</i>							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/04 11:46

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
<b>MW103 (P4D0111-01RE1) Water</b>						Sampled: 03/31/04 Received: 04/01/04			
n-Butylbenzene	ND	5.00	ug/l	1	EPA 8260B	04/08/04	04/08/04	4040290	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	15.7	0.500	"	"	"	"	"	"	
Xylenes (total)	52.9	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	24.4	2.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	58.2	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	10.4	0.500	"	"	"	"	"	"	
Isopropylbenzene	3.06	2.00	"	"	"	"	"	"	
n-Propylbenzene	7.64	0.500	"	"	"	"	"	"	
Surr: 4-BFB	96.5 %	75-120							
Surr: 1,2-DCA-d4	101 %	77-129							
Surr: Dibromofluoromethane	102 %	80-121							
Surr: Toluene-d8	95.0 %	80-120							

<b>MW105 (P4D0111-02) Water</b>						Sampled: 03/31/04 Received: 04/01/04			
n-Butylbenzene	ND	5.00	ug/l	1	EPA 8260B	04/07/04	04/07/04	4040238	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.500	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.500	"	"	"	"	"	"	
Benzene	ND	0.200	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 04/14/04 11:46

**Selected Volatile Organic Compounds per EPA Method 8260B**  
**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Dilution	Method	Prepared	Analyzed	Batch	Notes
---------	--------	-----------------	-------	----------	--------	----------	----------	-------	-------

**MW105 (P4D0111-02) Water**

Sampled: 03/31/04 Received: 04/01/04

Surr: 4-BFB	102 %	75-120							
Surr: 1,2-DCA-d4	103 %	77-129							
Surr: Dibromofluoromethane	108 %	80-121							
Surr: Toluene-d8	90.5 %	80-120							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network

Page 5 of 11



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/04 11:46

**Gasoline Hydrocarbons per NW TPH-Gx Method - Quality Control**

**North Creek Analytical - Portland**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Notes
<b>Batch 4040429 - EPA 5030B</b>										
<b>Blank (4040429-BLK1)</b>				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	ND	80.0	ug/l							
<i>Surr: 4-BFB</i>	43.5		"	50.0		87.0	50-150			
<b>LCS (4040429-BS1)</b>				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	750	80.0	ug/l	1000		75.0	70-130			
<i>Surr: 4-BFB</i>	42.8		"	50.0		85.6	50-150			
<b>LCS Dup (4040429-BSD1)</b>				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	879	80.0	ug/l	1000		87.9	70-130	15.8	40	
<i>Surr: 4-BFB</i>	44.6		"	50.0		89.2	50-150			
<b>Duplicate (4040429-DUP1)</b>				Source: P4D0046-02		Prepared & Analyzed: 04/12/04				
Gasoline Range Hydrocarbons	743	80.0	ug/l		916			20.9	40	
<i>Surr: 4-BFB</i>	49.9		"	50.0		99.8	50-150			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 04/14/04 11:46
---	--	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 4040238 - EPA 5030B**

<b>Blank (4040238-BLK1)</b>			Prepared & Analyzed: 04/07/04							
n-Butylbenzene	ND	5.00	ug/l							
p-Isopropyltoluene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.200	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							
Naphthalene	ND	2.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
Surr: 4-BFB	20.2		"	20.0		101	75-120			
Surr: 1,2-DCA-d4	20.5		"	20.0		102	77-129			
Surr: Dibromofluoromethane	20.3		"	20.0		102	80-121			
Surr: Toluene-d8	19.8		"	20.0		99.0	80-120			

<b>LCS (4040238-BS1)</b>			Prepared & Analyzed: 04/07/04							
Benzene	20.6	0.200	ug/l	20.0		103	80-120			
Toluene	21.1	0.500	"	20.0		106	80-124			
Ethylbenzene	21.5	0.500	"	20.0		108	80-120			
Xylenes (total)	64.1	1.00	"	60.0		107	73-124			
Methyl tert-butyl ether	22.0	2.00	"	20.0		110	80-129			
Naphthalene	27.7	2.00	"	20.0		138	72-149			
Surr: 4-BFB	19.4		"	20.0		97.0	75-120			
Surr: 1,2-DCA-d4	19.7		"	20.0		98.5	77-129			
Surr: Dibromofluoromethane	19.8		"	20.0		99.0	80-121			
Surr: Toluene-d8	20.0		"	20.0		100	80-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 04/14/04 11:46
---	--	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 4040238 - EPA 5030B**

Matrix Spike (4040238-MS1)	Source: P4D0118-15			Prepared & Analyzed: 04/07/04						
Benzene	21.1	0.200	ug/l	20.0	ND	106	80-124			
Toluene	20.0	0.500	"	20.0	ND	100	79.7-131			
Ethylbenzene	18.3	0.500	"	20.0	ND	91.5	80-124			
Xylenes (total)	50.2	1.00	"	60.0	ND	83.7	44.6-154			
Methyl tert-butyl ether	21.6	2.00	"	20.0	0.140	107	80-130			
Naphthalene	18.7	2.00	"	20.0	ND	93.5	69-163			
Surr: 4-BFB	19.7		"	20.0		98.5	75-120			
Surr: 1,2-DCA-d4	19.6		"	20.0		98.0	77-129			
Surr: Dibromofluoromethane	19.6		"	20.0		98.0	80-121			
Surr: Toluene-d8	19.3		"	20.0		96.5	80-120			

Matrix Spike Dup (4040238-MSD1)	Source: P4D0118-15			Prepared & Analyzed: 04/07/04						
Benzene	21.1	0.200	ug/l	20.0	ND	106	80-124	0.00	25	
Toluene	18.6	0.500	"	20.0	ND	93.0	79.7-131	7.25	25	
Ethylbenzene	17.7	0.500	"	20.0	ND	88.5	80-124	3.33	25	
Xylenes (total)	38.7	1.00	"	60.0	ND	64.5	44.6-154	25.9	25	Q-01
Methyl tert-butyl ether	22.2	2.00	"	20.0	0.140	110	80-130	2.74	25	
Naphthalene	19.4	2.00	"	20.0	ND	97.0	69-163	3.67	25	
Surr: 4-BFB	19.4		"	20.0		97.0	75-120			
Surr: 1,2-DCA-d4	19.9		"	20.0		99.5	77-129			
Surr: Dibromofluoromethane	20.1		"	20.0		100	80-121			
Surr: Toluene-d8	18.7		"	20.0		93.5	80-120			

**Batch 4040290 - EPA 5030B**

Blank (4040290-BLK1)	Prepared & Analyzed: 04/08/04									
n-Butylbenzene	ND	5.00	ug/l							
p-Isopropyltoluene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	0.500	"							
1,2-Dichloroethane	ND	0.500	"							
Benzene	ND	0.200	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Methyl tert-butyl ether	ND	2.00	"							

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588

AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/04 11:46

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 4040290 - EPA 5030B**

**Blank (4040290-BLK1)**

Prepared & Analyzed: 04/08/04

Naphthalene	ND	2.00	ug/l							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
Isopropylbenzene	ND	2.00	"							
n-Propylbenzene	ND	0.500	"							
<i>Surr: 4-BFB</i>	20.1		"	20.0		100	75-120			
<i>Surr: 1,2-DCA-d4</i>	20.6		"	20.0		103	77-129			
<i>Surr: Dibromofluoromethane</i>	20.0		"	20.0		100	80-121			
<i>Surr: Toluene-d8</i>	19.4		"	20.0		97.0	80-120			

**LCS (4040290-BS1)**

Prepared & Analyzed: 04/08/04

Benzene	20.7	0.200	ug/l	20.0		104	80-120			
Toluene	20.9	0.500	"	20.0		104	80-124			
Ethylbenzene	21.2	0.500	"	20.0		106	80-120			
Xylenes (total)	62.0	1.00	"	60.0		103	73-124			
Methyl tert-butyl ether	21.9	2.00	"	20.0		110	80-129			
Naphthalene	24.4	2.00	"	20.0		122	72-149			
<i>Surr: 4-BFB</i>	19.6		"	20.0		98.0	75-120			
<i>Surr: 1,2-DCA-d4</i>	20.2		"	20.0		101	77-129			
<i>Surr: Dibromofluoromethane</i>	20.1		"	20.0		100	80-121			
<i>Surr: Toluene-d8</i>	20.3		"	20.0		102	80-120			

**LCS Dup (4040290-BSD1)**

Prepared & Analyzed: 04/08/04

Benzene	20.8	0.200	ug/l	20.0		104	80-120	0.482	25	
Toluene	21.3	0.500	"	20.0		106	80-124	1.90	25	
Ethylbenzene	21.6	0.500	"	20.0		108	80-120	1.87	25	
Xylenes (total)	63.6	1.00	"	60.0		106	73-124	2.55	25	
Methyl tert-butyl ether	22.8	2.00	"	20.0		114	80-129	4.03	25	
Naphthalene	25.4	2.00	"	20.0		127	72-149	4.02	25	
<i>Surr: 4-BFB</i>	19.5		"	20.0		97.5	75-120			
<i>Surr: 1,2-DCA-d4</i>	19.8		"	20.0		99.0	77-129			
<i>Surr: Dibromofluoromethane</i>	19.8		"	20.0		99.0	80-121			
<i>Surr: Toluene-d8</i>	19.8		"	20.0		99.0	80-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 9 of 11



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 04/14/04 11:46
---	--	-----------------------------

**Selected Volatile Organic Compounds per EPA Method 8260B - Quality Control**

**North Creek Analytical - Portland**

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

**Batch 4040290 - EPA 5030B**

Matrix Spike (4040290-MS1)	Source: P4D0080-05			Prepared & Analyzed: 04/08/04						
Benzene	21.8	0.200	ug/l	20.0	2.09	98.6	80-124			
Toluene	25.1	0.500	"	20.0	5.22	99.4	79.7-131			
Ethylbenzene	67.4	0.500	"	20.0	45.9	108	80-124			
Xylenes (total)	70.9	1.00	"	60.0	18.1	88.0	44.6-154			
Methyl tert-butyl ether	20.7	2.00	"	20.0	ND	104	80-130			
Naphthalene	42.8	2.00	"	20.0	23.4	97.0	69-163			
Surr: 4-BFB	19.3		"	20.0		96.5	75-120			
Surr: 1,2-DCA-d4	19.8		"	20.0		99.0	77-129			
Surr: Dibromofluoromethane	19.7		"	20.0		98.5	80-121			
Surr: Toluene-d8	20.1		"	20.0		100	80-120			

Matrix Spike Dup (4040290-MSD1)	Source: P4D0080-05			Prepared & Analyzed: 04/08/04						
Benzene	22.2	0.200	ug/l	20.0	2.09	101	80-124	1.82	25	
Toluene	25.2	0.500	"	20.0	5.22	99.9	79.7-131	0.398	25	
Ethylbenzene	64.4	0.500	"	20.0	45.9	92.5	80-124	4.55	25	
Xylenes (total)	70.3	1.00	"	60.0	18.1	87.0	44.6-154	0.850	25	
Methyl tert-butyl ether	21.8	2.00	"	20.0	ND	109	80-130	5.18	25	
Naphthalene	46.4	2.00	"	20.0	23.4	115	69-163	8.07	25	
Surr: 4-BFB	19.2		"	20.0		96.0	75-120			
Surr: 1,2-DCA-d4	19.7		"	20.0		98.5	77-129			
Surr: Dibromofluoromethane	19.7		"	20.0		98.5	80-121			
Surr: Toluene-d8	20.5		"	20.0		102	80-120			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-9223  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588

AMEC- Portland 7376 SW Durham Road Portland, OR 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 04/14/04 11:46
---	--	------------------------------------

**Notes and Definitions**

- Q-01 The matrix spike recovery, and/or RPD, for this QC sample is outside of established control limits. Failure of a matrix spike QC sample does not represent an out-of-control condition for the batch.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. MRLs are adjusted if %Solids are less than 50%.
- wet Sample results reported on a wet weight basis (as received)
- RPD Relative Percent Difference

North Creek Analytical - Portland

Crystal Jones, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

# CHAIN OF CUSTODY REPORT

Work Order #: **P400111**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST in Business Days*</b> Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 STD. Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 STD. Please Specify <input type="checkbox"/> OTHER											
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:													
ADDRESS: <b>7376 SW Durham Port OR</b>															
PHONE: <b>503 6393400</b>		FAX:													
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		REQUESTED ANALYSES													
PROJECT NUMBER: <b>9-6111-10282-0</b>															
SAMPLED BY: <b>McFarland</b>															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MUTS 6x	BZOC	BTEX				MATRIX (W. S. O)	# OF CONT.	COMMENTS	NCA WO ID				
1. <b>MW 103</b>	<b>3-31-04 1105</b>	<b>X</b>	<b>X</b>												
2. <b>MW 105</b>	<b>3-31-04 1000</b>	<b>X</b>	<b>X</b>												
3. <b>Trip Blank</b>	<b>3-31-04 Lab supplied</b>			<b>X</b>											
4.															
5.															
6.															
7.															
8.															
9.															
10.															
11.															
12.															
13.															
14.															
15.															
RELINQUISHED BY: <b>W. J. McFarland</b>		FIRM: <b>AMEC</b>		DATE: <b>4-1-04</b>		TIME: <b>0800</b>		RECEIVED BY: <b>Bob F</b>		FIRM: <b>NCA</b>		DATE: <b>4/1/04</b>		TIME: <b>9:41</b>	
RELINQUISHED BY: <b>Bob F</b>		FIRM: <b>NCA</b>		DATE: <b>4/1/04</b>		TIME: <b>6:24</b>		RECEIVED BY: <b>Kim Dawis</b>		FIRM: <b>NCA</b>		DATE: <b>4/1/04</b>		TIME: <b>10:21</b>	
ADDITIONAL REMARKS:											TEMP:	PAGE 1 OF 1			
COC REV 3/99 <b>8260 TO include BTEX, MIBE, EDB, EDC, Naphthalene - Alkylbenzene suite</b>											<b>3.1</b>				

**APPENDIX D**

VOC Removal Rate Calculations



## VOC Removal Rate Calculations

Vapor emissions from the soil vapor extraction system (SVES) have been monitored periodically using a photoionization detector (PID) instrument. Air flow rates were also estimated using both equipment specification formulas for calculating air flow rates and using a Dwyer series 470 thermal anemometer.

The VOC extraction rate by the SVES was estimated using the following equation:

$$R = Q \times C \times F$$

Where:

- R = Removal Rate of VOCs (lbs/day)
- Q = Air Flow Rate (cfm)
- C = Vapor Concentration in Air (ppmv)
- F = Conversion factor for converting VOC concentrations on a volume basis to total weight of VOCs assuming instrument calibration is made using isobutylene =  $2.10 \times 10^{-4}$



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
07/21/04 13:40

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	B4G0035-01	Water	06/29/04 10:00	07/01/04 08:20
MW103	B4G0035-02	Water	06/29/04 16:50	07/01/04 08:20
MW105	B4G0035-03	Water	06/29/04 16:00	07/01/04 08:20

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 1 of 12



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 07/21/04 13:40

**Volatile Petroleum Products by NWTPH-Gx**  
**North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>Trip Blank (B4G0035-01) Water</b> Sampled: 06/29/04 10:00 Received: 07/01/04 08:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G11003	07/12/04	07/12/04	NWTPH-Gx	
Surrogate: 4-BFB (FID)	93.3 %	58-144			"	"	"	"	
<b>MW103 (B4G0035-02) Water</b> Sampled: 06/29/04 16:50 Received: 07/01/04 08:20									
Gasoline Range Hydrocarbons	17300	250	ug/l	5	4G13004	07/13/04	07/13/04	NWTPH-Gx	
Surrogate: 4-BFB (FID)	138 %	58-144			"	"	"	"	
<b>MW105 (B4G0035-03) Water</b> Sampled: 06/29/04 16:00 Received: 07/01/04 08:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4G11003	07/12/04	07/12/04	NWTPH-Gx	
Surrogate: 4-BFB (FID)	96.0 %	58-144			"	"	"	"	

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 07/21/04 13:40

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**Trip Blank (B4G0035-01) Water** Sampled: 06/29/04 10:00 Received: 07/01/04 08:20

Benzene	ND	0.200	ug/l	1	4G07053	07/06/04	07/06/04	EPA 8260B	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	103 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	103 %	70-130			"	"	"	"	
Surrogate: 4-BFB	100 %	70-130			"	"	"	"	

**MW103 (B4G0035-02) Water** Sampled: 06/29/04 16:50 Received: 07/01/04 08:20

Methyl tert-butyl ether	ND	2.50	ug/l	2.5	4G06006	07/06/04	07/06/04	EPA 8260B	
Benzene	ND	2.50	"	"	"	"	"	"	
<b>n-Butylbenzene</b>	<b>14.4</b>	2.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.50	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.50	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>243</b>	2.50	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>24.7</b>	2.50	"	"	"	"	"	"	
<b>p-Isopropyltoluene</b>	<b>5.98</b>	2.50	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>138</b>	2.50	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>69.4</b>	2.50	"	"	"	"	"	"	
Toluene	ND	2.50	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1010</b>	2.50	"	"	"	"	"	"	E
<b>1,3,5-Trimethylbenzene</b>	<b>281</b>	2.50	"	"	"	"	"	"	E
<b>o-Xylene</b>	<b>198</b>	2.50	"	"	"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/21/04 13:40
--	--	-----------------------------

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**MW103 (B4G0035-02) Water** Sampled: 06/29/04 16:50 Received: 07/01/04 08:20

<b>m,p-Xylene</b>	<b>915</b>	5.00	ug/l	2.5	4G06006	07/06/04	07/06/04	EPA 8260B	E
Surrogate: 1,2-DCA-d4	125 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	107 %	70-130			"	"	"	"	
Surrogate: 4-BFB	103 %	70-130			"	"	"	"	

**MW103 (B4G0035-02RE1) Water** Sampled: 06/29/04 16:50 Received: 07/01/04 08:20

Methyl tert-butyl ether	ND	20.0	ug/l	20	4G06006	07/06/04	07/06/04	EPA 8260B	
Benzene	ND	20.0	"	"	"	"	"	"	
n-Butylbenzene	ND	20.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	20.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	20.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	20.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	20.0	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>258</b>	20.0	"	"	"	"	"	"	
<b>Isopropylbenzene</b>	<b>26.4</b>	20.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20.0	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>114</b>	20.0	"	"	"	"	"	"	
<b>n-Propylbenzene</b>	<b>76.8</b>	20.0	"	"	"	"	"	"	
Toluene	ND	20.0	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1150</b>	20.0	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>331</b>	20.0	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>211</b>	20.0	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>964</b>	40.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	114 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	109 %	70-130			"	"	"	"	
Surrogate: 4-BFB	103 %	70-130			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 4 of 12





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 07/21/04 13:40
--	--	------------------------------------

**Volatile Organic Compounds by EPA Method 8260B**  
**North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>MW105 (B4G0035-03) Water    Sampled: 06/29/04 16:00    Received: 07/01/04 08:20</b>									
Benzene	ND	0.200	ug/l	1	4G07053	07/06/04	07/07/04	EPA 8260B	
n-Butylbenzene	ND	0.200	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.200	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane	ND	0.200	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.200	"	"	"	"	"	"	
Ethylbenzene	ND	0.200	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	0.500	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.200	"	"	"	"	"	"	
Naphthalene	ND	0.500	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.200	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.200	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
o-Xylene	ND	0.250	"	"	"	"	"	"	
m,p-Xylene	ND	0.500	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	106 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	104 %	70-130			"	"	"	"	
Surrogate: 4-BFB	101 %	70-130			"	"	"	"	

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 07/21/04 13:40

**Volatile Petroleum Products by NWTPH-Gx - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G11003: Prepared 07/12/04 Using EPA 5030B (P/T)**

**Blank (4G11003-BLK1)**

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
<i>Surrogate: 4-BFB (FID)</i>	44.7		"	48.0		93.1	58-144			

**LCS (4G11003-BS1)**

Gasoline Range Hydrocarbons	522	50.0	ug/l	502		104	80-120			
<i>Surrogate: 4-BFB (FID)</i>	50.6		"	48.0		105	58-144			

**LCS Dup (4G11003-BSD1)**

Gasoline Range Hydrocarbons	509	50.0	ug/l	502		101	80-120	2.52	25	
<i>Surrogate: 4-BFB (FID)</i>	48.3		"	48.0		101	58-144			

**Matrix Spike (4G11003-MS1)**

**Source: B4G0035-03**

Gasoline Range Hydrocarbons	454	50.0	ug/l	502	17.6	86.9	58-129			
<i>Surrogate: 4-BFB (FID)</i>	47.3		"	48.0		98.5	58-144			

**Matrix Spike Dup (4G11003-MSD1)**

**Source: B4G0035-03**

Gasoline Range Hydrocarbons	463	50.0	ug/l	502	17.6	88.7	58-129	1.96	25	
<i>Surrogate: 4-BFB (FID)</i>	50.4		"	48.0		105	58-144			

**Batch 4G13004: Prepared 07/13/04 Using EPA 5030B (P/T)**

**Blank (4G13004-BLK1)**

Gasoline Range Hydrocarbons	ND	50.0	ug/l							
<i>Surrogate: 4-BFB (FID)</i>	45.1		"	48.0		94.0	58-144			

**LCS (4G13004-BS1)**

Gasoline Range Hydrocarbons	518	50.0	ug/l	502		103	80-120			
<i>Surrogate: 4-BFB (FID)</i>	49.8		"	48.0		104	58-144			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Reported: 07/21/04 13:40
--	--	-----------------------------

**Volatile Petroleum Products by NWTPH-Gx - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G13004: Prepared 07/13/04 Using EPA 5030B (P/T)**

**LCS Dup (4G13004-BSD1)**

Gasoline Range Hydrocarbons	516	50.0	ug/l	502		103	80-120	0.387	25	
Surrogate: 4-BFB (FID)	50.8		"	48.0		106	58-144			

**Matrix Spike (4G13004-MS1)**

Source: B4G0185-05

Gasoline Range Hydrocarbons	496	50.0	ug/l	502	17.6	95.3	58-129			
Surrogate: 4-BFB (FID)	50.9		"	48.0		106	58-144			

**Matrix Spike Dup (4G13004-MSD1)**

Source: B4G0185-05

Gasoline Range Hydrocarbons	480	50.0	ug/l	502	17.6	92.1	58-129	3.28	25	
Surrogate: 4-BFB (FID)	50.9		"	48.0		106	58-144			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
07/21/04 13:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G06006: Prepared 07/06/04 Using EPA 5030B**

**Blank (4G06006-BLK1)**

Methyl tert-butyl ether	ND	1.00	ug/l							
Benzene	ND	1.00	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
<i>Surrogate: 1,2-DCA-d4</i>	<i>40.1</i>		"	<i>40.0</i>		<i>100</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>39.8</i>		"	<i>40.0</i>		<i>99.5</i>	<i>70-130</i>			
<i>Surrogate: 4-BFB</i>	<i>39.9</i>		"	<i>40.0</i>		<i>99.8</i>	<i>70-130</i>			

**LCS (4G06006-BS1)**

Methyl tert-butyl ether	21.8	1.00	ug/l	20.0		109	70-130			
Benzene	17.8	1.00	"	20.0		89.0	80-120			
n-Butylbenzene	16.9	1.00	"	20.0		84.5	70-130			
sec-Butylbenzene	17.2	1.00	"	20.0		86.0	70-130			
tert-Butylbenzene	17.9	1.00	"	20.0		89.5	70-130			
1,2-Dibromoethane	19.0	1.00	"	20.0		95.0	70-130			
1,2-Dichloroethane	20.2	1.00	"	20.0		101	70-130			
Ethylbenzene	16.7	1.00	"	20.0		83.5	70-130			
Isopropylbenzene	17.4	1.00	"	20.0		87.0	70-130			
p-Isopropyltoluene	17.4	1.00	"	20.0		87.0	70-130			
Naphthalene	18.6	1.00	"	20.0		93.0	70-130			
n-Propylbenzene	17.5	1.00	"	20.0		87.5	70-130			
Toluene	17.2	1.00	"	20.0		86.0	80-120			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

**Reported:**  
07/21/04 13:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G06006: Prepared 07/06/04 Using EPA 5030B**

**LCS (4G06006-BS1)**

1,2,4-Trimethylbenzene	17.4	1.00	ug/l	20.0		87.0	70-130			
1,3,5-Trimethylbenzene	17.2	1.00	"	20.0		86.0	70-130			
o-Xylene	16.6	1.00	"	20.0		83.0	70-130			
m,p-Xylene	34.5	2.00	"	40.0		86.2	70-130			
<i>Surrogate: 1,2-DCA-d4</i>	<i>41.2</i>		"	<i>40.0</i>		<i>103</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>39.3</i>		"	<i>40.0</i>		<i>98.2</i>	<i>70-130</i>			
<i>Surrogate: 4-BFB</i>	<i>40.4</i>		"	<i>40.0</i>		<i>101</i>	<i>70-130</i>			

**LCS Dup (4G06006-BSD1)**

Methyl tert-butyl ether	22.2	1.00	ug/l	20.0		111	70-130	1.82	20	
Benzene	18.4	1.00	"	20.0		92.0	80-120	3.31	20	
n-Butylbenzene	17.4	1.00	"	20.0		87.0	70-130	2.92	20	
sec-Butylbenzene	17.5	1.00	"	20.0		87.5	70-130	1.73	20	
tert-Butylbenzene	18.2	1.00	"	20.0		91.0	70-130	1.66	20	
1,2-Dibromoethane	19.6	1.00	"	20.0		98.0	70-130	3.11	20	
1,2-Dichloroethane	20.5	1.00	"	20.0		102	70-130	1.47	20	
Ethylbenzene	17.2	1.00	"	20.0		86.0	70-130	2.95	20	
Isopropylbenzene	17.9	1.00	"	20.0		89.5	70-130	2.83	20	
p-Isopropyltoluene	17.8	1.00	"	20.0		89.0	70-130	2.27	20	
Naphthalene	18.8	1.00	"	20.0		94.0	70-130	1.07	20	
n-Propylbenzene	18.0	1.00	"	20.0		90.0	70-130	2.82	20	
Toluene	18.0	1.00	"	20.0		90.0	80-120	4.55	20	
1,2,4-Trimethylbenzene	17.9	1.00	"	20.0		89.5	70-130	2.83	20	
1,3,5-Trimethylbenzene	17.8	1.00	"	20.0		89.0	70-130	3.43	20	
o-Xylene	17.2	1.00	"	20.0		86.0	70-130	3.55	20	
m,p-Xylene	35.5	2.00	"	40.0		88.8	70-130	2.86	20	
<i>Surrogate: 1,2-DCA-d4</i>	<i>42.3</i>		"	<i>40.0</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>40.4</i>		"	<i>40.0</i>		<i>101</i>	<i>70-130</i>			
<i>Surrogate: 4-BFB</i>	<i>41.2</i>		"	<i>40.0</i>		<i>103</i>	<i>70-130</i>			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network

Page 9 of 12



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

Amec - Portland  
7376 SW Durham Road  
Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Reported:  
07/21/04 13:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G07053: Prepared 07/06/04 Using EPA 5030B**

**Blank (4G07053-BLK1)**

Benzene	ND	0.200	ug/l							
n-Butylbenzene	ND	0.200	"							
sec-Butylbenzene	ND	0.200	"							
tert-Butylbenzene	ND	0.500	"							
1,2-Dibromoethane	ND	0.200	"							
1,2-Dichloroethane	ND	0.200	"							
Ethylbenzene	ND	0.200	"							
Methyl tert-butyl ether	ND	0.500	"							
Isopropylbenzene	ND	0.500	"							
p-Isopropyltoluene	ND	0.200	"							
Naphthalene	ND	0.500	"							
n-Propylbenzene	ND	0.500	"							
Toluene	ND	0.200	"							
1,2,4-Trimethylbenzene	ND	0.200	"							
1,3,5-Trimethylbenzene	ND	0.500	"							
o-Xylene	ND	0.250	"							
m,p-Xylene	ND	0.500	"							
Surrogate: 1,2-DCA-d4	4.11		"	4.00		103	70-130			
Surrogate: Toluene-d8	3.99		"	4.00		99.8	70-130			
Surrogate: 4-BFB	4.02		"	4.00		100	70-130			

**LCS (4G07053-BS1)**

Benzene	2.21	0.200	ug/l	2.00		110	80-120			
n-Butylbenzene	2.17	0.200	"	2.00		108	80-120			
sec-Butylbenzene	2.18	0.200	"	2.00		109	80-120			
tert-Butylbenzene	2.15	0.500	"	2.00		108	80-120			
1,2-Dibromoethane	2.18	0.200	"	2.00		109	80-120			
1,2-Dichloroethane	2.21	0.200	"	2.00		110	80-120			
Ethylbenzene	2.18	0.200	"	2.00		109	80-120			
Methyl tert-butyl ether	ND	0.500	"	2.00						
Isopropylbenzene	2.18	0.500	"	2.00		109	80-120			
p-Isopropyltoluene	2.19	0.200	"	2.00		110	80-120			
Naphthalene	2.17	0.500	"	2.00		108	80-120			
n-Propylbenzene	2.18	0.500	"	2.00		109	80-120			
Toluene	2.14	0.200	"	2.00		107	80-120			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland  
 7376 SW Durham Road  
 Portland, OR/USA 97224

Project: Fred Meyer Port Orchard  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Reported:  
 07/21/04 13:40

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**North Creek Analytical - Bothell**

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

**Batch 4G07053: Prepared 07/06/04 Using EPA 5030B**

**LCS (4G07053-BS1)**

1,2,4-Trimethylbenzene	2.18	0.200	ug/l	2.00		109	80-120			
1,3,5-Trimethylbenzene	2.19	0.500	"	2.00		110	80-120			
o-Xylene	2.17	0.250	"	2.00		108	80-120			
m,p-Xylene	4.40	0.500	"	4.00		110	80-120			
<i>Surrogate: 1,2-DCA-d4</i>	<i>4.08</i>		<i>"</i>	<i>4.00</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>3.99</i>		<i>"</i>	<i>4.00</i>		<i>99.8</i>	<i>70-130</i>			
<i>Surrogate: 4-BFB</i>	<i>3.97</i>		<i>"</i>	<i>4.00</i>		<i>99.2</i>	<i>70-130</i>			

**LCS Dup (4G07053-BSD1)**

Benzene	1.94	0.200	ug/l	2.00		97.0	80-120	13.0	30	
n-Butylbenzene	1.92	0.200	"	2.00		96.0	80-120	12.2	30	
sec-Butylbenzene	1.99	0.200	"	2.00		99.5	80-120	9.11	30	
tert-Butylbenzene	1.92	0.500	"	2.00		96.0	80-120	11.3	30	
1,2-Dibromoethane	1.94	0.200	"	2.00		97.0	80-120	11.7	30	
1,2-Dichloroethane	1.87	0.200	"	2.00		93.5	80-120	16.7	30	
Ethylbenzene	1.96	0.200	"	2.00		98.0	80-120	10.6	30	
Methyl tert-butyl ether	ND	0.500	"	2.00						
Isopropylbenzene	1.95	0.500	"	2.00		97.5	80-120	11.1	30	
p-Isopropyltoluene	1.93	0.200	"	2.00		96.5	80-120	12.6	30	
Naphthalene	1.81	0.500	"	2.00		90.5	80-120	18.1	30	
n-Propylbenzene	1.96	0.500	"	2.00		98.0	80-120	10.6	30	
Toluene	1.94	0.200	"	2.00		97.0	80-120	9.80	30	
1,2,4-Trimethylbenzene	1.94	0.200	"	2.00		97.0	80-120	11.7	30	
1,3,5-Trimethylbenzene	1.97	0.500	"	2.00		98.5	80-120	10.6	30	
o-Xylene	1.96	0.250	"	2.00		98.0	80-120	10.2	30	
m,p-Xylene	3.91	0.500	"	4.00		97.8	80-120	11.8	30	
<i>Surrogate: 1,2-DCA-d4</i>	<i>3.98</i>		<i>"</i>	<i>4.00</i>		<i>99.5</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>4.08</i>		<i>"</i>	<i>4.00</i>		<i>102</i>	<i>70-130</i>			
<i>Surrogate: 4-BFB</i>	<i>3.96</i>		<i>"</i>	<i>4.00</i>		<i>99.0</i>	<i>70-130</i>			

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network

Page 11 of 12



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 907.563.9200 fax 907.563.9210

Amec - Portland 7376 SW Durham Road Portland, OR/USA 97224	Project: Fred Meyer Port Orchard Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<b>Reported:</b> 07/21/04 13:40
--	--	------------------------------------

**Notes and Definitions**

- E Estimated value. The reported value exceeds the calibration range of the analysis.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Jeanne Garthwaite*

Jeanne Garthwaite, Project Manager





11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508  
 11115 E Montgomery Suite B, Spokane, WA 99206-4776  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7132  
 20332 Empire Ave Suite F-1, Bend, OR 99701-5711  
 3209 Denali St, Anchorage, AK 99503-4030

425-420-9200 FAX 420-9210  
 509-924-9200 FAX 924-9290  
 503-906-9200 FAX 906-9210  
 541-383-9310 FAX 382-7588  
 907-334-9200 FAX 334-9210

**CHAIN OF CUSTODY REPORT**

Work Order #: **B460035**

CLIENT: **AMEC**  
 CONTACT: **Paul Stull**  
 ADDRESS: **7376 SW Durham Port OR**  
 PHONE: **5036393400** FAX:  
 PROJECT NAME: **Fred Meyer Port Orchard**  
 PROJECT NUMBER: **9-411-10282-0**  
 SAMPLED BY: **McFarland**

INVOICE TO:  
 P.O. NUMBER:

**TURNAROUND REQUEST**  
 in Business Days \*

Organic & Inorganic Analyses  
 7  5  4  3  2  1 <1  
 STD.

Petroleum Hydrocarbon Analyses  
 5  4  3  2  1 <1  
 STD.

**OTHER** Specify: \_\_\_\_\_  
 \* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NUMPKX	BZL	REQUESTED ANALYSES													
Blank	6-29-04 1000	X	X														
mus 03	6-29-04 1650	X	X														
mus 05	6-29-04 1600	X	X														

MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
H <sub>2</sub> O	2		01
H <sub>2</sub> O	6		02
H <sub>2</sub> O	6		03

RELEASED BY: **[Signature]** DATE: **7-1-04**  
 PRINT NAME: **w.s. McFarland** FIRM: **AMEC** TIME: **0820**

RECEIVED BY: **[Signature]** DATE: **7/1/04**  
 PRINT NAME: **Dennis Kudman** FIRM: **NCA** TIME: **9:20**

REMARKS: **0200 to include BTEX, MTBE, EDC, EDB, Naphthalene & Alkylbenzene suite**

TEMP: **2.0** PAGE 1 OF 1  
 W/O



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

October 18, 2004

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 10/01/04 10:05.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

---

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P4J0076	Fred Meyer Port Orchard	9-61M-10282-0

---

Thank You,

---

Lisa Domenighini, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/18/04 17:26
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-092904	P4J0076-01	Water	09/29/04 13:45	10/01/04 10:05
MW105-092904	P4J0076-02	Water	09/29/04 14:00	10/01/04 10:05

North Creek Analytical - Portland

*"The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety."*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	<u>Report Created:</u>
Portland, OR 97224	Project Manager: Paul Stull	10/18/04 17:26

**Gasoline Hydrocarbons per NW TPH-Gx Method**

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P4J0076-01RE1</b>	<b>Water</b>	<b>MW103-092904</b>	<b>Sampled: 09/29/04 13:45</b>							
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>9680</b>	----	800	ug/l	10x	4100613	10/12/04	10/13/04 03:20	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 93.0%</i>		<i>Limits: 50 - 150 %</i>		<i>IX</i>		<i>"</i>		
<b>P4J0076-02</b>	<b>Water</b>	<b>MW105-092904</b>	<b>Sampled: 09/29/04 14:00</b>							
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>ND</b>	----	80.0	ug/l	1x	4100493	10/11/04	10/11/04 19:03	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 84.0%</i>		<i>Limits: 50 - 150 %</i>		<i>"</i>		<i>"</i>		

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	10/18/04 17:26
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P4J0076-01</b>	<b>Water</b>	<b>MW103-092904</b>	<b>Sampled: 09/29/04 13:45</b>							
n-Butylbenzene	EPA 8260B	ND	----	50.0	ug/l	10x	4100463	10/10/04	10/10/04 22:13	
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	5.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	5.00	"	"	"	"	"	
Benzene	"	ND	----	2.00	"	"	"	"	"	
Toluene	"	ND	----	5.00	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>276</b>	----	5.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>1010</b>	----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	20.0	"	"	"	"	"	
<b>Naphthalene</b>	"	<b>94.9</b>	----	20.0	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>1260</b>	----	10.0	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>391</b>	----	5.00	"	"	"	"	"	
<b>Isopropylbenzene</b>	"	<b>30.9</b>	----	20.0	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>88.6</b>	----	5.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.0%</i>		<i>Limits: 75 - 120 %</i>		<i>IX</i>				
<i>1,2-DCA-d4</i>		<i>95.5%</i>		<i>77 - 129 %</i>		"				
<i>Dibromofluoromethane</i>		<i>95.0%</i>		<i>80 - 121 %</i>		"				
<i>Toluene-d8</i>		<i>98.5%</i>		<i>80 - 120 %</i>		"				

North Creek Analytical - Portland

*"The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety."*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	10/18/04 17:26

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P4J0076-02</b>	<b>Water</b>	<b>MW105-092904</b>	<b>Sampled: 09/29/04 14:00</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	4100463	10/10/04	10/10/04 22:41	
p-Isopropyltoluene	"	ND	----	1.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 97.5%</i>		<i>Limits: 75 - 120 %</i>						
<i>1,2-DCA-d4</i>		<i>104%</i>		<i>77 - 129 %</i>						
<i>Dibromofluoromethane</i>		<i>101%</i>		<i>80 - 121 %</i>						
<i>Toluene-d8</i>		<i>96.5%</i>		<i>80 - 120 %</i>						

North Creek Analytical - Portland

*"The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety."*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	10/18/04 17:26
Portland, OR 97224	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 4100493 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (4100493-BLK1)</b> Extracted: 10/11/04 09:48												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	10/11/04 13:40	
Surrogate(s): 4-BFB		Recovery: 82.0%	Limits: 50-150%								10/11/04 13:40	
<b>LCS (4100493-BS2)</b> Extracted: 10/11/04 09:48												
Gasoline Range Hydrocarbons	NW TPH-Gx	933	---	80.0	ug/l	1x	--	1000	93.3% (70-130)	--	10/11/04 14:47	
Surrogate(s): 4-BFB		Recovery: 87.2%	Limits: 50-150%								10/11/04 14:47	
<b>LCS Dup (4100493-BSD2)</b> Extracted: 10/11/04 09:48												
Gasoline Range Hydrocarbons	NW TPH-Gx	974	---	80.0	ug/l	1x	--	1000	97.4% (70-130)	4.30% (40)	10/11/04 15:15	
Surrogate(s): 4-BFB		Recovery: 86.6%	Limits: 50-150%								10/11/04 15:15	
<b>Duplicate (4100493-DUP1)</b> QC Source: P4J0076-01 Extracted: 10/11/04 09:48												
Gasoline Range Hydrocarbons	NW TPH-Gx	10100	---	80.0	ug/l	1x	10000	--	--	0.995% (40)	10/11/04 18:35	E
Surrogate(s): 4-BFB		Recovery: 185%	Limits: 50-150%								10/11/04 18:35	S-0
<b>Duplicate (4100493-DUP2)</b> QC Source: P4J0315-01 Extracted: 10/11/04 09:48												
Gasoline Range Hydrocarbons	NW TPH-Gx	1010	---	80.0	ug/l	1x	ND	--	--	NR (40)	10/12/04 00:37	Q-14
Surrogate(s): 4-BFB		Recovery: 95.6%	Limits: 50-150%								10/12/04 00:37	

**QC Batch: 4100613 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (4100613-BLK1)</b> Extracted: 10/12/04 18:25												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	10/13/04 01:29	
Surrogate(s): 4-BFB		Recovery: 83.0%	Limits: 50-150%								10/13/04 01:29	
<b>LCS (4100613-BS2)</b> Extracted: 10/12/04 18:25												
Gasoline Range Hydrocarbons	NW TPH-Gx	952	---	80.0	ug/l	1x	--	1000	95.2% (70-130)	--	10/13/04 02:24	
Surrogate(s): 4-BFB		Recovery: 84.8%	Limits: 50-150%								10/13/04 02:24	
<b>LCS Dup (4100613-BSD2)</b> Extracted: 10/12/04 18:25												
Gasoline Range Hydrocarbons	NW TPH-Gx	946	---	80.0	ug/l	1x	--	1000	94.6% (70-130)	0.632% (40)	10/13/04 02:52	
Surrogate(s): 4-BFB		Recovery: 86.8%	Limits: 50-150%								10/13/04 02:52	
<b>Duplicate (4100613-DUP1)</b> QC Source: P4J0076-01RE1 Extracted: 10/12/04 18:25												
Gasoline Range Hydrocarbons	NW TPH-Gx	9320	---	800	ug/l	10x	9680	--	--	3.79% (40)	10/13/04 03:47	
Surrogate(s): 4-BFB		Recovery: 93.2%	Limits: 50-150%		1x						10/13/04 03:47	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	10/18/04 17:26
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 4100463**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (4100463-BLK1)</b>													Extracted: 10/10/04 10:59			
1,2-Dibromooethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	10/10/04 14:20			
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"			
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>96.0%</i>			<i>Limits:</i>	<i>75-120%</i>						<i>10/10/04 14:20</i>			
<i>1,2-DCA-d4</i>			<i>96.5%</i>				<i>77-129%</i>						<i>"</i>			
<i>Dibromofluoromethane</i>			<i>95.5%</i>				<i>80-121%</i>						<i>"</i>			
<i>Toluene-d8</i>			<i>97.5%</i>				<i>80-120%</i>						<i>"</i>			
<b>LCS (4100463-BS1)</b>													Extracted: 10/10/04 10:59			
Benzene	EPA 8260B	20.4	---	0.200	ug/l	1x	--	20.0	102%	(80-120)	--	--	10/10/04 12:28			
Toluene	"	20.4	---	0.500	"	"	--	"	102%	(80-124)	--	--	"			
Ethylbenzene	"	22.0	---	0.500	"	"	--	"	110%	(80-120)	--	--	"			
Xylenes (total)	"	65.5	---	1.00	"	"	--	60.0	109%	(73-124)	--	--	"			
Methyl tert-butyl ether	"	22.0	---	2.00	"	"	--	20.0	110%	(80-129)	--	--	"			
Naphthalene	"	22.4	---	2.00	"	"	--	"	112%	(72-149)	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>103%</i>			<i>Limits:</i>	<i>75-120%</i>						<i>10/10/04 12:28</i>			
<i>1,2-DCA-d4</i>			<i>99.0%</i>				<i>77-129%</i>						<i>"</i>			
<i>Dibromofluoromethane</i>			<i>100%</i>				<i>80-121%</i>						<i>"</i>			
<i>Toluene-d8</i>			<i>102%</i>				<i>80-120%</i>						<i>"</i>			
<b>Matrix Spike (4100463-MS1)</b>													QC Source: P4J0101-02		Extracted: 10/10/04 10:59	
Benzene	EPA 8260B	18.3	---	0.200	ug/l	1x	ND	20.0	91.5%	(80-124)	--	--	10/10/04 12:57			
Toluene	"	17.9	---	0.500	"	"	ND	"	89.5%	(79.7-131)	--	--	"			
Ethylbenzene	"	19.4	---	0.500	"	"	ND	"	97.0%	(80-124)	--	--	"			
Xylenes (total)	"	56.4	---	1.00	"	"	ND	60.0	94.0%	(44.6-154)	--	--	"			
Methyl tert-butyl ether	"	19.4	---	2.00	"	"	ND	20.0	97.0%	(80-130)	--	--	"			
Naphthalene	"	19.4	---	2.00	"	"	ND	"	97.0%	(69-163)	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>101%</i>			<i>Limits:</i>	<i>75-120%</i>						<i>10/10/04 12:57</i>			
<i>1,2-DCA-d4</i>			<i>98.0%</i>				<i>77-129%</i>						<i>"</i>			
<i>Dibromofluoromethane</i>			<i>100%</i>				<i>80-121%</i>						<i>"</i>			
<i>Toluene-d8</i>			<i>99.5%</i>				<i>80-120%</i>						<i>"</i>			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	10/18/04 17:26

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 4100463      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike Dup (4100463-MSD1)</b>							QC Source: P4J0101-02					Extracted: 10/10/04 10:59		
Benzene	EPA 8260B	18.0	---	0.200	ug/l	1x	ND	20.0	90.0%	(80-124)	1.65%	(25)	10/10/04 13:25	
Toluene	"	18.0	---	0.500	"	"	ND	"	90.0%	(79.7-131)	0.557%	"	"	
Ethylbenzene	"	19.4	---	0.500	"	"	ND	"	97.0%	(80-124)	0.00%	"	"	
Xylenes (total)	"	56.7	---	1.00	"	"	ND	60.0	94.5%	(44.6-154)	0.531%	"	"	
Methyl tert-butyl ether	"	19.5	---	2.00	"	"	ND	20.0	97.5%	(80-130)	0.514%	"	"	
Naphthalene	"	20.0	---	2.00	"	"	ND	"	100%	(69-163)	3.05%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>103%</i>	<i>Limits:</i>	<i>75-120%</i>	<i>"</i>							<i>10/10/04 13:25</i>	
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>77-129%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>100%</i>		<i>80-121%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

North Creek Analytical - Portland

*"The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety."*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/18/04 17:26
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

- E - Estimated value. The reported value exceeds the calibration range of the analysis.
- Q-14 - The matrix spike recovery, and/or RPD, for this QC sample is outside of control limits due to a non-homogeneous sample matrix.
- S-02 - The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR / NA - Not Reported / Not Available
- dry - Sample results reported on a dry weight basis. Reporting Limits are corrected for %Solids when %Solids are <50%.
- wet - Sample results and reporting limits reported on a wet weight basis (as received).
- RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

November 23, 2004

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 11/11/04 13:13.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

---

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P4K0532	Fred Meyer Port Orchard	9-61M-10282-0

---

Thank You,

---

Lisa Domenighini, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 11/23/04 16:58
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P4K0532-01	Water	11/09/04 12:30	11/11/04 13:13
MW105	P4K0532-02	Water	11/09/04 12:40	11/11/04 13:13

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	11/23/04 16:58
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P4K0532-01</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 11/09/04 12:30</b>							
n-Butylbenzene	EPA 8260B	ND	----	50.0	ug/l	10x	4110737	11/16/04	11/17/04 03:22	
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	5.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	5.00	"	"	"	"	"	
Benzene	"	ND	----	2.00	"	"	"	"	"	
Toluene	"	ND	----	5.00	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>310</b>	----	5.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>1020</b>	----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	20.0	"	"	"	"	"	
<b>Naphthalene</b>	"	<b>91.7</b>	----	20.0	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>1420</b>	----	10.0	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>440</b>	----	5.00	"	"	"	"	"	
<b>Isopropylbenzene</b>	"	<b>45.3</b>	----	20.0	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>123</b>	----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB		Recovery: 107%		Limits: 75 - 120 %	Ix					"
1,2-DCA-d4		94.0%		77 - 129 %	"					"
Dibromofluoromethane		97.0%		80 - 121 %	"					"
Toluene-d8		100%		80 - 120 %	"					"

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	11/23/04 16:58

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P4K0532-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 11/09/04 12:40</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	4110737	11/16/04	11/17/04 02:55	
p-Isopropyltoluene	"	ND	----	1.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene.	"	ND	----	0.500	"	"	"	"	"	

<i>Surrogate(s):</i> 4-BFB	<i>Recovery:</i> 96.5%	<i>Limits:</i> 75 - 120 %	"
1,2-DCA-d4	94.0%	77 - 129 %	"
Dibromofluoromethane	97.5%	80 - 121 %	"
Toluene-d8	94.0%	80 - 120 %	"

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 11/23/04 16:58
7376 SW Durham Road	Project Number: 9-61M-10282-0	
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 4110737      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (4110737-BLK1)</b>													Extracted: 11/16/04 12:04	
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	11/16/04 18:56	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		Recovery:	93.5%	Limits:	75-120%	"							11/16/04 18:56	
1,2-DCA-d4			100%		77-129%	"							"	
Dibromofluoromethane			102%		80-121%	"							"	
Toluene-d8			96.0%		80-120%	"							"	
<b>LCS (4110737-BS1)</b>													Extracted: 11/16/04 12:04	
Benzene	EPA 8260B	20.4	---	0.200	ug/l	1x	--	20.0	102%	(80-120)	--	--	11/16/04 17:10	
Toluene	"	20.8	---	0.500	"	"	--	"	104%	(80-124)	--	--	"	
Ethylbenzene	"	22.6	---	0.500	"	"	--	"	113%	(80-120)	--	--	"	
Xylenes (total)	"	68.3	---	1.00	"	"	--	60.0	114%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	24.0	---	2.00	"	"	--	20.0	120%	(80-129)	--	--	"	
Naphthalene	"	28.3	---	2.00	"	"	--	"	142%	(72-149)	--	--	"	
Surrogate(s): 4-BFB		Recovery:	102%	Limits:	75-120%	"							11/16/04 17:10	
1,2-DCA-d4			102%		77-129%	"							"	
Dibromofluoromethane			97.0%		80-121%	"							"	
Toluene-d8			102%		80-120%	"							"	
<b>Matrix Spike (4110737-MS1)</b>													QC Source: P4K0384-01	Extracted: 11/16/04 12:04
Benzene	EPA 8260B	19.5	---	0.200	ug/l	1x	ND	20.0	97.5%	(80-124)	--	--	11/16/04 17:36	
Toluene	"	19.8	---	0.500	"	"	ND	"	99.0%	(79.7-131)	--	--	"	
Ethylbenzene	"	20.3	---	0.500	"	"	ND	"	102%	(80-124)	--	--	"	
Xylenes (total)	"	61.0	---	1.00	"	"	ND	60.0	102%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	22.8	---	2.00	"	"	ND	20.0	114%	(80-130)	--	--	"	
Naphthalene	"	23.3	---	2.00	"	"	ND	"	116%	(69-163)	--	--	"	
Surrogate(s): 4-BFB		Recovery:	101%	Limits:	75-120%	"							11/16/04 17:36	
1,2-DCA-d4			103%		77-129%	"							"	
Dibromofluoromethane			100%		80-121%	"							"	
Toluene-d8			102%		80-120%	"							"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Lisa Domenighini*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	11/23/04 16:58

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 4110737**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike Dup (4110737-MSD1)</b>				QC Source: P4K0384-01				Extracted: 11/16/04 12:04						
Benzene	EPA 8260B	19.6	---	0.200	ug/l	1x	ND	20.0	98.0%	(80-124)	0.512%	(25)	11/16/04 18:03	
Toluene	"	19.4	---	0.500	"	"	ND	"	97.0%	(79.7-131)	2.04%	"	"	
Ethylbenzene	"	20.9	---	0.500	"	"	ND	"	104%	(80-124)	2.91%	"	"	
Xylenes (total)	"	63.2	---	1.00	"	"	ND	60.0	105%	(44.6-154)	3.54%	"	"	
Methyl tert-butyl ether	"	22.0	---	2.00	"	"	ND	20.0	110%	(80-130)	3.57%	"	"	
Naphthalene	"	21.9	---	2.00	"	"	ND	"	110%	(69-163)	6.19%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>103%</i>	<i>Limits:</i>	<i>75-120%</i>	"							<i>11/16/04 18:03</i>	
	<i>1,2-DCA-d4</i>		<i>97.5%</i>		<i>77-129%</i>	"							"	
	<i>Dibromofluoromethane</i>		<i>89.5%</i>		<i>80-121%</i>	"							"	
	<i>Toluene-d8</i>		<i>100%</i>		<i>80-120%</i>	"							"	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite 8, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Mever Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 11/23/04 16:58
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

None

Laboratory Reporting Conventions:

- DET** - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND** - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR / NA** - Not Reported / Not Available
- dry** - Sample results reported on a dry weight basis. Reporting Limits are corrected for %Solids when %Solids are <50%.
- wet** - Sample results and reporting limits reported on a wet weight basis (as received).
- RPD** - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
- MRL** - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\*** - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
- Dil** - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting limits** - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.



11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508  
 11115 E Montgomery Suite B, Spokane, WA 99206-4776  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7132  
 20332 Empire Ave Suite F-1, Bend, OR 99701-5711  
 3209 Denali St, Anchorage, AK 99503-4030

425-420-9200 FAX 420-9210  
 509-924-9200 FAX 924-9290  
 503-906-9200 FAX 906-9210  
 541-383-9310 FAX 382-7588  
 907-334-9200 FAX 334-9210

### CHAIN OF CUSTODY REPORT

Work Order #: **P4K0532**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days *					
REPORT TO: <b>Paul Stull</b>		ADDRESS: <b>7376 SW Durham Port OR</b>							
PHONE: <b>503 639 3400</b> FAX:		P.O. NUMBER:		<input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> <b>Organic &amp; Inorganic Analyses</b>					
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		PRESERVATIVE		<input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> <b>Petroleum Hydrocarbon Analyses</b>					
PROJECT NUMBER:		REQUESTED ANALYSES		<input type="checkbox"/> <b>OTHER</b> Specify: _____ <small>* Turnaround Requests less than standard may incur Rush Charges.</small>					
SAMPLED BY: <b>McFarland</b>									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME					MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 MW 103	11-09-04 1230	X				H <sub>2</sub> O	5		
2 MW 105	11-09-04 1240	X				↓	5		
3 Trip Blank	11-09-04	X				↓	2		
4									
5									
6									
7									
8									
9									
10									
RELEASED BY: <b>W.S. McFarland</b>		DATE: <b>11-11-04</b>		RECEIVED BY: <b>VANOSATERAN</b>		DATE: <b>11-11-04</b>			
PRINT NAME: <b>W.S. McFarland</b> FIRM: <b>AMEC</b>		TIME: <b>1310</b>		PRINT NAME: <b>VANOSATERAN</b> FIRM: <b>NCA</b>		TIME: <b>1313</b>			
RELEASED BY:		DATE:		RECEIVED BY:		DATE:			
PRINT NAME: FIRM:		TIME:		PRINT NAME: FIRM:		TIME:			
ADDITIONAL REMARKS:									

cc client 313  
 215  
 PAGE 1 OF 1

**NORTH CREEK ANALYTICAL COOLER RECEIPT FORM**

(Army Corp. compliant)

Client: AMEC

1. Please sign for receipt and opening of 2 cooler or          other         

By (print) Vanessa Bran (sign) Vanessa Bran

2. Date samples received 11/11/04 Date opened: Same  or 1/1/1

3. Delivered by:  NCA courier  FedEx  UPS  Courier  Client  Other           
Airbill # if applicable          (Put copy of shipping papers in file)

4. There were 0 custody seals present, signed by          date 1/1/1

5. Were the custody seals unbroken and intact at the date and time of arrival?  Yes  No

6. Was ice used?  yes  no Type of ice:  blue ice  gel ice  real ice  
Temperature (degrees C) 33.25 Raytek thermometer          Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag and taped inside to lid?  Yes  No

8. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No  
If "no" please specify:         

9. Was project identifiable from custody papers?  Yes  No  
Name of project Fred Meyer Port Orchard (if applicable)

10. Initial and date for unpacking: EF (initials) date 11/11/04

11. Packing material: NA bubble wrap/bag  styrofoam  cardboard  other         

12. Were samples in bags?  Yes  No

13. Did all containers indicated on the COC arrive?  Yes  No  
If "no" please indicate which containers were absent NO Trip Blank Received

14. Were all containers unbroken and labels in good condition?  Yes  No  
If "no" please indicate which containers         

15. Were all bottle labels complete (ID, date, time, signature, etc.)?  Yes  No  
Do the IDs, times, etc. agree with the COC?  Yes  No  
If "no" please indicate which containers         

16. Are containers properly preserved for indicated analysis?  Yes  No

17. Is there adequate volume for the test(s) requested?  Yes  No

18. If voa vials were submitted, are they free of bubbles? N/A  Yes  No

19. Log-in phase: Date samples were logged in: 11/11/04 Elm Project # P4K0532

20. Logged in by (print) Doug McKenzie (sign) Doug McKenzie

21. Was the project manager notified of status? (Use back of form as a record)  Yes  No



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1115  
907.563.9200 fax 907.563.9210

March 23, 2005

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RECEIVED MAR 28 2005

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 03/14/05 09:36.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P5C0595	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Crystal Jones For Lisa Domenighini, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/23/05 16:35
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	P5C0595-01	Water	03/10/05 13:00	03/14/05 09:36
EB	P5C0595-02	Water	03/10/05 13:15	03/14/05 09:36
MW105	P5C0595-03	Water	03/10/05 14:00	03/14/05 09:36
MW103	P5C0595-04	Water	03/10/05 14:40	03/14/05 09:36



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 03/23/05 16:35
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5C0595-01</b>	<b>Water</b>	<b>Trip Blank</b>	<b>Sampled: 03/10/05 13:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 01:01	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.6%</i>		<i>Limits: 50 - 150 %</i>						
<b>P5C0595-02</b>	<b>Water</b>	<b>EB</b>	<b>Sampled: 03/10/05 13:15</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 01:28	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.2%</i>		<i>Limits: 50 - 150 %</i>						
<b>P5C0595-03</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 03/10/05 14:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 02:23	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.6%</i>		<i>Limits: 50 - 150 %</i>						
<b>P5C0595-04RE2</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 03/10/05 14:40</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	<b>1570</b>	----	80.0	ug/l	1x	5030730	03/17/05	03/18/05 03:10	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 118%</i>		<i>Limits: 50 - 150 %</i>						

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 03/23/05 16:35
	Project Number: 9-61M-10282-0	
	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5C0595-03</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 03/10/05 14:00</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	5030854	03/21/05	03/22/05	04:29
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	"
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	"
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	"
Benzene	"	ND	----	0.200	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	"
Naphthalene	"	ND	----	2.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	"
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	"
<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>Recovery: 96.5%</i>		<i>Limits: 75 - 120 %</i>						
	<i>1,2-DCA-d4</i>	<i>102%</i>		<i>77 - 129 %</i>						
	<i>Dibromofluoromethane</i>	<i>101%</i>		<i>80 - 121 %</i>						
	<i>Toluene-d8</i>	<i>92.0%</i>		<i>80 - 120 %</i>						

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 03/23/05 16:35
	Project Number: 9-61M-10282-0	
	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5C0595-04</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 03/10/05 14:40</b>							<b>R-16</b>
n-Butylbenzene	EPA 8260B	ND	----	50.0	ug/l	10x	5030854	03/21/05	03/22/05 04:56	
p-Isopropyltoluene	"	ND	----	20.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	5.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	5.00	"	"	"	"	"	
Benzene	"	ND	----	2.00	"	"	"	"	"	
Toluene	"	ND	----	5.00	"	"	"	"	"	
Ethylbenzene	"	<b>140</b>	----	5.00	"	"	"	"	"	
Xylenes (total)	"	<b>612</b>	----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	20.0	"	"	"	"	"	
Naphthalene	"	<b>89.0</b>	----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	<b>918</b>	----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	<b>266</b>	----	5.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	20.0	"	"	"	"	"	
n-Propylbenzene	"	<b>56.1</b>	----	5.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.0%</i>		<i>Limits: 75 - 120 %</i>		<i>1x</i>				
<i>1,2-DCA-d4</i>		<i>101%</i>		<i>77 - 129 %</i>		<i>"</i>				
<i>Dibromofluoromethane</i>		<i>102%</i>		<i>80 - 121 %</i>		<i>"</i>				
<i>Toluene-d8</i>		<i>97.0%</i>		<i>80 - 120 %</i>		<i>"</i>				

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Report Created:  
 03/23/05 16:35

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 5030636**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5030636-BLK1)</b>													Extracted: 03/15/05 12:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/15/05 13:30	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 50-150%</i>		"							03/15/05 13:30	
<b>LCS (5030636-BS1)</b>													Extracted: 03/15/05 12:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	871	---	80.0	ug/l	1x	--	1000	87.1%	(70-130)	--	--	03/15/05 13:57	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 108%</i>		<i>Limits: 50-150%</i>		"							03/15/05 13:57	
<b>LCS Dup (5030636-BSD1)</b>													Extracted: 03/15/05 12:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	862	---	80.0	ug/l	1x	--	1000	86.2%	(70-130)	1.04%	(40)	03/15/05 14:25	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 107%</i>		<i>Limits: 50-150%</i>		"							03/15/05 14:25	
<b>Duplicate (5030636-DUP1)</b>													Extracted: 03/15/05 12:13	
				QC Source: P5C0539-01										
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	NR	(40)	03/15/05 16:44	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.2%</i>		<i>Limits: 50-150%</i>		"							03/15/05 16:44	
<b>Duplicate (5030636-DUP2)</b>													Extracted: 03/15/05 12:13	
				QC Source: P5C0595-02										
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	NR	(40)	03/16/05 01:56	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.2%</i>		<i>Limits: 50-150%</i>		"							03/16/05 01:56	

**QC Batch: 5030708**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5030708-BLK1)</b>													Extracted: 03/16/05 13:51	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/16/05 14:04	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 50-150%</i>		"							03/16/05 14:04	
<b>LCS (5030708-BS1)</b>													Extracted: 03/16/05 13:51	
Gasoline Range Hydrocarbons	NW TPH-Gx	862	---	80.0	ug/l	1x	--	1000	86.2%	(70-130)	--	--	03/16/05 14:43	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 109%</i>		<i>Limits: 50-150%</i>		"							03/16/05 14:43	
<b>LCS Dup (5030708-BSD1)</b>													Extracted: 03/16/05 13:51	
Gasoline Range Hydrocarbons	NW TPH-Gx	872	---	80.0	ug/l	1x	--	1000	87.2%	(70-130)	1.15%	(40)	03/16/05 15:10	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>		"							03/16/05 15:10	
<b>Duplicate (5030708-DUP1)</b>													Extracted: 03/16/05 13:51	
				QC Source: P5C0485-07RE1										
Gasoline Range Hydrocarbons	NW TPH-Gx	277	---	80.0	ug/l	1x	281	--	--	--	1.43%	(40)	03/16/05 16:21	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 50-150%</i>		"							03/16/05 16:21	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 03/23/05 16:35
	Project Number: 9-61M-10282-0	
	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 5030730      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5030730-BLK1)</b>													Extracted: 03/17/05 08:50	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/17/05 11:15	
Surrogate(s): 4-BFB		Recovery: 97.4%	Limits: 50-150%										03/17/05 11:15	
<b>LCS (5030730-BS2)</b>													Extracted: 03/17/05 09:48	
Gasoline Range Hydrocarbons	NW TPH-Gx	847	---	80.0	ug/l	1x	--	1000	84.7%	(70-130)	--	--	03/17/05 12:11	
Surrogate(s): 4-BFB		Recovery: 106%	Limits: 50-150%										03/17/05 12:11	
<b>LCS Dup (5030730-BSD2)</b>													Extracted: 03/17/05 09:48	
Gasoline Range Hydrocarbons	NW TPH-Gx	855	---	80.0	ug/l	1x	--	1000	85.5%	(70-130)	0.940%	(40)	03/17/05 12:38	
Surrogate(s): 4-BFB		Recovery: 104%	Limits: 50-150%										03/17/05 12:38	
<b>Duplicate (5030730-DUP1)</b>													QC Source: P5C0655-02      Extracted: 03/17/05 08:50	
Gasoline Range Hydrocarbons	NW TPH-Gx	1890	---	80.0	ug/l	1x	1850	--	--	--	2.14%	(40)	03/17/05 18:55	
Surrogate(s): 4-BFB		Recovery: 136%	Limits: 50-150%										03/17/05 18:55	
<b>Duplicate (5030730-DUP2)</b>													QC Source: P5C0630-10RE1      Extracted: 03/17/05 09:47	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	40.3%	(40)	03/18/05 04:05	Q-16
Surrogate(s): 4-BFB		Recovery: 95.8%	Limits: 50-150%										03/18/05 04:05	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

03/23/05 16:35

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5030854      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (5030854-BLK1)</b>													Extracted: 03/21/05 17:49			
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/21/05 20:02			
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"			
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>98.0%</i>	<i>Limits:</i>	<i>75-120%</i>	"							<i>03/21/05 20:02</i>			
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>77-129%</i>	"							"			
<i>Dibromofluoromethane</i>			<i>102%</i>		<i>80-121%</i>	"							"			
<i>Toluene-d8</i>			<i>99.0%</i>		<i>80-120%</i>	"							"			
<b>LCS (5030854-BS1)</b>													Extracted: 03/21/05 17:49			
Benzene	EPA 8260B	20.3	---	0.200	ug/l	1x	--	20.0	102%	(80-120)	--	--	03/21/05 18:15			
Toluene	"	19.8	---	0.500	"	"	--	"	99.0%	(80-124)	--	--	"			
Ethylbenzene	"	19.9	---	0.500	"	"	--	"	99.5%	(80-120)	--	--	"			
Xylenes (total)	"	60.4	---	1.00	"	"	--	60.0	101%	(73-124)	--	--	"			
Methyl tert-butyl ether	"	21.1	---	2.00	"	"	--	20.0	106%	(80-129)	--	--	"			
Naphthalene	"	21.6	---	2.00	"	"	--	"	108%	(72-149)	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>100%</i>	<i>Limits:</i>	<i>75-120%</i>	"							<i>03/21/05 18:15</i>			
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>77-129%</i>	"							"			
<i>Dibromofluoromethane</i>			<i>104%</i>		<i>80-121%</i>	"							"			
<i>Toluene-d8</i>			<i>99.5%</i>		<i>80-120%</i>	"							"			
<b>Matrix Spike (5030854-MS1)</b>													QC Source: PSC0529-01		Extracted: 03/21/05 17:49	
Benzene	EPA 8260B	19.6	---	0.200	ug/l	1x	ND	20.0	98.0%	(80-124)	--	--	03/21/05 18:42			
Toluene	"	19.3	---	0.500	"	"	ND	"	96.5%	(79.7-131)	--	--	"			
Ethylbenzene	"	19.3	---	0.500	"	"	ND	"	96.5%	(80-124)	--	--	"			
Xylenes (total)	"	57.9	---	1.00	"	"	ND	60.0	96.5%	(44.6-154)	--	--	"			
Methyl tert-butyl ether	"	20.2	---	2.00	"	"	ND	20.0	101%	(80-130)	--	--	"			
Naphthalene	"	20.4	---	2.00	"	"	ND	"	102%	(69-163)	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>99.0%</i>	<i>Limits:</i>	<i>75-120%</i>	"							<i>03/21/05 18:42</i>			
<i>1,2-DCA-d4</i>			<i>99.5%</i>		<i>77-129%</i>	"							"			
<i>Dibromofluoromethane</i>			<i>102%</i>		<i>80-121%</i>	"							"			
<i>Toluene-d8</i>			<i>99.0%</i>		<i>80-120%</i>	"							"			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/23/05 16:35
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5030854      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Matrix Spike Dup (5030854-MSD1)</b>				QC Source: P5C0529-01				Extracted: 03/21/05 17:49				
Benzene	EPA 8260B	20.1	---	0.200	ug/l	1x	ND	20.0	100% (80-124)	2.52% (25)	03/21/05 19:08	
Toluene	"	20.1	---	0.500	"	"	ND	"	100% (79.7-131)	4.06%	"	"
Ethylbenzene	"	20.3	---	0.500	"	"	ND	"	102% (80-124)	5.05%	"	"
Xylenes (total)	"	61.0	---	1.00	"	"	ND	60.0	102% (44.6-154)	5.21%	"	"
Methyl tert-butyl ether	"	20.4	---	2.00	"	"	ND	20.0	102% (80-130)	0.985%	"	"
Naphthalene	"	20.4	---	2.00	"	"	ND	"	102% (69-163)	0.00%	"	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>100%</i>	<i>Limits:</i>	<i>75-120%</i>	"					03/21/05 19:08	
<i>1,2-DCA-d4</i>			<i>99.5%</i>		<i>77-129%</i>	"					"	
<i>Dibromofluoromethane</i>			<i>102%</i>		<i>80-121%</i>	"					"	
<i>Toluene-d8</i>			<i>100%</i>		<i>80-120%</i>	"					"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/23/05 16:35
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

- Q-16 - RPD is not applicable for analyte concentrations less than 5 times the MRL.
- R-16 - Estimated Value. Sample reported from a vial with headspace.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR / NA - Not Reported / Not Available
- dry - Sample results reported on a dry weight basis. Reporting Limits are corrected for %Solids when %Solids are <50%.
- wet - Sample results and reporting limits reported on a wet weight basis (as received).
- RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.



11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210  
 11922 E 1st Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
 20332 Empire Ave, Ste F1, Bend, OR 97701-5712 541-383-9310 FAX 382-7588  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

### CHAIN OF CUSTODY REPORT

Work Order #: **PS005915**

NCA CLIENT: **AMEC**  
 REPORT TO: **Paul Shell**  
 ADDRESS: **7576 SW Durham Port OR**  
 PHONE: **503-4523400** FAX:

INVOICE TO:  
 P.O. NUMBER:

**TURNAROUND REQUEST**  
 in Business Days \*

Organic & Inorganic Analyses  
 7  5  4  3  2  1  <1

Petroleum Hydrocarbon Analyses  
 5  4  3  2  1  <1

370.

**OTHER** Specify:  
\* Turnaround Request less than standard may incur Peak Charge.

PROJECT NAME: **Fred Meyer Port Onward** PRESERVATIVE  
 PROJECT NUMBER: **9-614-10282-C**  
 SAMPLED BY: **McFarland** REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MUSTPH (ex)	B260 Suite								MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 Trip Blank	3-10-05 1300	X									W	1		
2 EB	3-10-05 1315	X									W	1		
3 MW105	3-10-05 1400	X	X								W	3		
4 MW103	3-10-05 1440	X	X								W	3		
5														
6														
7														
8														
9														
10														

RELEASED BY: **[Signature]** DATE: **3-14-05**  
 PRINT NAME: **W.J. McFarland** FIRM: **AMEC** TIME: **0730**

RECEIVED BY: **[Signature]** DATE: **3/14/05**  
 PRINT NAME: **Bob R** FIRM: **NIA** TIME: **9:21**

RELEASED BY: **[Signature]** DATE: **3/14/05**  
 PRINT NAME: **Bob R** FIRM: **NIA** TIME: **9:30**

RECEIVED BY: **[Signature]** DATE: **3/14/05**  
 PRINT NAME: **Carrie Falschitz** FIRM: **NCA** TIME: **0930**

ADDITIONAL REMARKS: **B260 TO include BTEX, MTBE, EDC, EDI**  
**Naphthalene & Alkylbenzene suite**

TEMP: **0.5** PAGE **1 of 1**

**NORTH CREEK ANALYTICAL COOLER RECEIPT FORM**

(Army Corp. compliant)

Client: AWCC

1. Please sign for receipt and opening of 1 cooler or other

By (print) William Falisheck (sign) [Signature]

2. Date samples received 3/14/05 Date opened: Same  or 1

3. Delivered by:  <sup>BOD</sup>NCA courier  FedEx  UPS  Courier  Client  Other

Airbill # if applicable \_\_\_\_\_ (Put copy of shipping papers in file)

4. There were 1 custody seals present, signed by Bob date 3/14/05

5. Were the custody seals unbroken and intact at the date and time of arrival?  Yes  No

6. Was ice used?  yes  no Type of ice:  blue ice  gel ice  real ice

Temperature (degrees C) \_\_\_\_\_ Raytek thermometer 1.5 Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag and taped inside to lid?  Yes  No

8. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No

If "no" please specify: \_\_\_\_\_

9. Was project identifiable from custody papers?  Yes  No

Name of project Fred Meyer Port Orchard (if applicable)

10. Initial and date for unpacking: WF (initials) date 3/14/05

11. Packing material:  bubble wrap/bag  styrofoam  cardboard  other

12. Were samples in bags?  Yes  No

13. Did all containers indicated on the COC arrive?  Yes  No

If "no" please indicate which containers were absent \_\_\_\_\_

14. Were all containers unbroken and labels in good condition?  Yes  No

If "no" please indicate which containers \_\_\_\_\_

15. Were all bottle labels complete (ID, date, time, signature, etc.)?  Yes  No

Do the IDs, times, etc. agree with the COC?  Yes  No

If "no" please indicate which containers \_\_\_\_\_

16. Are containers properly preserved for indicated analysis?  Yes  No

17. Is there adequate volume for the test(s) requested?  Yes  No

18. If voa vials were submitted, are they free of bubbles?  N/A  Yes  No

19. Log-in phase: Date samples were logged in: 3/14/05 Elm Project # P 50595

20. Logged in by (print) Vamosa Bran (sign) [Signature]

21. Was the project manager notified of status? (Use back of form as a record)  Yes  No



Amended Report

July 26, 2005

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 06/24/05 09:35.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

**Amended Report: All results reported here supercede any previously reported results.**

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P5F1076	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini, Project Manager

**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.  
Environmental Laboratory Network**





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<u>Report Created:</u> 07/26/05 16:59
--	--	--

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MWX	P5F1076-01	Water	06/21/05 09:00	06/24/05 09:35
MW103	P5F1076-02	Water	06/21/05 16:00	06/24/05 09:35
MW105	P5F1076-03	Water	06/21/05 16:25	06/24/05 09:35

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	<u>Report Created:</u> 07/26/05 16:59
--	--	--

**Analytical Case Narrative**  
**North Creek Analytical - Portland**

**P5F1076**

Samples MW103 and MW105 were analyzed past the recommended holding time. These samples were included within a failed run within holding time, but reanalysis was not able to be performed within the holding time.

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 07/26/05 16:59
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	DH	Batch	Prepared	Analyzed	Notes
<b>P5F1076-01</b>	<b>Water</b>	<b>MWX</b>	<b>Sampled: 06/21/05 09:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5061156	06/27/05	06/27/05 19:10	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 93.6%</i>		<i>Limits: 50 - 150 %</i>						
<b>P5F1076-02</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 06/21/05 16:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5061156	06/27/05	06/27/05 19:40	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.8%</i>		<i>Limits: 50 - 150 %</i>						
<b>P5F1076-03RE1</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 06/21/05 16:25</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	6660	----	800	ug/l	10x	5061208	06/28/05	06/28/05 14:35	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 107%</i>		<i>Limits: 50 - 150 %</i>		<i>1x</i>				

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
 Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

**AMEC- Portland**

7376 SW Durham Road  
 Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

07/26/05 16:59

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**

**North Creek Analytical - Portland**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
<b>P5F1076-02RE1</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 06/21/05 16:00</b>								<b>I-02</b>
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	5070129	07/06/05	07/06/05 11:52		
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"		
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"		
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"		
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"		
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"		
Benzene	"	ND	----	0.200	"	"	"	"	"		
Toluene	"	ND	----	0.500	"	"	"	"	"		
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"		
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"		
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"		
Naphthalene	"	ND	----	2.00	"	"	"	"	"		
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"		
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"		
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"		
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.5%</i>		<i>Limits: 75 - 120 %</i>		"		"			
<i>1,2-DCA-d4</i>		<i>104%</i>		<i>77 - 129 %</i>		"		"			
<i>Dibromofluoromethane</i>		<i>102%</i>		<i>80 - 121 %</i>		"		"			
<i>Toluene-d8</i>		<i>92.0%</i>		<i>80 - 120 %</i>		"		"			

<b>P5F1076-03RE1</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 06/21/05 16:25</b>								<b>I-02</b>
n-Butylbenzene	EPA 8260B	ND	----	25.0	ug/l	5x	5070129	07/06/05	07/06/05 12:18		
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"		
sec-Butylbenzene	"	ND	----	5.00	"	"	"	"	"		
tert-Butylbenzene	"	ND	----	5.00	"	"	"	"	"		
1,2-Dibromoethane	"	ND	----	2.50	"	"	"	"	"		
1,2-Dichloroethane	"	ND	----	2.50	"	"	"	"	"		
Benzene	"	ND	----	1.00	"	"	"	"	"		
Toluene	"	ND	----	2.50	"	"	"	"	"		
<b>Ethylbenzene</b>	"	<b>114</b>	----	2.50	"	"	"	"	"		
<b>Xylenes (total)</b>	"	<b>484</b>	----	5.00	"	"	"	"	"		
Methyl tert-butyl ether	"	ND	----	10.0	"	"	"	"	"		
<b>Naphthalene</b>	"	<b>57.8</b>	----	10.0	"	"	"	"	"		
<b>1,2,4-Trimethylbenzene</b>	"	<b>474</b>	----	5.00	"	"	"	"	"		
<b>1,3,5-Trimethylbenzene</b>	"	<b>128</b>	----	2.50	"	"	"	"	"		
<b>Isopropylbenzene</b>	"	<b>12.4</b>	----	10.0	"	"	"	"	"		
<b>n-Propylbenzene</b>	"	<b>31.8</b>	----	2.50	"	"	"	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: &gt;300%</i>		<i>Limits: 75 - 120 %</i>		"		"			
<i>1,2-DCA-d4</i>		<i>&gt;300%</i>		<i>77 - 129 %</i>		"		"			
<i>Dibromofluoromethane</i>		<i>&gt;300%</i>		<i>80 - 121 %</i>		"		"			

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nilmbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 07/26/05 16:59
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5F1076-03RE1	Water	MW105								I-02
	Toluene-d8	>300%			80 - 120 %	5x			07/06/05 12:18	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

**North Creek Analytical, Inc.**  
 Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
 Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 07/26/05 16:59
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 5061156 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5061156-BLK1)</b>													Extracted: 06/27/05 11:37	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	--	--	06/27/05 13:43	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 104%</i>		<i>Limits: 50-150%</i>								06/27/05 13:43		
<b>LCS (5061156-BS1)</b>													Extracted: 06/27/05 11:37	
Gasoline Range Hydrocarbons	NW TPH-Gx	453	--	80.0	ug/l	1x	--	500	90.6%	(70-130)	--	--	06/27/05 12:44	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>								06/27/05 12:44		
<b>LCS Dup (5061156-BSD1)</b>													Extracted: 06/27/05 11:37	
Gasoline Range Hydrocarbons	NW TPH-Gx	441	--	80.0	ug/l	1x	--	500	88.2%	(70-130)	2.68%	(40)	06/27/05 13:14	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 107%</i>		<i>Limits: 50-150%</i>								06/27/05 13:14		
<b>Duplicate (5061156-DUP1)</b>													QC Source: P5F1003-02RE1 Extracted: 06/27/05 11:37	
Gasoline Range Hydrocarbons	NW TPH-Gx	14700	--	1600	ug/l	20x	14500	--	--	--	1.37%	(40)	06/27/05 17:02	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 117%</i>		<i>Limits: 50-150%</i>		1x						06/27/05 17:02		
<b>Duplicate (5061156-DUP2)</b>													QC Source: P5F1027-12RE1 Extracted: 06/27/05 11:37	
Gasoline Range Hydrocarbons	NW TPH-Gx	4650	--	800	ug/l	10x	4980	--	--	--	6.85%	(40)	06/27/05 18:39	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 118%</i>		<i>Limits: 50-150%</i>		1x						06/27/05 18:39		

**QC Batch: 5061208 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5061208-BLK1)</b>													Extracted: 06/28/05 10:34	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	--	--	06/28/05 13:02	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.6%</i>		<i>Limits: 50-150%</i>								06/28/05 13:02		
<b>LCS (5061208-BS1)</b>													Extracted: 06/28/05 10:34	
Gasoline Range Hydrocarbons	NW TPH-Gx	433	--	80.0	ug/l	1x	--	500	86.6%	(70-130)	--	--	06/28/05 12:01	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 106%</i>		<i>Limits: 50-150%</i>								06/28/05 12:01		
<b>LCS Dup (5061208-BSD1)</b>													Extracted: 06/28/05 10:34	
Gasoline Range Hydrocarbons	NW TPH-Gx	428	--	80.0	ug/l	1x	--	500	85.6%	(70-130)	1.16%	(40)	06/28/05 12:32	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 107%</i>		<i>Limits: 50-150%</i>								06/28/05 12:32		
<b>Duplicate (5061208-DUP1)</b>													QC Source: P5F1032-01RE1 Extracted: 06/28/05 10:34	
Gasoline Range Hydrocarbons	NW TPH-Gx	100	--	80.0	ug/l	1x	102	--	--	--	1.98%	(40)	06/28/05 14:05	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.8%</i>		<i>Limits: 50-150%</i>								06/28/05 14:05		

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
 Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
 Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
 Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
 Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

**AMEC- Portland**  
 7376 SW Durham Road  
 Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
 Project Number: 9-61M-10282-0  
 Project Manager: Paul Stull

Report Created: 07/26/05 16:59

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5070129 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5070129-BLK1)</b>													Extracted: 07/06/05 07:38	
sec-Butylbenzene	EPA 8260B	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	07/06/05 10:31	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		Recovery:	97.0%	Limits:	75-120%	"							07/06/05 10:31	
1,2-DCA-d4			102%		77-129%	"							"	
Dibromofluoromethane			102%		80-121%	"							"	
Toluene-d8			96.5%		80-120%	"							"	

<b>LCS (5070129-BS1)</b>													Extracted: 07/06/05 07:38	
Benzene	EPA 8260B	19.9	---	0.200	ug/l	1x	--	20.0	99.5%	(80-120)	--	--	07/06/05 08:18	
Toluene	"	18.5	---	0.500	"	"	--	"	92.5%	(80-124)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-120)	--	--	"	
Xylenes (total)	"	61.5	---	1.00	"	"	--	60.0	102%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	24.4	---	2.00	"	"	--	20.0	122%	(80-129)	--	--	"	
Naphthalene	"	25.4	---	2.00	"	"	--	"	127%	(72-149)	--	--	"	
Surrogate(s): 4-BFB		Recovery:	101%	Limits:	75-120%	"							07/06/05 08:18	
1,2-DCA-d4			103%		77-129%	"							"	
Dibromofluoromethane			104%		80-121%	"							"	
Toluene-d8			96.0%		80-120%	"							"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Lisa Domenighini*

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 07/26/05 16:59
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5070129      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike (5070129-MS1)</b>			QC Source: P5F1195-04				Extracted: 07/06/05 07:38								
Benzene	EPA 8260B	20.4	---	0.200	ug/l	1x	ND	20.0	102%	(80-124)	--	--	07/06/05 08:45		
Toluene	"	17.6	---	0.500	"	"	ND	"	88.0%	(79.7-131)	--	--	"		
Ethylbenzene	"	19.5	---	0.500	"	"	ND	"	97.5%	(80-124)	--	--	"		
Xylenes (total)	"	49.8	---	1.00	"	"	ND	60.0	83.0%	(44.6-154)	--	--	"		
Methyl tert-butyl ether	"	23.6	---	2.00	"	"	ND	20.0	118%	(80-130)	--	--	"		
Naphthalene	"	24.0	---	2.00	"	"	0.930	"	115%	(69-163)	--	--	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 75-120%</i>		"								07/06/05 08:45	
<i>1,2-DCA-d4</i>		<i>102%</i>		<i>77-129%</i>		"								"	
<i>Dibromofluoromethane</i>		<i>104%</i>		<i>80-121%</i>		"								"	
<i>Toluene-d8</i>		<i>92.0%</i>		<i>80-120%</i>		"								"	

<b>Matrix Spike Dup (5070129-MSD1)</b>			QC Source: P5F1195-04				Extracted: 07/06/05 07:38								
Benzene	EPA 8260B	20.8	---	0.200	ug/l	1x	ND	20.0	104%	(80-124)	1.94%	(25)	07/06/05 09:11		
Toluene	"	18.8	---	0.500	"	"	ND	"	94.0%	(79.7-131)	6.59%	"	"		
Ethylbenzene	"	20.5	---	0.500	"	"	ND	"	102%	(80-124)	5.00%	"	"		
Xylenes (total)	"	55.1	---	1.00	"	"	ND	60.0	91.8%	(44.6-154)	10.1%	"	"		
Methyl tert-butyl ether	"	23.8	---	2.00	"	"	ND	20.0	119%	(80-130)	0.844%	"	"		
Naphthalene	"	23.8	---	2.00	"	"	0.930	"	114%	(69-163)	0.837%	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 75-120%</i>		"								07/06/05 09:11	
<i>1,2-DCA-d4</i>		<i>99.5%</i>		<i>77-129%</i>		"								"	
<i>Dibromofluoromethane</i>		<i>100%</i>		<i>80-121%</i>		"								"	
<i>Toluene-d8</i>		<i>95.5%</i>		<i>80-120%</i>		"								"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**Amended Report**

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 07/26/05 16:59
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

I-02 - This sample was analyzed outside of the EPA recommended holding time.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR / NA - Not Reported / Not Available
- dry - Sample results reported on a dry weight basis. Reporting Limits are corrected for %Solids when %Solids are <50%.
- wet - Sample results and reporting limits reported on a wet weight basis (as received).
- RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**Amended Report**

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-9508  
 11115 E Montgomery Suite B, Spokane, WA 99206-4776  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7132  
 20332 Empire Ave Suite F-1, Bend, OR 99701-5711  
 3209 Denali St, Anchorage, AK 99503-4030

425-420-9200 FAX 420-9210  
 509-924-9200 FAX 924-9290  
 503-906-9200 FAX 906-9210  
 541-383-9310 FAX 382-7588  
 907-334-9200 FAX 334-9210

### CHAIN OF CUSTODY REPORT

Work Order #: **PSF10321E**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD.</small> <input type="checkbox"/> OTHER Specify: _____ <small>* Turnaround Requests less than standard may incur Rush Charges.</small>							
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:									
ADDRESS: <b>7376 SW Durbin Port OR</b>											
PHONE: <b>5036313400</b> FAX:											
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		PRESERVATIVE									
PROJECT NUMBER: <b>9-6111-102820</b>		REQUESTED ANALYSES									
SAMPLED BY: <b>McFarland</b>											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MWPH Cx	8260 Suite					MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 MWX	6.21.05 0900	X						H2O	2		
2 MW 103	6.21.05 1600	X	X					H2O	4		
3 MW 105	6.21.05 1625	X	X					H2O	4		
4											
5											
6											
7											
8											
9											
10											
RELEASED BY: <b>[Signature]</b>		DATE: <b>6/21/05</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>6/24/05</b>					
PRINT NAME: <b>W. J. McFarland</b>		FIRM: <b>AMEC</b>		PRINT NAME: <b>Bob [Signature]</b>		FIRM: <b>NCA</b>		TIME: <b>9:18</b>			
RELEASED BY: <b>[Signature]</b>		DATE: <b>6/24/05</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>6-24-05</b>					
PRINT NAME: <b>Bob [Signature]</b>		FIRM: <b>NCA</b>		PRINT NAME: <b>Emmet Jensen</b>		FIRM: <b>NCA</b>		TIME: <b>9:35</b>			
ADDITIONAL REMARKS:										TEMP:	
COCC REV 1/03 <b>8260 suite includes DPEX, MTBE, KDC, EPB, Naphthalene, &amp; Alkyl benzene suites 22</b>											PAGE 1 OF 1

NORTH CROOK ANALYTICAL COOLER RECEIPT FORM

(Army Corp. compliant)

Client: AMEC

1. Please sign for receipt and opening of 1 cooler or other

By (print) EMILY JENSEN (sign) [Signature]

2. Date samples received 6/24/05 Date opened: Same or 1/1

3. Delivered by: Bob NCA courier FedEx UPS Courier Client Other
Airbill # if applicable (Put copy of shipping papers in file)

4. There were 1 custody seals present, signed by Bob date 6/24/05

5. Were the custody seals unbroken and intact at the date and time of arrival? Yes No

6. Was ice used? yes no Type of ice: blue ice gel ice real ice
Temperature (degrees C) Raytek thermometer 2.2 Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag and taped inside to lid? Yes No

8. Were custody papers filled out properly (ink, signed, etc.)? Yes No
If "no" please specify:

9. Was project identifiable from custody papers? Yes No
Name of project Fred Meyer Fort Orchard (if applicable)

10. Initial and date for unpacking: VE (initials) date 6/24/05

11. Packing material: N/A bubble wrap/bag styrofoam cardboard other

12. Were samples in bags? Yes No

13. Did all containers indicated on the COC arrive? Yes No
If "no" please indicate which containers were absent Did not receive voas for J

14. Were all containers unbroken and labels in good condition? Yes No
If "no" please indicate which containers

15. Were all bottle labels complete (ID, date, time, signature, etc.)? Yes No
Do the IDs, times, etc. agree with the COC? Yes No
If "no" please indicate which containers

16. Are containers properly preserved for indicated analysis? Yes No

17. Is there adequate volume for the test(s) requested? Yes No

18. If voa vials were submitted, are they free of bubbles? N/A Yes No

19. Log-in phase: Date samples were logged in: 6/25/05 Eim Project # P 5F1036

20. Logged in by (print) Vanessa Brown (sign) [Signature]

21. Was the project manager notified of status? (Use back of form as a record) Yes No

RECEIVED OCT 17 2005



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

October 12, 2005

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 09/27/05 10:55.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

---

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P511036	Fred Meyer Port Orchard	9-61M-10282-0

---

Thank You,

A handwritten signature in black ink, appearing to read "Lisa Domenighini", is written over a horizontal line.

Lisa Domenighini, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

**North Creek Analytical, Inc.**  
**Environmental Laboratory Network**



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/12/05 17:49
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P5I1036-01	Water	09/23/05 13:05	09/27/05 10:55
MW105	P5I1036-02	Water	09/23/05 14:10	09/27/05 10:55
EB	P5I1036-03	Water	09/23/05 13:10	09/27/05 10:55
Trip Blank	P5I1036-04	Water	09/23/05 06:30	09/27/05 10:55

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	10/12/05 17:49

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5I1036-01</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 09/23/05 13:05</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	13700	----	400	ug/l	5x	5091195	09/28/05	09/28/05 16:20	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 82.8%</i>		<i>Limits: 50 - 150 %</i>		<i>1x</i>				"
<b>P5I1036-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 09/23/05 14:10</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 15:48	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 87.4%</i>		<i>Limits: 50 - 150 %</i>		"				"
<b>P5I1036-03</b>	<b>Water</b>	<b>EB</b>	<b>Sampled: 09/23/05 13:10</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 14:45	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 90.4%</i>		<i>Limits: 50 - 150 %</i>		"				"
<b>P5I1036-04</b>	<b>Water</b>	<b>Trip Blank</b>	<b>Sampled: 09/23/05 06:30</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 15:16	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 88.4%</i>		<i>Limits: 50 - 150 %</i>		"				"



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:  
10/12/05 17:49

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5I1036-01</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 09/23/05 13:05</b>							
n-Butylbenzene	EPA 8260B	ND	----	8.00	ug/l	1x	5100002	10/01/05	10/01/05 18:16	R-03
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	"
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	"
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	"
Benzene	"	ND	----	0.200	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	25.8	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	99.1	----	1.00	"	"	"	"	"	"
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	"
Naphthalene	"	9.10	----	2.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	173	----	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	57.8	----	0.500	"	"	"	"	"	"
Isopropylbenzene	"	4.08	----	2.00	"	"	"	"	"	"
n-Propylbenzene	"	12.6	----	0.500	"	"	"	"	"	"
Surrogate(s): 4-BFB		Recovery: 106%		Limits: 75 - 120 %		"		"		"
1,2-DCA-d4		112%		77 - 129 %		"		"		"
Dibromofluoromethane		110%		80 - 121 %		"		"		"
Toluene-d8		112%		80 - 120 %		"		"		"

<b>P5I1036-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 09/23/05 14:10</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	5100002	10/01/05	10/01/05 18:44	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	2.04	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 4-BFB		Recovery: 93.5%		Limits: 75 - 120 %		"		"		"
1,2-DCA-d4		104%		77 - 129 %		"		"		"
Dibromofluoromethane		102%		80 - 121 %		"		"		"

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Emplre Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 10/12/05 17:49
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

<b>P5I1036-02</b>	Water	MW105	Sampled: 09/23/05 14:10							
	<i>Toluene-d8</i>		102%		80 - 120 %	1x			10/01/05 18:44	

<b>P5I1036-03</b>	Water	EB	Sampled: 09/23/05 13:10							
-------------------	-------	----	-------------------------	--	--	--	--	--	--	--

n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	5100002	10/01/05	10/01/05 19:12	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	

Surrogate(s):	4-BFB	Recovery:	97.5%	Limits:	75 - 120 %	"			
	1,2-DCA-d4		108%		77 - 129 %	"			
	Dibromofluoromethane		105%		80 - 121 %	"			
	Toluene-d8		102%		80 - 120 %	"			

<b>P5I1036-04</b>	Water	Trip Blank	Sampled: 09/23/05 06:30							
-------------------	-------	------------	-------------------------	--	--	--	--	--	--	--

n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	5100002	10/01/05	10/01/05 19:40	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 10/12/05 17:49
	Project Number: 9-61M-10282-0	
	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch Prepared	Analyzed	Notes
<b>P5I1036-04</b>	<b>Water</b>	<b>Trip Blank</b>	<b>Sampled: 09/23/05 06:30</b>						
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.5%</i>		<i>Limits: 75 - 120 %</i>		<i>Ix</i>		<i>10/01/05 19:40</i>	
<i>1,2-DCA-d4</i>		<i>104%</i>		<i>77 - 129 %</i>		<i>"</i>		<i>"</i>	
<i>Dibromofluoromethane</i>		<i>99.0%</i>		<i>80 - 121 %</i>		<i>"</i>		<i>"</i>	
<i>Toluene-d8</i>		<i>99.0%</i>		<i>80 - 120 %</i>		<i>"</i>		<i>"</i>	



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 10/12/05 17:49
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

**QC Batch: 5091195**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5091195-BLK1)</b>													Extracted: 09/28/05 12:30	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	--	--	09/28/05 14:01	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.6%</i>		<i>Limits: 50-150%</i>		<i>"</i>							<i>09/28/05 14:01</i>	
<b>LCS (5091195-BS1)</b>													Extracted: 09/28/05 12:30	
Gasoline Range Hydrocarbons	NW TPH-Gx	376	--	80.0	ug/l	1x	--	500	75.2%	(70-130)	--	--	09/28/05 12:58	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>							<i>09/28/05 12:58</i>	
<b>LCS Dup (5091195-BSD1)</b>													Extracted: 09/28/05 12:30	
Gasoline Range Hydrocarbons	NW TPH-Gx	369	--	80.0	ug/l	1x	--	500	73.8%	(70-130)	1.88%	(40)	09/28/05 13:29	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.8%</i>		<i>Limits: 50-150%</i>		<i>"</i>							<i>09/28/05 13:29</i>	
<b>Duplicate (5091195-DUP1)</b>													QC Source: P5I0932-01	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	ND	--	--	--	NR	(40)	09/28/05 18:46	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 89.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>							<i>09/28/05 18:46</i>	
<b>Duplicate (5091195-DUP2)</b>													QC Source: P5I1036-01	
Gasoline Range Hydrocarbons	NW TPH-Gx	14300	--	400	ug/l	5x	13700	--	--	--	4.29%	(40)	09/28/05 16:51	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 98.2%</i>		<i>Limits: 50-150%</i>		<i>1x</i>							<i>09/28/05 16:51</i>	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	10/12/05 17:49
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5100002      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (5100002-BLK1)</b>												
Extracted: 10/01/05 10:21												
n-Butylbenzene	EPA 8260B	ND	---	5.00	ug/l	1x	--	--	--	--	10/01/05 12:43	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>92.5%</i>	<i>Limits:</i>	<i>75-120%</i>	<i>"</i>					<i>10/01/05 12:43</i>	
<i>1,2-DCA-d4</i>			<i>96.5%</i>		<i>77-129%</i>	<i>"</i>					<i>"</i>	
<i>Dibromofluoromethane</i>			<i>93.0%</i>		<i>80-121%</i>	<i>"</i>					<i>"</i>	
<i>Toluene-d8</i>			<i>96.5%</i>		<i>80-120%</i>	<i>"</i>					<i>"</i>	

<b>LCS (5100002-BS1)</b>												
Extracted: 10/01/05 10:21												
Benzene	EPA 8260B	19.3	---	0.200	ug/l	1x	--	20.0	96.5% (80-120)	--	10/01/05 10:52	
Toluene	"	21.4	---	0.500	"	"	--	"	107% (80-124)	--	"	
Ethylbenzene	"	23.5	---	0.500	"	"	--	"	118% (80-120)	--	"	
Xylenes (total)	"	71.9	---	1.00	"	"	--	60.0	120% (73-124)	--	"	
Methyl tert-butyl ether	"	21.8	---	2.00	"	"	--	20.0	109% (80-129)	--	"	
Naphthalene	"	24.6	---	2.00	"	"	--	"	123% (72-149)	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>100%</i>	<i>Limits:</i>	<i>75-120%</i>	<i>"</i>					<i>10/01/05 10:52</i>	
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>77-129%</i>	<i>"</i>					<i>"</i>	
<i>Dibromofluoromethane</i>			<i>100%</i>		<i>80-121%</i>	<i>"</i>					<i>"</i>	
<i>Toluene-d8</i>			<i>98.5%</i>		<i>80-120%</i>	<i>"</i>					<i>"</i>	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/12/05 17:49
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5100002      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

Matrix Spike (5100002-MS1)			QC Source: P5I0987-01					Extracted: 10/01/05 10:21						
Benzene	EPA 8260B	22.4	---	0.200	ug/l	1x	1.52	20.0	104%	(80-124)	--	--	10/01/05 11:20	
Toluene	"	21.6	---	0.500	"	"	2.14	"	97.3%	(79.7-131)	--	--	"	
Ethylbenzene	"	32.3	---	0.500	"	"	14.3	"	90.0%	(80-124)	--	--	"	
Xylenes (total)	"	77.0	---	1.00	"	"	27.1	60.0	83.2%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	23.5	---	2.00	"	"	ND	20.0	118%	(80-130)	--	--	"	
Naphthalene	"	60.2	---	2.00	"	"	43.0	"	86.0%	(69-163)	--	--	"	
Surrogate(s): 4-BFB		Recovery:	95.0%	Limits:	75-120%	"							10/01/05 11:20	
1,2-DCA-d4			96.0%		77-129%	"							"	
Dibromofluoromethane			96.0%		80-121%	"							"	
Toluene-d8			92.5%		80-120%	"							"	

Matrix Spike Dup (5100002-MSD1)			QC Source: P5I0987-01					Extracted: 10/01/05 10:21						
Benzene	EPA 8260B	22.6	---	0.200	ug/l	1x	1.52	20.0	105%	(80-124)	0.889%	(25)	10/01/05 11:48	
Toluene	"	21.2	---	0.500	"	"	2.14	"	95.3%	(79.7-131)	1.87%	"	"	
Ethylbenzene	"	31.1	---	0.500	"	"	14.3	"	84.0%	(80-124)	3.79%	"	"	
Xylenes (total)	"	74.1	---	1.00	"	"	27.1	60.0	78.3%	(44.6-154)	3.84%	"	"	
Methyl tert-butyl ether	"	24.2	---	2.00	"	"	ND	20.0	121%	(80-130)	2.94%	"	"	
Naphthalene	"	61.1	---	2.00	"	"	43.0	"	90.5%	(69-163)	1.48%	"	"	
Surrogate(s): 4-BFB		Recovery:	98.5%	Limits:	75-120%	"							10/01/05 11:48	
1,2-DCA-d4			102%		77-129%	"							"	
Dibromofluoromethane			100%		80-121%	"							"	
Toluene-d8			98.0%		80-120%	"							"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/12/05 17:49
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

R-03 - The reporting limit for this analyte was raised due to matrix interference.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR / NA - Not Reported / Not Available

dry - Sample results reported on a dry weight basis. Reporting Limits have been corrected for %Solids.

wet - Sample results and reporting limits reported on a wet weight basis (as received).

RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.

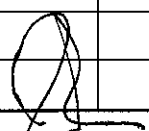
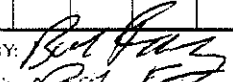
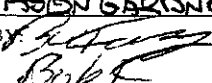
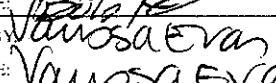
Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.

**CHAIN OF CUSTODY REPORT**

Work Order #: **151036**

CLIENT: <b>AMEC</b>		INVOICE TO:		TURNAROUND REQUEST in Business Days <sup>1</sup> Organic & Inorganic Analyses STD: <table border="1" style="display: inline-table; text-align: center;"><tr><td>10</td><td>7</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>&lt;1</td></tr></table> Petroleum Hydrocarbon Analyses STD: <table border="1" style="display: inline-table; text-align: center;"><tr><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>&lt;1</td></tr></table> OTHER: <span style="border: 1px solid black; padding: 2px;"> </span> Please Specify				10	7	5	4	3	2	1	<1	5	4	3	2	1	<1
10	7	5	4					3	2	1	<1										
5	4	3	2	1	<1																
REPORT TO: <b>PAUL STULL</b>		P.O. NUMBER:																			
ADDRESS: <b>7376 SW Durham Rd Portland 97224</b>		PHONE: <b>503 659 3400</b>		FAX: <b>503 659 7822</b>		PROJECT NAME: <b>Petroleum Fred Meyer</b>		REQUESTED ANALYSES													
PROJECT NUMBER: <b>91M102820</b>		SAMPLED BY: <b>JASON GARDNER</b>		PROJECT NUMBER: <b>91M102820</b>		SAMPLED BY: <b>JASON GARDNER</b>															
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8260 Suite									MATRIX (W.S.O)	# OF CONT.	COMMENTS	NCA WO ID							
1. <b>MW103</b>	<b>9/27/05</b> <sup>1305</sup> <del>0930</del>	<b>X</b>									<b>W</b>	<b>5</b>									
2. <b>MW105</b>	<b>9/27/05</b> <b>1418</b>	<b>X</b>									<b>W</b>	<b>5</b>									
3. <b>EB</b>	<b>1310</b>	<b>X</b>									<b>W</b>	<b>2</b>									
4. <b>TRIP BLANK</b>	<b>0638</b>	<b>X</b>									<b>W</b>	<b>2</b>									
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
12.																					
13.																					
14.																					
15.																					

RELINQUISHED BY: 	DATE: <b>9/27/05</b>	RECEIVED BY: 	DATE: <b>9/27/05</b>
PRINT NAME: <b>JASON GARDNER</b>	FIRM: <b>AMEC</b>	PRINT NAME: <b>Bob Fraz</b>	FIRM: <b>NCA</b>
RELINQUISHED BY: 	DATE: <b>9/27/05</b>	RECEIVED BY: 	DATE: <b>9-27-05</b>
PRINT NAME: <b>Bob Fraz</b>	FIRM: <b>NCA</b>	PRINT NAME: <b>Vannosa Evan</b>	FIRM: <b>NCA</b>

ADDITIONAL REMARKS: **8260 Suite : NWTPH-6X / EPA 8260 = BTEX, MTBE, EDC, EDB, NAPHTHALENE, A/K/A 8260 suite** TEMP: **-0.5, -0.7, -0.7**

COC REV 3/99 PAGE 1 OF 1



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1115  
907.563.9200 fax 907.563.9210

December 14, 2005

RECEIVED DEC 20 2005

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 12/06/05 10:16.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P5L0201	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/14/05 16:23
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	P5L0201-01	Water	12/01/05 11:40	12/06/05 10:16
MW105	P5L0201-02	Water	12/01/05 11:00	12/06/05 10:16
TB	P5L0201-03	Water	12/01/05 10:00	12/06/05 10:16

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 12/14/05 16:23
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5L0201-01RE1</b>	Water	<b>MW103</b>	<b>Sampled: 12/01/05 11:40</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	<b>3310</b>	----	400	ug/l	5x	5120357	12/08/05	12/08/05 23:14	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 87.4%</i>		<i>Limits: 50 - 150 %</i>		<i>1x</i>				
<b>P5L0201-02</b>	Water	<b>MW105</b>	<b>Sampled: 12/01/05 11:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	5120276	12/07/05	12/07/05 23:16	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 84.0%</i>		<i>Limits: 50 - 150 %</i>		<i>"</i>				

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	<b>Report Created:</b> 12/14/05 16:23
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX per EPA Method 8021B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5L0201-03</b>	<b>Water</b>	<b>TB</b>	<b>Sampled: 12/01/05 10:00</b>							
Benzene	NW-G, 8021B	ND	----	0.500	ug/l	1x	5120292	12/07/05	12/07/05 22:08	
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
Gasoline Range Hydrocarbons	"	ND	----	80.0	"	"	"	"	"	"
Surrogate(s): 4-BFB (FID)		Recovery: 77.4%		Limits: 50 - 150 %						"
4-BFB (PID)		80.0%		70 - 130 %						"

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/14/05 16:23
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P5L0201-01RE1</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 12/01/05 11:40</b>							
n-Butylbenzene	EPA 8260B	ND	----	10.0	ug/l	5x	5120343	12/08/05	12/08/05 20:59	
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	2.50	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	2.50	"	"	"	"	"	
Benzene	"	ND	----	1.00	"	"	"	"	"	
Toluene	"	ND	----	2.50	"	"	"	"	"	
Ethylbenzene	"	<b>105</b>	----	2.50	"	"	"	"	"	
Xylenes (total)	"	<b>694</b>	----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	10.0	"	"	"	"	"	
Naphthalene	"	<b>25.0</b>	----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	<b>780</b>	----	5.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	<b>289</b>	----	2.50	"	"	"	"	"	
Isopropylbenzene	"	<b>13.0</b>	----	10.0	"	"	"	"	"	
n-Propylbenzene	"	<b>23.5</b>	----	2.50	"	"	"	"	"	
Surrogate(s): 4-BFB		Recovery: 92.0%		Limits: 75 - 120 %		1x				"
1,2-DCA-d4		104%		77 - 129 %						"
Dibromofluoromethane		100%		80 - 121 %						"
Toluene-d8		99.5%		80 - 120 %						"

<b>P5L0201-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 12/01/05 11:00</b>							
n-Butylbenzene	EPA 8260B	ND	----	2.00	ug/l	1x	5120272	12/07/05	12/07/05 14:31	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
Surrogate(s): 4-BFB		Recovery: 108%		Limits: 75 - 120 %						"
1,2-DCA-d4		104%		77 - 129 %						"
Dibromofluoromethane		108%		80 - 121 %						"

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 12/14/05 16:23
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5L0201-02	Water	MW105								
	<i>Toluene-d8</i>		106%		80 - 120 %	1x			12/07/05 14:31	

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/14/05 16:23
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5120276      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5120276-BLK1)</b>													Extracted: 12/07/05 10:22	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/07/05 12:25	
Surrogate(s): 4-BFB		Recovery: 92.4%	Limits: 50-150%		"									12/07/05 12:25
<b>LCS (5120276-BS1)</b>													Extracted: 12/07/05 10:22	
Gasoline Range Hydrocarbons	NW TPH-Gx	445	---	80.0	ug/l	1x	--	500	89.0%	(70-130)	--	--	12/07/05 11:55	
Surrogate(s): 4-BFB		Recovery: 95.0%	Limits: 50-150%		"									12/07/05 11:55
<b>Duplicate (5120276-DUP1)</b>													QC Source: P5L0140-02RE1	Extracted: 12/07/05 10:22
Gasoline Range Hydrocarbons	NW TPH-Gx	193	---	80.0	ug/l	1x	228	--	--	--	16.6% (40)	--	12/07/05 13:37	
Surrogate(s): 4-BFB		Recovery: 94.6%	Limits: 50-150%		"									12/07/05 13:37
<b>Duplicate (5120276-DUP2)</b>													QC Source: P5L0201-01	Extracted: 12/07/05 10:22
Gasoline Range Hydrocarbons	NW TPH-Gx	7420	---	4000	ug/l	50x	7280	--	--	--	1.90% (40)	--	12/07/05 22:16	
Surrogate(s): 4-BFB		Recovery: 89.4%	Limits: 50-150%		1x									12/07/05 22:16
<b>Matrix Spike (5120276-MS1)</b>													QC Source: P5L0127-07RE2	Extracted: 12/07/05 10:22
Gasoline Range Hydrocarbons	NW TPH-Gx	22300	---	1600	ug/l	20x	13500	10000	88.0%	(70-130)	--	--	12/07/05 20:17	
Surrogate(s): 4-BFB		Recovery: 94.8%	Limits: 50-150%		1x									12/07/05 20:17
<b>Matrix Spike Dup (5120276-MSD1)</b>													QC Source: P5L0127-07RE2	Extracted: 12/07/05 10:22
Gasoline Range Hydrocarbons	NW TPH-Gx	22900	---	1600	ug/l	20x	13500	10000	94.0%	(70-130)	2.65% (30)	--	12/07/05 20:47	
Surrogate(s): 4-BFB		Recovery: 99.2%	Limits: 50-150%		1x									12/07/05 20:47

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/14/05 16:23
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5120357      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5120357-BLK1)</b>													Extracted: 12/08/05 12:46	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	--	--	12/08/05 19:36	
Surrogate(s): 4-BFB		Recovery:	80.0%	Limits: 50-150%		"								12/08/05 19:36
<b>LCS (5120357-BS2)</b>													Extracted: 12/08/05 12:47	
Gasoline Range Hydrocarbons	NW TPH-Gx	487	---	80.0	ug/l	1x	--	500	97.4%	(70-130)	--	--	12/08/05 18:13	
Surrogate(s): 4-BFB		Recovery:	91.8%	Limits: 50-150%		"								12/08/05 18:13
<b>LCS Dup (5120357-BSD2)</b>													Extracted: 12/08/05 12:47	
Gasoline Range Hydrocarbons	NW TPH-Gx	483	---	80.0	ug/l	1x	--	500	96.6%	(70-130)	0.825%	(40)	12/08/05 18:40	
Surrogate(s): 4-BFB		Recovery:	86.4%	Limits: 50-150%		"								12/08/05 18:40
<b>Duplicate (5120357-DUP1)</b>													QC Source: P5L0284-01      Extracted: 12/08/05 12:47	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	ND	--	--	--	NR	(40)	12/08/05 21:26	
Surrogate(s): 4-BFB		Recovery:	65.0%	Limits: 50-150%		"								12/08/05 21:26



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: <b>12/14/05 16:23</b>
7376 SW Durham Road	Project Number: <b>9-61M-10282-0</b>	
Portland, OR 97224	Project Manager: <b>Paul Stull</b>	

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX per EPA Method 8021B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: **5120292** Water Preparation Method: **EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (5120292-BLK1)</b>													Extracted: 12/07/05 12:27			
Benzene	NW-G, 8021B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	12/07/05 14:16			
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Gasoline Range Hydrocarbons	"	ND	---	80.0	"	"	--	--	--	--	--	--	"			
Surrogate(s): 4-BFB (FID)		Recovery:	79.0%	Limits: 50-150%		"							12/07/05 14:16			
4-BFB (PID)		Recovery:	81.4%	Limits: 70-130%		"							"			
<b>LCS (5120292-BS1)</b>													Extracted: 12/07/05 12:27			
Benzene	NW-G, 8021B	19.1	---	0.500	ug/l	1x	--	20.0	95.5%	(70-130)	--	--	12/07/05 13:48			
Toluene	"	18.0	---	0.500	"	"	--	"	90.0%	(76-129)	--	--	"			
Ethylbenzene	"	19.7	---	0.500	"	"	--	"	98.5%	(82-130)	--	--	"			
Xylenes (total)	"	58.6	---	1.00	"	"	--	60.0	97.7%	(76-130)	--	--	"			
Surrogate(s): 4-BFB (PID)		Recovery:	79.4%	Limits: 70-130%		"							12/07/05 13:48			
<b>LCS (5120292-BS2)</b>													Extracted: 12/07/05 12:27			
Gasoline Range Hydrocarbons	NW-G, 8021B	492	---	80.0	ug/l	1x	--	500	98.4%	(50-150)	--	--	12/07/05 12:53			
Surrogate(s): 4-BFB (FID)		Recovery:	96.2%	Limits: 50-150%		"							12/07/05 12:53			
<b>LCS Dup (5120292-BSD2)</b>													Extracted: 12/07/05 12:27			
Gasoline Range Hydrocarbons	NW-G, 8021B	492	---	80.0	ug/l	1x	--	500	98.4%	(50-150)	0.00% (15)		12/07/05 13:21			
Surrogate(s): 4-BFB (FID)		Recovery:	80.0%	Limits: 50-150%		"							12/07/05 13:21			
<b>Duplicate (5120292-DUP1)</b>													QC Source: P5L0199-01		Extracted: 12/07/05 12:27	
Gasoline Range Hydrocarbons	NW-G, 8021B	ND	---	80.0	ug/l	1x	ND	--	--	--	NR (50)		12/07/05 18:29			
Surrogate(s): 4-BFB (FID)		Recovery:	83.2%	Limits: 50-150%		"							12/07/05 18:29			
<b>Duplicate (5120292-DUP2)</b>													QC Source: P5L0238-01		Extracted: 12/07/05 12:27	
Gasoline Range Hydrocarbons	NW-G, 8021B	ND	---	80.0	ug/l	1x	ND	--	--	--	NR (50)		12/08/05 02:40			
Surrogate(s): 4-BFB (FID)		Recovery:	72.4%	Limits: 50-150%		"							12/08/05 02:40			
<b>Matrix Spike (5120292-MS1)</b>													QC Source: P5L0223-01		Extracted: 12/07/05 12:27	
Benzene	NW-G, 8021B	18.5	---	0.500	ug/l	1x	ND	20.0	92.5%	(65-144)	--	--	12/08/05 00:52			
Toluene	"	17.4	---	0.500	"	"	ND	"	87.0%	(68-139)	--	--	"			
Ethylbenzene	"	19.0	---	0.500	"	"	ND	"	95.0%	(69-144)	--	--	"			
Xylenes (total)	"	56.4	---	1.00	"	"	ND	60.0	94.0%	(60-144)	--	--	"			
Surrogate(s): 4-BFB (PID)		Recovery:	78.8%	Limits: 70-130%		"							12/08/05 00:52			

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/14/05 16:23

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX per EPA Method 8021B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5120292      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike Dup (5120292-MSD1)</b>							QC Source: PSL0223-01			Extracted: 12/07/05 12:27				
Benzene	NW-G, 8021B	19.5	---	0.500	ug/l	1x	ND	20.0	97.5%	(65-144)	5.26% (20)		12/08/05 01:19	
Toluene	"	18.1	---	0.500	"	"	ND	"	90.5%	(68-139)	3.94%	"	"	"
Ethylbenzene	"	19.8	---	0.500	"	"	ND	"	99.0%	(69-144)	4.12%	"	"	"
Xylenes (total)	"	58.3	---	1.00	"	"	ND	60.0	97.2%	(60-144)	3.31%	"	"	"
Surrogate(s): 4-BFB (PID)		Recovery: 70.0%		Limits: 70-130%									12/08/05 01:19	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Emplre Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/14/05 16:23
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5120272      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (5120272-BLK1)</b>													Extracted: 12/07/05 09:01	
n-Butylbenzene	EPA 8260B	ND	---	2.00	ug/l	1x	--	--	--	--	--	--	12/07/05 13:39	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>													12/07/05 13:39	
		<i>Recovery:</i>	107%			<i>Limits:</i>	75-120%	"						
		<i>1,2-DCA-d4</i>	106%				77-129%	"						
		<i>Dibromofluoromethane</i>	107%				80-121%	"						
		<i>Toluene-d8</i>	107%				80-120%	"						

<b>LCS (5120272-BS1)</b>													Extracted: 12/07/05 09:01	
Benzene	EPA 8260B	20.2	---	0.200	ug/l	1x	--	20.0	101%	(80-120)	--	--	12/07/05 11:54	
Toluene	"	21.4	---	0.500	"	"	--	"	107%	(80-124)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-120)	--	--	"	
Xylenes (total)	"	61.6	---	1.00	"	"	--	60.0	103%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	22.1	---	2.00	"	"	--	20.0	110%	(80-129)	--	--	"	
Naphthalene	"	20.2	---	2.00	"	"	--	"	101%	(72-149)	--	--	"	
<i>Surrogate(s): 4-BFB</i>													12/07/05 11:54	
		<i>Recovery:</i>	108%			<i>Limits:</i>	75-120%	"						
		<i>1,2-DCA-d4</i>	102%				77-129%	"						
		<i>Dibromofluoromethane</i>	108%				80-121%	"						
		<i>Toluene-d8</i>	107%				80-120%	"						

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: 12/14/05 16:23
7376 SW Durham Road Portland, OR 97224	Project Number: 9-61M-10282-0 Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 5120272      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Matrix Spike (5120272-MS1)</b>		QC Source: P5L0201-02				Extracted: 12/07/05 09:01						
Benzene	EPA 8260B	20.4	---	0.200	ug/l	1x	ND	20.0	102% (80-124)	-- --	12/07/05 12:20	
Toluene	"	21.3	---	0.500	"	"	ND	"	106% (79.7-131)	-- --	"	
Ethylbenzene	"	20.2	---	0.500	"	"	ND	"	101% (80-124)	-- --	"	
Xylenes (total)	"	60.4	---	1.00	"	"	ND	60.0	101% (44.6-154)	-- --	"	
Methyl tert-butyl ether	"	22.2	---	2.00	"	"	ND	20.0	111% (80-130)	-- --	"	
Naphthalene	"	20.4	---	2.00	"	"	ND	"	102% (69-163)	-- --	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>105%</i>	<i>Limits: 75-120%</i>		<i>"</i>						<i>12/07/05 12:20</i>
<i>1,2-DCA-d4</i>			<i>103%</i>	<i>77-129%</i>		<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>107%</i>	<i>80-121%</i>		<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>108%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>

<b>Matrix Spike Dup (5120272-MSD1)</b>		QC Source: P5L0201-02				Extracted: 12/07/05 09:01						
Benzene	EPA 8260B	15.6	---	0.200	ug/l	1x	ND	20.0	78.0% (80-124)	26.7% (25)	12/07/05 12:46	Q-01
Toluene	"	16.7	---	0.500	"	"	ND	"	83.5% (79.7-131)	24.2% "	"	
Ethylbenzene	"	15.4	---	0.500	"	"	ND	"	77.0% (80-124)	27.0% "	"	Q-01
Xylenes (total)	"	46.1	---	1.00	"	"	ND	60.0	76.8% (44.6-154)	26.9% "	"	Q-01
Methyl tert-butyl ether	"	16.8	---	2.00	"	"	ND	20.0	84.0% (80-130)	27.7% "	"	Q-01
Naphthalene	"	15.9	---	2.00	"	"	ND	"	79.5% (69-163)	24.8% "	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>107%</i>	<i>Limits: 75-120%</i>		<i>"</i>						<i>12/07/05 12:46</i>
<i>1,2-DCA-d4</i>			<i>104%</i>	<i>77-129%</i>		<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>109%</i>	<i>80-121%</i>		<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>108%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/14/05 16:23
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5120343      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (5120343-BLK1)</b>													Extracted: 12/08/05 09:31			
tert-Butylbenzene	EPA 8260B	ND	---	2.00	ug/l	1x	--	--	--	--	--	--	12/08/05 13:17			
sec-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
n-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"			
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"			
<i>Surrogate(s): 4-BFB</i>													<i>Recovery: 87.0%</i>	<i>Limits: 75-120%</i>	"	12/08/05 13:17
<i>1,2-DCA-d4</i>													<i>100%</i>	<i>77-129%</i>	"	"
<i>Dibromofluoromethane</i>													<i>96.0%</i>	<i>80-121%</i>	"	"
<i>Toluene-d8</i>													<i>95.0%</i>	<i>80-120%</i>	"	"

<b>LCS (5120343-BS1)</b>													Extracted: 12/08/05 09:31			
Benzene	EPA 8260B	22.6	---	0.200	ug/l	1x	--	20.0	113%	(80-120)	--	--	12/08/05 11:16			
Toluene	"	22.9	---	0.500	"	"	--	"	114%	(80-124)	--	--	"			
Ethylbenzene	"	19.0	---	0.500	"	"	--	"	95.0%	(80-120)	--	--	"			
Xylenes (total)	"	58.3	---	1.00	"	"	--	60.0	97.2%	(73-124)	--	--	"			
Methyl tert-butyl ether	"	23.2	---	2.00	"	"	--	20.0	116%	(80-129)	--	--	"			
Naphthalene	"	19.4	---	2.00	"	"	--	"	97.0%	(72-149)	--	--	"			
<i>Surrogate(s): 4-BFB</i>													<i>Recovery: 104%</i>	<i>Limits: 75-120%</i>	"	12/08/05 11:16
<i>1,2-DCA-d4</i>													<i>117%</i>	<i>77-129%</i>	"	"
<i>Dibromofluoromethane</i>													<i>114%</i>	<i>80-121%</i>	"	"
<i>Toluene-d8</i>													<i>108%</i>	<i>80-120%</i>	"	"

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name:	<b>Fred Meyer Port Orchard</b>	Report Created: 12/14/05 16:23
	Project Number:	9-61M-10282-0	
	Project Manager:	Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 North Creek Analytical - Portland

QC Batch: 5120343      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike (5120343-MS1)</b>			QC Source: P5L0231-01				Extracted: 12/08/05 09:31							
Benzene	EPA 8260B	1210	---	2.00	ug/l	10x	976	200	117%	(80-124)	--	--	12/08/05 11:54	
Toluene	"	217	---	5.00	"	"	4.30	"	106%	(79.7-131)	--	--	"	
Ethylbenzene	"	368	---	5.00	"	"	184	"	92.0%	(80-124)	--	--	"	
Xylenes (total)	"	577	---	10.0	"	"	30.3	600	91.1%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	201	---	20.0	"	"	ND	200	100%	(80-130)	--	--	"	
Naphthalene	"	1110	---	20.0	"	"	896	"	107%	(69-163)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>97.5%</i>	<i>Limits: 75-120%</i>		<i>1x</i>							<i>12/08/05 11:54</i>	
<i>1,2-DCA-d4</i>			<i>112%</i>	<i>77-129%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>108%</i>	<i>80-121%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>104%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

<b>Matrix Spike Dup (5120343-MSD1)</b>			QC Source: P5L0231-01				Extracted: 12/08/05 09:31							
Benzene	EPA 8260B	1200	---	2.00	ug/l	10x	976	200	112%	(80-124)	0.830%	(25)	12/08/05 12:22	
Toluene	"	219	---	5.00	"	"	4.30	"	107%	(79.7-131)	0.917%	"	"	
Ethylbenzene	"	374	---	5.00	"	"	184	"	95.0%	(80-124)	1.62%	"	"	
Xylenes (total)	"	581	---	10.0	"	"	30.3	600	91.8%	(44.6-154)	0.691%	"	"	
Methyl tert-butyl ether	"	204	---	20.0	"	"	ND	200	102%	(80-130)	1.48%	"	"	
Naphthalene	"	1140	---	20.0	"	"	896	"	122%	(69-163)	2.67%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>94.5%</i>	<i>Limits: 75-120%</i>		<i>1x</i>							<i>12/08/05 12:22</i>	
<i>1,2-DCA-d4</i>			<i>106%</i>	<i>77-129%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>102%</i>	<i>80-121%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>100%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Lisa Domenighini, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** East 11115 Montgomery, Suite B, Spokane, WA 99206-4776  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/14/05 16:23
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

Q-01 - The matrix spike recovery, and/or RPD, for this QC sample is outside of established control limits. Failure of a matrix spike QC sample does not represent an out-of-control condition for the batch.

Laboratory Reporting Conventions:

DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.

ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).

NR / NA - Not Reported / Not Available

dry - Sample results reported on a dry weight basis. Reporting Limits have been corrected for %Solids.

wet - Sample results and reporting limits reported on a wet weight basis (as received).

RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).

MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.

MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.

Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.

Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.



Earth & Environmental, Inc.  
 7376 SW Durham Road  
 Portland, Oregon 97224  
 Phone Number (503) 639-3400  
 Fax Number (503) 620-7892

1045

05 L0201

**CHAIN OF CUSTODY**

PROJECT <b>FRED MEYER PORT-DUMAS (PDM)</b>		PROJECT No. <b>90M102820</b>		ANALYSIS REQUESTED (circle, check box or write preferred method in box)														
REPORT TO: <b>PAUL STULL</b>		PHONE No. <b>503 639 3400</b>																
PROJECT MANAGER <b>PAUL STULL</b>		PHONE No.																
SAMPLER'S NAME (please print) <b>JASON GARDNER</b>		PHONE No.																
SAMPLER'S SIGNATURE 																		
SAMPLE I.D.	DATE	TIME	MURK	PRESERVATIVE	CONTAINERS													
					No.	VL.												
1. MW103	12/1/05	1140	H2O	HEX/ICE	5	UGA												
2. MW105	}	1100	}	}	1	}												
3. TB		NA			2													
4. TB		1030			2													
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE RECEIPT		LABORATORY		TURNAROUND TIME	QC Reporting Requirements	COMMENTS / INSTRUCTIONS
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #		<input type="checkbox"/> 8 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 1 WEEK <input checked="" type="checkbox"/> 2 WEEK (standard) <input type="checkbox"/> OTHER _____		
CONDITION OF CONTAINERS		CARRIER				
CONDITION OF SEALS		DOT DESTINATION				
RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	
	12/5/05	1140	NCA	12/6/05	9:45	
NCA	12/6/05	10:16	NCA	12/6	10:14	

1.7



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
425.420.9200 fax 425.420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
509.924.9200 fax 509.924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
503.906.9200 fax 503.906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
541.383.9310 fax 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
907.563.9200 fax 907.563.9210

March 21, 2006

RECEIVED MAR 27 2006

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 03/13/06 10:20.  
The following list is a summary of the NCA Work Orders contained in this report.  
If you have any questions concerning this report, please feel free to contact me.

---

<u>Work</u>	<u>Project</u>	<u>ProjectNumber</u>
P6C0495	Fred Meyer Port Orchard	9-61M-10282-0

---

Thank You,

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

---

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T/B	P6C0495-01	Water	03/09/06 08:00	03/13/06 10:20
MW105	P6C0495-02	Water	03/09/06 15:45	03/13/06 10:20
MW103	P6C0495-03	Water	03/09/06 16:40	03/13/06 10:20

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	03/21/06 16:55

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P6C0495-01</b>	<b>Water</b>	<b>T/B</b>	<b>Sampled: 03/09/06 08:00</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	6030726	03/16/06	03/16/06 23:25	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.4%</i>		<i>Limits: 50 - 150 %</i>		"		"		
<b>P6C0495-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 03/09/06 15:45</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	6030726	03/16/06	03/17/06 00:20	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 90.6%</i>		<i>Limits: 50 - 150 %</i>		"		"		
<b>P6C0495-03RE1</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 03/09/06 16:40</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	6030781	03/17/06	03/17/06 20:26	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.8%</i>		<i>Limits: 50 - 150 %</i>		"		"		

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P6C0495-01</b>	<b>Water</b>	<b>T/B</b>	<b>Sampled: 03/09/06 08:00</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	6030619	03/15/06	03/15/06 11:56	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 82.5%</i>		<i>Limits: 80 - 120 %</i>						
<i>1,2-DCA-d4</i>		<i>108%</i>		<i>80 - 120 %</i>						
<i>Dibromofluoromethane</i>		<i>104%</i>		<i>80 - 120 %</i>						
<i>Toluene-d8</i>		<i>97.5%</i>		<i>80 - 120 %</i>						

<b>P6C0495-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 03/09/06 15:45</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	6030619	03/15/06	03/15/06 12:22	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 83.0%</i>		<i>Limits: 80 - 120 %</i>						
<i>1,2-DCA-d4</i>		<i>109%</i>		<i>80 - 120 %</i>						
<i>Dibromofluoromethane</i>		<i>104%</i>		<i>80 - 120 %</i>						

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	03/21/06 16:55

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>P6C0495-02</b>	<b>Water</b>	<b>MW105</b>	<b>Sampled: 03/09/06 15:45</b>							
<i>Toluene-d8</i>		93.0%		80 - 120 %		1x			03/15/06 12:22	
<b>P6C0495-03RE1</b>	<b>Water</b>	<b>MW103</b>	<b>Sampled: 03/09/06 16:40</b>							
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	6030685	03/16/06	03/16/06 14:11	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>0.750</b>	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>0.780</b>	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>1.31</b>	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 89.0%</i>		<i>Limits: 80 - 120 %</i>						
<i>1,2-DCA-d4</i>		<i>102%</i>		<i>80 - 120 %</i>						
<i>Dibromofluoromethane</i>		<i>99.0%</i>		<i>80 - 120 %</i>						
<i>Toluene-d8</i>		<i>88.5%</i>		<i>80 - 120 %</i>						

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
North Creek Analytical - Portland

**QC Batch: 6030726 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (6030726-BLK1)</b> <span style="float:right">Extracted: 03/16/06 13:04</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	03/16/06 14:43	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/16/06 14:43</i>	
<b>LCS (6030726-BS2)</b> <span style="float:right">Extracted: 03/16/06 13:04</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	445	---	80.0	ug/l	1x	--	500	89.0% (70-130)	--	03/16/06 13:21	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/16/06 13:21</i>	
<b>LCS Dup (6030726-BSD2)</b> <span style="float:right">Extracted: 03/16/06 13:04</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	428	---	80.0	ug/l	1x	--	500	85.6% (70-130)	3.89% (40)	03/16/06 13:48	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 97.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/16/06 13:48</i>	
<b>Duplicate (6030726-DUP1)</b> <span style="float:right">QC Source: P6C0468-01</span> <span style="float:right">Extracted: 03/16/06 13:04</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	2.51% (40)	03/16/06 17:55	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.8%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/16/06 17:55</i>	
<b>Duplicate (6030726-DUP2)</b> <span style="float:right">QC Source: P6C0495-03</span> <span style="float:right">Extracted: 03/16/06 13:04</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	800	ug/l	10x	ND	--	--	2.11% (40)	03/17/06 01:16	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 93.0%</i>		<i>Limits: 50-150%</i>		<i>1x</i>					<i>03/17/06 01:16</i>	

**QC Batch: 6030781 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (6030781-BLK1)</b> <span style="float:right">Extracted: 03/17/06 13:00</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	03/17/06 16:44	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/17/06 16:44</i>	
<b>LCS (6030781-BS2)</b> <span style="float:right">Extracted: 03/17/06 13:00</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	433	---	80.0	ug/l	1x	--	500	86.6% (70-130)	--	03/17/06 13:04	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 97.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/17/06 13:04</i>	
<b>LCS Dup (6030781-BSD2)</b> <span style="float:right">Extracted: 03/17/06 13:00</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	422	---	80.0	ug/l	1x	--	500	84.4% (70-130)	2.57% (40)	03/17/06 13:32	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.2%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/17/06 13:32</i>	
<b>Duplicate (6030781-DUP1)</b> <span style="float:right">QC Source: P6C0495-03RE1</span> <span style="float:right">Extracted: 03/17/06 13:00</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	88.9	---	80.0	ug/l	1x	ND	--	--	56.6% (40)	03/17/06 21:48	Q-06
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>					<i>03/17/06 21:48</i>	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 6030781      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

<b>Duplicate (6030781-DUP2)</b>		QC Source: P6C0784-07				Extracted: 03/17/06 13:00								
Gasoline Range Hydrocarbons	NW TPH-Gx	20300	--	4000	ug/l	50x	22300	--	--	--	9.39% (40)		03/18/06 01:28	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 93.2%</i>		<i>Limits: 50-150% 1x</i>			<i>03/18/06 01:28</i>							

North Creek Analytical - Portland

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	03/21/06 16:55

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
**North Creek Analytical - Portland**

**QC Batch: 6030619**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

<b>Blank (6030619-BLK1)</b>														
												Extracted: 03/15/06 08:01		
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/15/06 10:35	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>86.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>03/15/06 10:35</i>	
<i>1,2-DCA-d4</i>			<i>106%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>98.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

<b>LCS (6030619-BS1)</b>														
												Extracted: 03/15/06 08:01		
Benzene	EPA 8260B	21.4	---	0.200	ug/l	1x	--	20.0	107%	(80-120)	--	--	03/15/06 08:49	
Toluene	"	21.0	---	0.500	"	"	--	"	105%	(80-124)	--	--	"	
Ethylbenzene	"	22.0	---	0.500	"	"	--	"	110%	(80-120)	--	--	"	
Xylenes (total)	"	65.9	---	1.00	"	"	--	60.0	110%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	23.2	---	2.00	"	"	--	20.0	116%	(80-129)	--	--	"	
Naphthalene	"	24.4	---	2.00	"	"	--	"	122%	(72-149)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>104%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>03/15/06 08:49</i>	
<i>1,2-DCA-d4</i>			<i>99.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

<b>Matrix Spike (6030619-MS1)</b>														
												QC Source: P6C0495-02		
												Extracted: 03/15/06 08:01		
Benzene	EPA 8260B	20.4	---	0.200	ug/l	1x	ND	20.0	102%	(80-124)	--	--	03/15/06 09:15	
Toluene	"	18.2	---	0.500	"	"	ND	"	91.0%	(79.7-131)	--	--	"	
Ethylbenzene	"	19.1	---	0.500	"	"	ND	"	95.5%	(80-124)	--	--	"	
Xylenes (total)	"	43.1	---	1.00	"	"	ND	60.0	71.8%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	22.0	---	2.00	"	"	ND	20.0	110%	(80-130)	--	--	"	
Naphthalene	"	19.1	---	2.00	"	"	ND	"	95.5%	(69-163)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>99.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>03/15/06 09:15</i>	
<i>1,2-DCA-d4</i>			<i>99.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>99.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>96.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
 Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created: <b>03/21/06 16:55</b>
7376 SW Durham Road Portland, OR 97224	Project Number: <b>9-61M-10282-0</b>	
	Project Manager: <b>Paul Stull</b>	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 6030619 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike Dup (6030619-MSD1)</b>			QC Source: P6C0495-02			Extracted: 03/15/06 08:01								
Benzene	EPA 8260B	21.6	---	0.200	ug/l	1x	ND	20.0	108%	(80-124)	5.71% (25)		03/15/06 09:42	
Toluene	"	19.5	---	0.500	"	"	ND	"	97.5%	(79.7-131)	6.90%	"	"	"
Ethylbenzene	"	20.4	---	0.500	"	"	ND	"	102%	(80-124)	6.58%	"	"	"
Xylenes (total)	"	47.1	---	1.00	"	"	ND	60.0	78.5%	(44.6-154)	8.87%	"	"	"
Methyl tert-butyl ether	"	24.5	---	2.00	"	"	ND	20.0	122%	(80-130)	10.8%	"	"	"
Naphthalene	"	20.8	---	2.00	"	"	ND	"	104%	(69-163)	8.52%	"	"	"
Surrogate(s): 4-BFB		Recovery:	102%	Limits:	80-120%	"							03/15/06 09:42	
1,2-DCA-d4			102%		80-120%	"							"	
Dibromofluoromethane			101%		80-120%	"							"	
Toluene-d8			97.5%		80-120%	"							"	

QC Batch: 6030685 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (6030685-BLK1)</b>						Extracted: 03/16/06 08:06								
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/16/06 11:04	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		Recovery:	88.0%	Limits:	80-120%	"							03/16/06 11:04	
1,2-DCA-d4			106%		80-120%	"							"	
Dibromofluoromethane			102%		80-120%	"							"	
Toluene-d8			98.0%		80-120%	"							"	

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network



**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
North Creek Analytical - Portland

QC Batch: 6030685      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	----------------	----------------	----------	-------

**LCS (6030685-BS1)**      **Extracted: 03/16/06 08:06**

Benzene	EPA 8260B	21.7	---	0.200	ug/l	1x	--	20.0	108%	(80-120)	--	03/16/06 08:50
Toluene	"	21.3	---	0.500	"	"	--	"	106%	(80-124)	--	"
Ethylbenzene	"	22.1	---	0.500	"	"	--	"	110%	(80-120)	--	"
Xylenes (total)	"	66.7	---	1.00	"	"	--	60.0	111%	(73-124)	--	"
Methyl tert-butyl ether	"	24.2	---	2.00	"	"	--	20.0	121%	(80-129)	--	"
Naphthalene	"	22.7	---	2.00	"	"	--	"	114%	(72-149)	--	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>						<i>03/16/06 08:50</i>
<i>1,2-DCA-d4</i>			<i>103%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>104%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>102%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>

**Matrix Spike (6030685-MS1)**      **QC Source: P6C0576-01**      **Extracted: 03/16/06 08:06**

Benzene	EPA 8260B	20.1	---	0.200	ug/l	1x	ND	20.0	100%	(80-124)	--	03/16/06 09:17
Toluene	"	19.5	---	0.500	"	"	ND	"	97.5%	(79.7-131)	--	"
Ethylbenzene	"	20.1	---	0.500	"	"	ND	"	100%	(80-124)	--	"
Xylenes (total)	"	56.7	---	1.00	"	"	ND	60.0	94.5%	(44.6-154)	--	"
Methyl tert-butyl ether	"	22.2	---	2.00	"	"	ND	20.0	111%	(80-130)	--	"
Naphthalene	"	21.0	---	2.00	"	"	ND	"	105%	(69-163)	--	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>99.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>						<i>03/16/06 09:17</i>
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>99.5%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>

**Matrix Spike Dup (6030685-MSD1)**      **QC Source: P6C0576-01**      **Extracted: 03/16/06 08:06**

Benzene	EPA 8260B	21.3	---	0.200	ug/l	1x	ND	20.0	106%	(80-124)	5.80% (25)	03/16/06 09:44
Toluene	"	20.6	---	0.500	"	"	ND	"	103%	(79.7-131)	5.49%	"
Ethylbenzene	"	21.6	---	0.500	"	"	ND	"	108%	(80-124)	7.19%	"
Xylenes (total)	"	62.1	---	1.00	"	"	ND	60.0	104%	(44.6-154)	9.09%	"
Methyl tert-butyl ether	"	23.6	---	2.00	"	"	ND	20.0	118%	(80-130)	6.11%	"
Naphthalene	"	21.7	---	2.00	"	"	ND	"	108%	(69-163)	3.28%	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>102%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>						<i>03/16/06 09:44</i>
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>100%</i>		<i>80-120%</i>	<i>"</i>						<i>"</i>

North Creek Analytical - Portland

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.  
Environmental Laboratory Network





**Seattle** 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244  
 phone: (425) 420.9200 fax: (425) 420.9210  
**Spokane** 11922 East 1st Avenue, Spokane Valley, WA 99206-5302  
 phone: (509) 924.9200 fax: (509) 924.9290  
**Portland** 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132  
 phone: (503) 906.9200 fax: (503) 906.9210  
**Bend** 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711  
 phone: (541) 383.9310 fax: 541.382.7588  
**Anchorage** 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119  
 phone: (907) 563.9200 fax: (907) 563.9210

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 03/21/06 16:55
--	--	-----------------------------------

**Notes and Definitions**

Report Specific Notes:

Q-06 - RPD is not applicable for analyte concentrations less than 5 times the MRL.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR / NA - Not Reported / Not Available
- dry - Sample results reported on a dry weight basis. Reporting Limits have been corrected for %Solids.
- wet - Sample results and reporting limits reported on a wet weight basis (as received).
- RPD - Relative Percent Difference. (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.



11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210  
 11922 E 1st Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
 20332 Empire Ave, Ste F1, Bend, OR 97701-5712 541-383-9310 FAX 382-7588  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

**CHAIN OF CUSTODY REPORT**

Work Order #: **7660499**

NCA CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify: _____ <small>* Turnaround Request Fee does not include any lower Pouch Charges.</small>					
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:							
ADDRESS: <b>7376 SW Durham Port OR</b>									
PHONE: <b>503 6393400</b> FAX:									
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		PRESERVATIVE							
PROJECT NUMBER: <b>(Furpo) 9-61M-10282-0</b>		REQUESTED ANALYSES							
SAMPLED BY: <b>McFarland</b>									
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	WEL	WEL			MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 T/B	3-9-06 0800	X	X			H2O	2		
2 MW 105	3-9-06 1545	X	X			H2O	7		
3 MW 103	3-9-06 1640	X	X			H2O	7		
4									
5									
6									
7									
8									
9									
10									
RELEASED BY: <b>upmell</b>		DATE: <b>3-13-06</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>3/13/06</b>			
PRINT NAME: <b>W.J. McFarland</b> FIRM: <b>AMEC</b>		TIME: <b>0900</b>		PRINT NAME: <b>[Signature]</b> FIRM: <b>NCA</b>		TIME: <b>9:46</b>			
RELEASED BY:		DATE:		RECEIVED BY:		DATE: <b>lab 10:20</b>			
PRINT NAME:		TIME:		PRINT NAME:		TIME:			
ADDITIONAL REMARKS: <b>B260 To include: BTEX, MTBE EDC, EDB, Naphthalene, Alkylbenzene suite</b>								TEMP: <b>23</b>	PAGE 1 OF 1

June 22, 2006

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 06/09/06 10:30.  
The following list is a summary of the Work Orders contained in this report, generated on 06/22/06  
16:21.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PPF0446	Fred Meyer Port Orchard	9-61M-10282-0

---



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	PPF0446-01	Water	06/08/06 07:00	06/09/06 10:30
MW105	PPF0446-02	Water	06/08/06 12:30	06/09/06 10:30
MW103	PPF0446-03	Water	06/08/06 13:30	06/09/06 10:30
Carbon Vessel #1	PPF0446-04	Other dry	06/08/06 14:00	06/09/06 10:30
Carbon Vessel #2	PPF0446-05	Other dry	06/08/06 14:20	06/09/06 10:30

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPF0446-01 (Trip Blank)</b>		<b>Water</b>					<b>Sampled: 06/08/06 07:00</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/14/06 23:20	
<i>Surrogate(s): 4-BFB</i>			90.0%		50 - 150 %		"			"
<b>PPF0446-02 (MW105)</b>		<b>Water</b>					<b>Sampled: 06/08/06 12:30</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/14/06 23:48	
<i>Surrogate(s): 4-BFB</i>			88.4%		50 - 150 %		"			"
<b>PPF0446-03 (MW103)</b>		<b>Water</b>					<b>Sampled: 06/08/06 13:30</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	584	----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/15/06 00:16	
<i>Surrogate(s): 4-BFB</i>			110%		50 - 150 %		"			"



<b>AMEC - Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
---	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPF0446-02 (MW105)</b>		<b>Water</b>					<b>Sampled: 06/08/06 12:30</b>			
n-Butylbenzene	EPA 8260B	ND	----	2.00	ug/l	1x	6060617	06/15/06 07:56	06/15/06 11:49	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>				85.5%			80 - 120 %	"		"
<i>1,2-DCA-d4</i>				114%			80 - 120 %	"		"
<i>Dibromofluoromethane</i>				106%			80 - 120 %	"		"
<i>Toluene-d8</i>				99.0%			80 - 120 %	"		"

<b>PPF0446-03 (MW103)</b>		<b>Water</b>					<b>Sampled: 06/08/06 13:30</b>			
n-Butylbenzene	EPA 8260B	5.78	----	2.00	ug/l	1x	6060617	06/15/06 07:56	06/15/06 11:22	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	8.32	----	0.500	"	"	"	"	"	
Xylenes (total)	"	22.2	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	13.0	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	81.3	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	29.0	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	3.64	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	12.5	----	0.500	"	"	"	"	"	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPF0446-03 (MW103)</b>		<b>Water</b>					<b>Sampled: 06/08/06 13:30</b>			
<i>Surrogate(s): 4-BFB</i>		96.5%				80 - 120 %	1x		06/15/06 11:22	
<i>1,2-DCA-d4</i>		119%				80 - 120 %	"		"	
<i>Dibromofluoromethane</i>		108%				80 - 120 %	"		"	
<i>Toluene-d8</i>		99.5%				80 - 120 %	"		"	



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**TCLP Volatile Organic Compounds by EPA Method 1311/8260B**  
 TestAmerica - Seattle, WA

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPF0446-04 (Carbon Vessel #1)</b>		<b>Other dry</b>						<b>Sampled: 06/08/06 14:00</b>		
Benzene	EPA 8260B	ND	----	0.0800	mg/l	1x	6F21065	06/20/06 15:14	06/21/06 18:16	
Surrogate(s):										
1,2-DCA-d4			102%		67 - 135 %	"				"
Toluene-d8			100%		70 - 130 %	"				"
4-BFB			99.2%		70 - 130 %	"				"
<b>PPF0446-05 (Carbon Vessel #2)</b>		<b>Other dry</b>						<b>Sampled: 06/08/06 14:20</b>		
Benzene	EPA 8260B	ND	----	0.0800	mg/l	1x	6F21065	06/20/06 15:14	06/21/06 18:45	
Surrogate(s):										
1,2-DCA-d4			104%		67 - 135 %	"				"
Toluene-d8			101%		70 - 130 %	"				"
4-BFB			98.4%		70 - 130 %	"				"

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager





<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6060577      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (6060577-BLK1)</b> <span style="float:right">Extracted: 06/14/06 12:01</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	06/14/06 13:14	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.0%</i>		<i>Limits: 50-150%</i>							06/14/06 13:14	
<b>LCS (6060577-BS1)</b> <span style="float:right">Extracted: 06/14/06 12:01</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	394	--	80.0	ug/l	1x	--	500	78.8% (70-130)	--	06/14/06 12:19	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 50-150%</i>							06/14/06 12:19	
<b>LCS Dup (6060577-BSD1)</b> <span style="float:right">Extracted: 06/14/06 12:01</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	388	--	80.0	ug/l	1x	--	500	77.6% (70-130)	1.53% (40)	06/14/06 12:46	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 50-150%</i>							06/14/06 12:46	
<b>Duplicate (6060577-DUP1)</b> <span style="float:right">QC Source: PPF0438-11      Extracted: 06/14/06 12:01</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	20000	--	4000	ug/l	50x	20600	--	--	2.96% (40)	06/14/06 22:25	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.8%</i>		<i>Limits: 50-150%</i>	1x						06/14/06 22:25	
<b>Duplicate (6060577-DUP2)</b> <span style="float:right">QC Source: PPF0447-02      Extracted: 06/14/06 12:01</span>												
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	800	ug/l	10x	ND	--	--	46.3% (40)	06/15/06 01:11	Q-06
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 89.6%</i>		<i>Limits: 50-150%</i>	1x						06/15/06 01:11	



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6060617      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (6060617-BLK1)</b>													Extracted: 06/15/06 07:56	
tert-Butylbenzene	EPA 8260B	ND	---	2.00	ug/l	1x	--	--	--	--	--	--	06/15/06 10:29	
sec-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

<i>Surrogate(s): 4-BFB</i>	<i>Recovery:</i>	<i>89.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>	<i>06/15/06 10:29</i>
<i>1,2-DCA-d4</i>		<i>117%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>
<i>Dibromofluoromethane</i>		<i>108%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>

<b>LCS (6060617-BS1)</b>													Extracted: 06/15/06 07:56	
Benzene	EPA 8260B	21.4	---	0.200	ug/l	1x	--	20.0	107%	(80-120)	--	--	06/15/06 08:42	
Toluene	"	22.0	---	0.500	"	"	--	"	110%	(80-124)	--	--	"	
Ethylbenzene	"	22.0	---	0.500	"	"	--	"	110%	(80-120)	--	--	"	
Xylenes (total)	"	63.4	---	1.00	"	"	--	60.0	106%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	25.6	---	2.00	"	"	--	20.0	128%	(80-129)	--	--	"	
Naphthalene	"	24.0	---	2.00	"	"	--	"	120%	(72-149)	--	--	"	

<i>Surrogate(s): 4-BFB</i>	<i>Recovery:</i>	<i>99.0%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>	<i>06/15/06 08:42</i>
<i>1,2-DCA-d4</i>		<i>119%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>
<i>Dibromofluoromethane</i>		<i>108%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>
<i>Toluene-d8</i>		<i>105%</i>		<i>80-120%</i>	<i>"</i>	<i>"</i>

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6060617      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

<b>Matrix Spike (6060617-MS1)</b>		QC Source: PPF0446-02				Extracted: 06/15/06 07:56								
Benzene	EPA 8260B	21.0	---	0.200	ug/l	1x	ND	20.0	105%	(80-124)	--	--	06/15/06 09:08	
Toluene	"	21.2	---	0.500	"	"	ND	"	106%	(79.7-131)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	ND	"	102%	(80-124)	--	--	"	
Xylenes (total)	"	59.0	---	1.00	"	"	ND	60.0	98.3%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	24.4	---	2.00	"	"	ND	20.0	122%	(80-130)	--	--	"	
Naphthalene	"	21.5	---	2.00	"	"	1.89	"	98.0%	(69-163)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>96.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>06/15/06 09:08</i>	
<i>1,2-DCA-d4</i>			<i>114%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>108%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>104%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

<b>Matrix Spike Dup (6060617-MSD1)</b>		QC Source: PPF0446-02				Extracted: 06/15/06 07:56								
Benzene	EPA 8260B	21.3	---	0.200	ug/l	1x	ND	20.0	106%	(80-124)	1.42% (25)		06/15/06 09:35	
Toluene	"	21.3	---	0.500	"	"	ND	"	106%	(79.7-131)	0.471%	"	"	
Ethylbenzene	"	21.2	---	0.500	"	"	ND	"	106%	(80-124)	3.85%	"	"	
Xylenes (total)	"	60.8	---	1.00	"	"	ND	60.0	101%	(44.6-154)	3.01%	"	"	
Methyl tert-butyl ether	"	26.2	---	2.00	"	"	ND	20.0	131%	(80-130)	7.11%	"	"	Q-01
Naphthalene	"	21.6	---	2.00	"	"	1.89	"	98.6%	(69-163)	0.464%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>97.5%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>06/15/06 09:35</i>	
<i>1,2-DCA-d4</i>			<i>116%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>108%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>104%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 06/22/06 16:21
--	--	-----------------------------------

**TCLP Volatile Organic Compounds by EPA Method 1311/8260B - Laboratory Quality Control Results**  
 TestAmerica - Seattle, WA

**QC Batch: 6F21065      TCLP Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (6F21065-BLK1)</b>													Extracted: 06/20/06 15:14	
Benzene	EPA 8260B	ND	---	0.0800	mg/l	1x	--	--	--	--	--	--	06/21/06 17:47	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>102%</i>	<i>Limits:</i>	<i>67-135%</i>	<i>"</i>							06/21/06 17:47	
<i>Toluene-d8</i>			<i>102%</i>		<i>70-130%</i>	<i>"</i>								
<i>4-BFB</i>			<i>98.8%</i>		<i>70-130%</i>	<i>"</i>								
<b>LCS (6F21065-BS1)</b>													Extracted: 06/21/06 12:09	
Benzene	EPA 8260B	0.707	---	0.0800	mg/l	1x	--	0.800	88.4%	(80-120)	--	--	06/21/06 16:19	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>102%</i>	<i>Limits:</i>	<i>67-135%</i>	<i>"</i>							06/21/06 16:19	
<i>Toluene-d8</i>			<i>97.2%</i>		<i>70-130%</i>	<i>"</i>								
<i>4-BFB</i>			<i>99.4%</i>		<i>70-130%</i>	<i>"</i>								
<b>LCS Dup (6F21065-BSD1)</b>													Extracted: 06/21/06 12:09	
Benzene	EPA 8260B	0.673	---	0.0800	mg/l	1x	--	0.800	84.1%	(80-120)	4.93% (25)		06/21/06 16:48	
<i>Surrogate(s): 1,2-DCA-d4</i>		<i>Recovery:</i>	<i>100%</i>	<i>Limits:</i>	<i>67-135%</i>	<i>"</i>							06/21/06 16:48	
<i>Toluene-d8</i>			<i>98.4%</i>		<i>70-130%</i>	<i>"</i>								
<i>4-BFB</i>			<i>99.2%</i>		<i>70-130%</i>	<i>"</i>								



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

06/22/06 16:21

**Notes and Definitions**

Report Specific Notes:

- Q-01 - The matrix spike recovery, and/or RPD, for this QC sample is outside of established control limits. Failure of a matrix spike QC sample does not represent an out-of-control condition for the batch.
- Q-06 - RPD is not applicable for analyte concentrations less than 5 times the MRL.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.



# Test America

ANALYTICAL TESTING CORPORATION

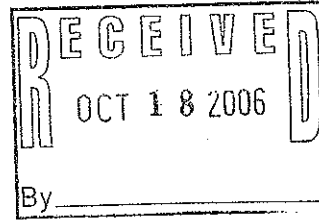
11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210  
 11922 E. First Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

## CHAIN OF CUSTODY REPORT

Work Order #: **PPF0446**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <small>STD.</small> Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 <small>STD.</small> OTHER Specify: _____ <small>* Turnaround Request less than standard may incur Rush Charges.</small>									
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:											
ADDRESS: <b>7376 SW Durham Port OR.</b>													
PHONE: <b>503 639 3400</b> FAX:													
PROJECT NAME: <b>Fred Meyer Port expansion</b>		PRESERVATIVE											
PROJECT NUMBER: <b>9411 10282-C</b>													
SAMPLED BY: <b>McFarland</b>													
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME		REQUESTED ANALYSES		MATRIX (W, S, O)		# OF CONT.		LOCATION / COMMENTS		NCA WO ID	
1 Trip Blank		6-8-06 0700		HCL		H2O		2					
2 MW105		6-8-06 1230		HCL		H2O		2					
3 MW103		6-8-06 1330		HCL		H2O		2					
4 Carbon Vessel #1		6-8-06 1400		HCL									
5 Carbon Vessel #2		6-8-06 1420		HCL									
6													
7													
8													
9													
10													
RELEASED BY: <b>W. J. McFarland</b>		FIRM: <b>AMEC</b>		DATE: <b>6-9-06</b>		TIME: <b>0800</b>		RECEIVED BY: <b>Bub</b>		FIRM: <b>TAP</b>		DATE: <b>6/9/06</b>	
RELEASED BY:		FIRM:		DATE:		TIME:		RECEIVED BY:		FIRM:		DATE:	
PRINT NAME:		FIRM:		DATE:		TIME:		PRINT NAME:		FIRM:		DATE:	
PRINT NAME:		FIRM:		DATE:		TIME:		PRINT NAME:		FIRM:		DATE:	
ADDITIONAL REMARKS												TEMP:	
* 8260 suite to include BTEX, MTBE, EDC, EOB, Naphthalene; Alkylbenzene suite												PAGE 1 of 1	

350



October 10, 2006

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 09/26/06 11:00.  
The following list is a summary of the Work Orders contained in this report, generated on 10/10/06  
18:22.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PPI1074	Fred Meyer Port Orchard	9-61M-10282-0

---



**AMEC- Portland**  
7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Report Created:  
10/10/06 18:22

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW105	PPI1074-01	Water	09/22/06 11:00	09/26/06 11:00
MW103	PPI1074-02	Water	09/22/06 12:00	09/26/06 11:00
TB	PPI1074-03	Water	09/22/06 06:00	09/26/06 11:00
EB	PPI1074-04	Water	09/22/06 11:10	09/26/06 11:00

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager





<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPI1074-01 (MW105)</b>		<b>Water</b>					<b>Sampled: 09/22/06 11:00</b>			
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>2340</b>	----	80.0	ug/l	1x	6091200	09/28/06 11:58	09/28/06 21:04	
<i>Surrogate(s): 4-BFB</i>			98.6%		50 - 150 %	"				"
<b>PPI1074-02 (MW103)</b>		<b>Water</b>					<b>Sampled: 09/22/06 12:00</b>			
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>3850</b>	----	80.0	ug/l	1x	6091200	09/28/06 11:58	09/28/06 21:31	
<i>Surrogate(s): 4-BFB</i>			185%		50 - 150 %	"				" S-09

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
<b>PPI1074-03 (TB)</b>		<b>Water</b>					<b>Sampled: 09/22/06 06:00</b>				
Acetone	EPA 8260B	ND	----	25.0	ug/l	1x	6100246	10/06/06 09:07	10/06/06 15:09		
Benzene	"	ND	----	1.00	"	"	"	"	"		
Bromobenzene	"	ND	----	1.00	"	"	"	"	"		
Bromochloromethane	"	ND	----	1.00	"	"	"	"	"		
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"		
Bromoform	"	ND	----	1.00	"	"	"	"	"		
Bromomethane	"	ND	----	5.00	"	"	"	"	"		
2-Butanone (MEK)	"	ND	----	10.0	"	"	"	"	"		
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"		
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"		
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"		
Carbon disulfide	"	ND	----	10.0	"	"	"	"	"		
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"		
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"		
Chloroethane	"	ND	----	1.00	"	"	"	"	"		
Chloroform	"	ND	----	1.00	"	"	"	"	"		
Chloromethane	"	ND	----	5.00	"	"	"	"	"		
2-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"		
4-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"		
1,2-Dibromo-3-chloropropane	"	ND	----	5.00	"	"	"	"	"		
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"		
Dibromomethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
Dichlorodifluoromethane	"	ND	----	5.00	"	"	"	"	"		
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"		
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
cis-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
1,3-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
2,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
1,1-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"		
Hexachlorobutadiene	"	ND	----	4.00	"	"	"	"	"		
2-Hexanone	"	ND	----	10.0	"	"	"	"	"		
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"		
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"		

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPI1074-03 (TB)</b>		<b>Water</b>				<b>Sampled: 09/22/06 06:00</b>				
4-Methyl-2-pentanone	EPA 8260B	ND	----	5.00	ug/l	1x	6100246	10/06/06 09:07	10/06/06 15:09	
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	1.00	"	"	"	"	"	
Styrene	"	ND	----	1.00	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	
Toluene	"	ND	----	1.00	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	1.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	
o-Xylene	"	ND	----	1.00	"	"	"	"	"	
m,p-Xylene	"	ND	----	2.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			89.0%	80 - 120 %	"	"	"	"	"	
<i>1,2-DCA-d4</i>			92.5%	80 - 120 %	"	"	"	"	"	
<i>Dibromofluoromethane</i>			91.5%	80 - 120 %	"	"	"	"	"	
<i>Toluene-d8</i>			87.5%	80 - 120 %	"	"	"	"	"	

<b>PPI1074-04 (EB)</b>		<b>Water</b>				<b>Sampled: 09/22/06 11:10</b>				
Acetone	EPA 8260B	ND	----	25.0	ug/l	1x	6100246	10/06/06 09:07	10/06/06 15:37	
Benzene	"	ND	----	1.00	"	"	"	"	"	
Bromobenzene	"	ND	----	1.00	"	"	"	"	"	
Bromochloromethane	"	ND	----	1.00	"	"	"	"	"	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	
Bromoform	"	ND	----	1.00	"	"	"	"	"	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	
2-Butanone (MEK)	"	ND	----	10.0	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Carbon disulfide	"	ND	----	10.0	"	"	"	"	"	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC - Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
---	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
<b>PPI1074-04 (EB)</b>		<b>Water</b>					<b>Sampled: 09/22/06 11:10</b>				
Chloroethane	EPA 8260B	ND	----	1.00	ug/l	1x	6100246	10/06/06 09:07	10/06/06 15:37		
Chloroform	"	ND	----	1.00	"	"	"	"	"		
Chloromethane	"	ND	----	5.00	"	"	"	"	"		
2-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"		
4-Chlorotoluene	"	ND	----	1.00	"	"	"	"	"		
1,2-Dibromo-3-chloropropane	"	ND	----	5.00	"	"	"	"	"		
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"		
Dibromomethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
Dichlorodifluoromethane	"	ND	----	5.00	"	"	"	"	"		
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"		
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
cis-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"		
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
1,3-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
2,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"		
1,1-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"		
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"		
Hexachlorobutadiene	"	ND	----	4.00	"	"	"	"	"		
2-Hexanone	"	ND	----	10.0	"	"	"	"	"		
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"		
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"		
4-Methyl-2-pentanone	"	ND	----	5.00	"	"	"	"	"		
Methyl tert-butyl ether	"	ND	----	1.00	"	"	"	"	"		
Methylene chloride	"	ND	----	5.00	"	"	"	"	"		
Naphthalene	"	ND	----	2.00	"	"	"	"	"		
n-Propylbenzene	"	ND	----	1.00	"	"	"	"	"		
Styrene	"	ND	----	1.00	"	"	"	"	"		
1,1,1,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"		
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"		
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"		
Toluene	"	ND	----	1.00	"	"	"	"	"		
1,2,3-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"		
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"		
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"		

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPI1074-04 (EB)</b>		<b>Water</b>			<b>Sampled: 09/22/06 11:10</b>					
Trichloroethene	EPA 8260B	ND	----	1.00	ug/l	1x	6100246	10/06/06 09:07	10/06/06 15:37	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	"
1,2,3-Trichloropropane	"	ND	----	1.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	"
o-Xylene	"	ND	----	1.00	"	"	"	"	"	"
m,p-Xylene	"	ND	----	2.00	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB</i>				91.0%		80 - 120 %	"			"
<i>1,2-DCA-d4</i>				95.5%		80 - 120 %	"			"
<i>Dibromofluoromethane</i>				97.5%		80 - 120 %	"			"
<i>Toluene-d8</i>				90.5%		80 - 120 %	"			"

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPI1074-01 (MW105)</b>		<b>Water</b>					<b>Sampled: 09/22/06 11:00</b>			
n-Butylbenzene	EPA 8260B	ND	----	25.0	ug/l	5x	6100246	10/06/06 09:07	10/06/06 16:36	
p-Isopropyltoluene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	2.50	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	2.50	"	"	"	"	"	
<b>Benzene</b>	"	<b>329</b>	----	1.00	"	"	"	"	"	
<b>Toluene</b>	"	<b>412</b>	----	2.50	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>6.55</b>	----	2.50	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>151</b>	----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	10.0	"	"	"	"	"	
Naphthalene	"	ND	----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	5.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>6.15</b>	----	2.50	"	"	"	"	"	
Isopropylbenzene	"	ND	----	10.0	"	"	"	"	"	
n-Propylbenzene	"	ND	----	2.50	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>				99.0%		80 - 120 %	1x			"
<i>1,2-DCA-d4</i>				98.5%		80 - 120 %	"			"
<i>Dibromofluoromethane</i>				102%		80 - 120 %	"			"
<i>Toluene-d8</i>				96.0%		80 - 120 %	"			"
<b>PPI1074-02 (MW103)</b>		<b>Water</b>					<b>Sampled: 09/22/06 12:00</b>			
n-Butylbenzene	EPA 8260B	ND	----	50.0	ug/l	10x	6100246	10/06/06 09:07	10/06/06 18:05	
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	10.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	5.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	5.00	"	"	"	"	"	
Benzene	"	ND	----	2.00	"	"	"	"	"	
Toluene	"	ND	----	5.00	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>152</b>	----	5.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>710</b>	----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	20.0	"	"	"	"	"	
Naphthalene	"	<b>75.3</b>	----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	<b>1150</b>	----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	<b>446</b>	----	5.00	"	"	"	"	"	
Isopropylbenzene	"	<b>28.3</b>	----	20.0	"	"	"	"	"	
n-Propylbenzene	"	<b>93.1</b>	----	5.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>				106%		80 - 120 %	1x			"
<i>1,2-DCA-d4</i>				98.5%		80 - 120 %	"			"
<i>Dibromofluoromethane</i>				98.5%		80 - 120 %	"			"

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPI1074-02 (MW103)		Water						Sampled: 09/22/06 12:00		
Toluene-d8			100%		80 - 120 %	1x			10/06/06 18:05	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

QC Batch: 6091200      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (6091200-BLK1)</b>													Extracted: 09/28/06 11:58			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	--	80.0	ug/l	1x	--	--	--	--	--	--	09/28/06 16:56			
Surrogate(s): 4-BFB		Recovery:	98.2%	Limits: 50-150%		"						09/28/06 16:56				
<b>LCS (6091200-BS1)</b>													Extracted: 09/28/06 11:58			
Gasoline Range Hydrocarbons	NW TPH-Gx	465	--	80.0	ug/l	1x	--	500	93.0%	(70-130)	--	--	09/28/06 16:00			
Surrogate(s): 4-BFB		Recovery:	109%	Limits: 50-150%		"						09/28/06 16:00				
<b>LCS Dup (6091200-BSD1)</b>													Extracted: 09/28/06 11:58			
Gasoline Range Hydrocarbons	NW TPH-Gx	481	--	80.0	ug/l	1x	--	500	96.2%	(70-130)	3.38%	(40)	09/28/06 16:28			
Surrogate(s): 4-BFB		Recovery:	108%	Limits: 50-150%		"						09/28/06 16:28				
<b>Duplicate (6091200-DUP1)</b>													QC Source: PPI1075-05RE1		Extracted: 09/28/06 11:58	
Gasoline Range Hydrocarbons	NW TPH-Gx	44600	--	1600	ug/l	20x	46300	--	--	--	3.74%	(40)	09/29/06 00:17			
Surrogate(s): 4-BFB		Recovery:	131%	Limits: 50-150%		1x						09/29/06 00:17				
<b>Duplicate (6091200-DUP2)</b>													QC Source: PPI1029-02RE1		Extracted: 09/28/06 11:58	
Gasoline Range Hydrocarbons	NW TPH-Gx	4270	--	400	ug/l	5x	6540	--	--	--	42.0%	(40)	09/28/06 20:36	Q-02		
Surrogate(s): 4-BFB		Recovery:	124%	Limits: 50-150%		1x						09/28/06 20:36				

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager





<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6100246      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
<b>Blank (6100246-BLK1)</b>												
Extracted: 10/06/06 09:07												
Acetone	EPA 8260B	ND	---	25.0	ug/l	1x	--	--	--	--	10/06/06 13:18	
Benzene	"	ND	---	1.00	"	"	--	--	--	--	"	
Bromobenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
Bromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	"	
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	"	
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	"	
Bromomethane	"	ND	---	5.00	"	"	--	--	--	--	"	
2-Butanone (MEK)	"	ND	---	10.0	"	"	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
Carbon disulfide	"	ND	---	10.0	"	"	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	"	
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
Chloroethane	"	ND	---	1.00	"	"	--	--	--	--	"	
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	"	
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	"	
2-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dibromo-3-chloropropane	"	ND	---	5.00	"	"	--	--	--	--	"	
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dibromoethane	"	ND	---	1.00	"	"	--	--	--	--	"	
Dibromomethane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	"	
Dichlorodifluoromethane	"	ND	---	5.00	"	"	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	"	
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	"	

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

QC Batch: 6100246      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (6100246-BLK1)</b>													Extracted: 10/06/06 09:07	
Hexachlorobutadiene	EPA 8260B	ND	--	4.00	ug/l	1x	--	--	--	--	--	--	10/06/06 13:18	
2-Hexanone	"	ND	--	10.0	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	--	2.00	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	--	2.00	"	"	--	--	--	--	--	--	"	
4-Methyl-2-pentanone	"	ND	--	5.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	--	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	--	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	--	1.00	"	"	--	--	--	--	--	--	"	
m,p-Xylene	"	ND	--	2.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB	Recovery:	97.5%	Limits:	80-120%	"								10/06/06 13:18	
1,2-DCA-d4		92.0%		80-120%	"								"	
Dibromofluoromethane		94.5%		80-120%	"								"	
Toluene-d8		92.5%		80-120%	"								"	

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6100246      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**LCS (6100246-BS1)** Extracted: 10/06/06 09:07

Benzene	EPA 8260B	21.2	---	1.00	ug/l	1x	--	20.0	106%	(80-120)	--	--	10/06/06 10:59	
Chlorobenzene	"	19.9	---	1.00	"	"	--	"	99.5%	(80-124)	--	--	"	
1,1-Dichloroethene	"	18.8	---	1.00	"	"	--	"	94.0%	(78-120)	--	--	"	
Toluene	"	20.6	---	1.00	"	"	--	"	103%	(80-124)	--	--	"	
Trichloroethene	"	20.7	---	1.00	"	"	--	"	104%	(80-132)	--	--	"	
<i>Surrogate(s): +BFB</i>		<i>Recovery:</i>	<i>109%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>10/06/06 10:59</i>	
	<i>1,2-DCA-d4</i>		<i>98.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>104%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>105%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**Matrix Spike (6100246-MS1)** QC Source: PPI1298-01      Extracted: 10/06/06 09:07

Benzene	EPA 8260B	19.8	---	1.00	ug/l	1x	ND	20.0	99.0%	(80-124)	--	--	10/06/06 11:27	
Chlorobenzene	"	18.7	---	1.00	"	"	0.510	"	91.0%	(72.9-134)	--	--	"	
1,1-Dichloroethene	"	17.2	---	1.00	"	"	ND	"	86.0%	(79.3-127)	--	--	"	
Toluene	"	19.0	---	1.00	"	"	ND	"	95.0%	(79.7-131)	--	--	"	
Trichloroethene	"	18.2	---	1.00	"	"	ND	"	91.0%	(68.4-130)	--	--	"	
<i>Surrogate(s): +BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>10/06/06 11:27</i>	
	<i>1,2-DCA-d4</i>		<i>92.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>98.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>95.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**Matrix Spike Dup (6100246-MSD1)** QC Source: PPI1298-01      Extracted: 10/06/06 09:07

Benzene	EPA 8260B	20.2	---	1.00	ug/l	1x	ND	20.0	101%	(80-124)	2.00% (25)		10/06/06 11:55	
Chlorobenzene	"	19.3	---	1.00	"	"	0.510	"	94.0%	(72.9-134)	3.16%	"	"	
1,1-Dichloroethene	"	17.9	---	1.00	"	"	ND	"	89.5%	(79.3-127)	3.99%	"	"	
Toluene	"	19.5	---	1.00	"	"	ND	"	97.5%	(79.7-131)	2.60%	"	"	
Trichloroethene	"	18.6	---	1.00	"	"	ND	"	93.0%	(68.4-130)	2.17%	"	"	
<i>Surrogate(s): +BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>10/06/06 11:55</i>	
	<i>1,2-DCA-d4</i>		<i>92.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>98.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>95.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

*Sarah Rockwell*  
 Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull
--	--

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224
--

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Q**  
TestAmerica - Portland, OR

**Volatile C**

QC Batch: 6100246 Water Preparation Method: EPA 5030B

QC Batch: 6100246

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)
<b>Blank (6100246-BLK1)</b>									
tert-Butylbenzene	EPA 8260B	ND	---	1.00	ug/l	1x	--	--	--
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--
p-Isopropyltoluene	"	ND	---	1.00	"	"	--	--	--
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--
1,2-Dibromoethane	"	ND	---	0.500	"	"	--	--	--
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--
Benzene	"	ND	---	0.200	"	"	--	--	--
Toluene	"	ND	---	0.500	"	"	--	--	--
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--
Naphthalene	"	ND	---	2.00	"	"	--	--	--
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--

Analyte
---------

Surrogate(s): 4-BFB	Recovery: 97.5%	Limits: 80-120%	"
1,2-DCA-d4	92.0%	80-120%	"
Dibromofluoromethane	94.5%	80-120%	"
Toluene-d8	92.5%	80-120%	"

<b>LCS (6100246-BS1)</b>	
Benzene	
Chlorobenzene	
1,1-Dichloroethene	
Toluene	
Trichloroethene	
Surrogate(s): 4-BFB	
1,2-DCA-d4	
Dibromofluoromethane	
Toluene-d8	

<b>LCS (6100246-BS1)</b>									
Benzene	EPA 8260B	21.2	---	0.200	ug/l	1x	--	20.0	106% (80-120)
Toluene	"	20.6	---	0.500	"	"	--	"	103% (80-124)
Ethylbenzene	"	22.6	---	0.500	"	"	--	"	113% (80-120)
Xylenes (total)	"	65.3	---	1.00	"	"	--	60.0	109% (73-124)
Methyl tert-butyl ether	"	22.3	---	2.00	"	"	--	20.0	112% (80-129)
Naphthalene	"	20.8	---	2.00	"	"	--	"	104% (72-149)

<b>Matrix Spike (6100246-MS1)</b>	
Benzene	
Chlorobenzene	
1,1-Dichloroethene	
Toluene	
Trichloroethene	
Surrogate(s): 4-BFB	
1,2-DCA-d4	
Dibromofluoromethane	
Toluene-d8	

Surrogate(s): 4-BFB	Recovery: 109%	Limits: 80-120%	"
1,2-DCA-d4	98.0%	80-120%	"
Dibromofluoromethane	104%	80-120%	"
Toluene-d8	105%	80-120%	"

<b>Matrix Spike Dup (6100246-M)</b>	
Benzene	
Chlorobenzene	
1,1-Dichloroethene	
Toluene	
Trichloroethene	
Surrogate(s): 4-BFB	
1,2-DCA-d4	
Dibromofluoromethane	
Toluene-d8	

TestAmerica - Portland, OR

The results in this report apply to the sam  
of custody document. This analytic

TestAmerica - Portland, OR

*Sarah Rockwell*  
Sarah Rockwell, Project Manager

*Sarah Rockwell*  
Sarah Rockwell, Project Manager

<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 10/10/06 18:22
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6100246      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	----------------	----------------	----------	-------

<b>Matrix Spike (6100246-MS1)</b>			QC Source: PPI1298-01				Extracted: 10/06/06 09:07					
Benzene	EPA 8260B	19.8	---	0.200	ug/l	1x	ND	20.0	99.0%	(80-124)	--	10/06/06 11:27
Toluene	"	19.0	---	0.500	"	"	ND	"	95.0%	(79.7-131)	--	"
Ethylbenzene	"	21.4	---	0.500	"	"	ND	"	107%	(80-124)	--	"
Xylenes (total)	"	60.4	---	1.00	"	"	ND	60.0	101%	(44.6-154)	--	"
Methyl tert-butyl ether	"	20.6	---	2.00	"	"	ND	20.0	103%	(80-130)	--	"
Naphthalene	"	21.0	---	2.00	"	"	ND	"	105%	(69-163)	--	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits: 80-120%</i>		<i>"</i>						<i>10/06/06 11:27</i>
<i>1,2-DCA-d4</i>			<i>92.0%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>98.5%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>95.0%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>

<b>Matrix Spike Dup (6100246-MSD1)</b>			QC Source: PPI1298-01				Extracted: 10/06/06 09:07					
Benzene	EPA 8260B	20.2	---	0.200	ug/l	1x	ND	20.0	101%	(80-124)	2.00% (25)	10/06/06 11:55
Toluene	"	19.5	---	0.500	"	"	ND	"	97.5%	(79.7-131)	2.60%	"
Ethylbenzene	"	21.5	---	0.500	"	"	ND	"	108%	(80-124)	0.466%	"
Xylenes (total)	"	61.5	---	1.00	"	"	ND	60.0	102%	(44.6-154)	1.80%	"
Methyl tert-butyl ether	"	21.7	---	2.00	"	"	ND	20.0	108%	(80-130)	5.20%	"
Naphthalene	"	20.7	---	2.00	"	"	ND	"	104%	(69-163)	1.44%	"
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits: 80-120%</i>		<i>"</i>						<i>10/06/06 11:55</i>
<i>1,2-DCA-d4</i>			<i>92.0%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>
<i>Dibromofluoromethane</i>			<i>98.0%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>
<i>Toluene-d8</i>			<i>95.5%</i>	<i>80-120%</i>		<i>"</i>						<i>"</i>



**AMEC- Portland**  
7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Report Created:  
10/10/06 18:22

**Notes and Definitions**

Report Specific Notes:

- Q-02 - The matrix spike recovery, and/or RPD, for this QC sample is outside of established control limits due to sample matrix interference.
- S-09 - Surrogate recovery is outside control limits due to matrix interference.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and Limits - percent solids, where applicable.
- Electronic - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Signature - Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.



202

# TestAmerica

ANALYTICAL TESTING CORPORATION

11720 North Creek Dr Hwy N Suite 404, Bothell, WA 98011-8214  
425-421-9200 FAX 420-9210  
11922 E. First Ave., Spokane, WA 99206-5302  
509-924-9200 FAX 924-9290  
9405 SW Nimbus Ave., Beaverton, OR 97008-7145  
503-906-9200 FAX 906-9210  
2000 W International Airport Rd Ste A106, Anchorage, AK 99503-1116  
907-563-9200 FAX 563-9210

## CHAIN OF CUSTODY REPORT

Work Order #: **PE1074**

CLIENT: <b>AMEC</b>		INVOICE TO	
REPORT TO: <b>PAUL STULL</b>		PRESERVATIVE	
ADDRESS: <b>7376 SW Putnam Rd Portland, OR</b>		REQUESTED ANALYSES	
PHONE: <b>503 634 3400</b> FAX: <b>503 620 7592</b>	PROJECT NUMBER: <b>9614-10282-0</b>	POLYMER:	
PROJECT NAME: <b>Fred Meyer Port oak</b>	SAMPLED BY: <b>JASON GARDNER</b>	OTHER: <input checked="" type="checkbox"/> <b>STR</b>	
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TURNAROUND REQUESTS In Business Days*	
1. <b>MW195</b>	<b>9/22/06 1100</b>	1. <input type="checkbox"/>	Organic & Inorganic Analyses
2. <b>MW104</b>	<b>1200</b>	2. <input type="checkbox"/>	Petroleum Hydrocarbon Analyses
3. <b>TS</b>	<b>0600</b>	3. <input type="checkbox"/>	Other (Specify):
4. <b>EB</b>	<b>1110</b>	4. <input type="checkbox"/>	* Turnaround Requests less than standard may incur Rush Charge.
5.		5. <input type="checkbox"/>	
6.		6. <input type="checkbox"/>	
7.		7. <input type="checkbox"/>	
8.		8. <input type="checkbox"/>	
9.		9. <input type="checkbox"/>	
10.		10. <input type="checkbox"/>	
RELEASED BY: <b>[Signature]</b>	DATE: <b>9/29/06</b>	FIRM: <b>AMEC</b>	RECEIVED BY: <b>[Signature]</b>
PRINT NAME: <b>JASON GARDNER</b>	TIME: <b>1000</b>	FIRM: <b>AMEC</b>	PRINT NAME: <b>Bob F...</b>
RELEASED BY:	DATE:	FIRM:	RECEIVED BY:
PRINT NAME:	TIME:	FIRM:	PRINT NAME:
ADDITIONAL REMARKS			
DATE: <b>9/26/06</b>		DATE: <b>10/6</b>	
TIME: <b>9:55</b>		TIME: <b>11:00</b>	
FIRM: <b>TAP</b>		FIRM: <b>AMEC</b>	
DATE: <b>9/29/06</b>		DATE: <b>10/6</b>	
TIME: <b>1000</b>		TIME: <b>11:00</b>	
FIRM: <b>AMEC</b>		FIRM: <b>AMEC</b>	
DATE: <b>9/29/06</b>		DATE: <b>10/6</b>	
TIME: <b>1000</b>		TIME: <b>11:00</b>	
FIRM: <b>AMEC</b>		FIRM: <b>AMEC</b>	
DATE: <b>9/29/06</b>		DATE: <b>10/6</b>	
TIME: <b>1000</b>		TIME: <b>11:00</b>	
FIRM: <b>AMEC</b>		FIRM: <b>AMEC</b>	

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.

\* BTEX, MTBE, EDC, EDB, NAPM, ALKYLBN, SUITE.

December 21, 2006

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 12/13/06 11:30.  
The following list is a summary of the Work Orders contained in this report, generated on 12/21/06  
16:34.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PPL0455	Fred Meyer Port Orchard	9-61M-10282-0

---

---

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain  
of custody document. This analytical report shall not be reproduced except in full,  
without the written approval of the laboratory.*

  
Crystal Jones For Sarah Rockwell, Project Manager



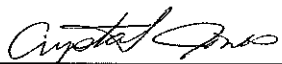


<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/21/06 16:34

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	PPL0455-01	Water	12/12/06 10:00	12/13/06 11:30
MW103-121206	PPL0455-02	Water	12/12/06 12:00	12/13/06 11:30
MW105-121206	PPL0455-03	Water	12/12/06 11:45	12/13/06 11:30

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

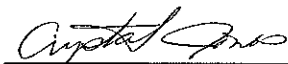


<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPL0455-01 (Trip Blank)</b>		<b>Water</b>			<b>Sampled: 12/12/06 10:00</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	6120541	12/14/06 10:10	12/14/06 19:30	
Surrogate(s): 4-BFB			88.8%		50 - 150 %	"				"
<b>PPL0455-02 (MW103-121206)</b>		<b>Water</b>			<b>Sampled: 12/12/06 12:00</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	1750	---	80.0	ug/l	1x	6120541	12/14/06 10:10	12/14/06 19:58	
Surrogate(s): 4-BFB			112%		50 - 150 %	"				"
<b>PPL0455-03RE1 (MW105-121206)</b>		<b>Water</b>			<b>Sampled: 12/12/06 11:45</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	6140	---	400	ug/l	5x	6120609	12/14/06 10:10	12/15/06 18:07	
Surrogate(s): 4-BFB			92.6%		50 - 150 %	1x				"

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	<b>Project Name: Fred Meyer Port Orchard</b>	
7376 SW Durham Road	<b>Project Number: 9-61M-10282-0</b>	<b>Report Created:</b>
Portland, OR 97224	<b>Project Manager: Paul Stull</b>	12/21/06 16:34


**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PPL0455-02RE1 (MW103-121206)</b>		<b>Water</b>			<b>Sampled: 12/12/06 12:00</b>					
n-Butylbenzene	EPA 8260B	ND	---	11.0	ug/l	1x	6120658	12/18/06 09:02	12/18/06 16:15	RL1
p-Isopropyltoluene	"	2.15	---	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	---	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	---	0.500	"	"	"	"	"	
Benzene	"	ND	---	0.200	"	"	"	"	"	
Toluene	"	ND	---	0.500	"	"	"	"	"	
Ethylbenzene	"	23.2	---	0.500	"	"	"	"	"	
Xylenes (total)	"	84.7	---	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	"	"	"	
Naphthalene	"	18.5	---	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	176	---	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	59.8	---	0.500	"	"	"	"	"	
Isopropylbenzene	"	5.83	---	2.00	"	"	"	"	"	
n-Propylbenzene	"	20.6	---	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			93.5%		80 - 120 %	"				"
<i>1,2-DCA-d4</i>			88.5%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>			88.0%		80 - 120 %	"				"
<i>Toluene-d8</i>			109%		80 - 120 %	"				"

<b>PPL0455-03 (MW105-121206)</b>		<b>Water</b>			<b>Sampled: 12/12/06 11:45</b>					
n-Butylbenzene	EPA 8260B	ND	---	100	ug/l	20x	6120646	12/17/06 09:48	12/17/06 21:07	
p-Isopropyltoluene	"	ND	---	40.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	---	20.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	---	20.0	"	"	"	"	"	
1,2-Dibromoethane	"	ND	---	10.0	"	"	"	"	"	
1,2-Dichloroethane	"	ND	---	10.0	"	"	"	"	"	
Benzene	"	1690	---	4.00	"	"	"	"	"	
Toluene	"	1870	---	10.0	"	"	"	"	"	
Ethylbenzene	"	105	---	10.0	"	"	"	"	"	
Xylenes (total)	"	549	---	20.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	---	40.0	"	"	"	"	"	
Naphthalene	"	ND	---	40.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	57.6	---	20.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	24.6	---	10.0	"	"	"	"	"	
Isopropylbenzene	"	ND	---	40.0	"	"	"	"	"	
n-Propylbenzene	"	ND	---	10.0	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			98.5%		80 - 120 %	1x				"
<i>1,2-DCA-d4</i>			95.5%		80 - 120 %	"				"

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
--	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PPL0455-03	(MW105-121206)	<b>Water</b>			<b>Sampled: 12/12/06 11:45</b>					
	<i>Dibromofluoromethane</i>	90.5%		80 - 120 %		1x			12/17/06 21:07	
	<i>Toluene-d8</i>	112%		80 - 120 %		"			"	

TestAmerica - Portland, OR

*Crystal Jones*

Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



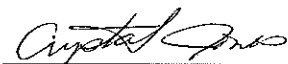
<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

QC Batch: 6120541      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (6120541-BLK1)</b>													Extracted: 12/14/06 10:10			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/14/06 11:27			
Surrogate(s): 4-BFB		Recovery: 86.8%		Limits: 50-150%		"								12/14/06 11:27		
<b>LCS (6120541-BS2)</b>													Extracted: 12/14/06 10:10			
Gasoline Range Hydrocarbons	NW TPH-Gx	421	---	80.0	ug/l	1x	--	500	84.2%	(70-130)	--	--	12/14/06 10:32			
Surrogate(s): 4-BFB		Recovery: 98.4%		Limits: 50-150%		"								12/14/06 10:32		
<b>Duplicate (6120541-DUPI)</b>													QC Source: PPL0471-01		Extracted: 12/14/06 10:10	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	34.3%	(40)	12/14/06 16:44			
Surrogate(s): 4-BFB		Recovery: 87.4%		Limits: 50-150%		"								12/14/06 16:44		
<b>Duplicate (6120541-DUP2)</b>													QC Source: PPL0473-09		Extracted: 12/14/06 10:10	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	400	ug/l	5x	ND	--	--	--	2.76%	(40)	12/14/06 22:43			
Surrogate(s): 4-BFB		Recovery: 90.0%		Limits: 50-150%		1x								12/14/06 22:43		
<b>Matrix Spike (6120541-MS2)</b>													QC Source: PPL0473-14		Extracted: 12/14/06 10:10	
Gasoline Range Hydrocarbons	NW TPH-Gx	444	---	80.0	ug/l	1x	47.8	500	79.2%	(70-130)	--	--	12/14/06 14:26			
Surrogate(s): 4-BFB		Recovery: 98.8%		Limits: 50-150%		"								12/14/06 14:26		
<b>Matrix Spike Dup (6120541-MSD2)</b>													QC Source: PPL0473-14		Extracted: 12/14/06 10:10	
Gasoline Range Hydrocarbons	NW TPH-Gx	470	---	80.0	ug/l	1x	47.8	500	84.4%	(70-130)	5.69%	(30)	12/14/06 14:54			
Surrogate(s): 4-BFB		Recovery: 99.2%		Limits: 50-150%		"								12/14/06 14:54		

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

QC Batch: 6120609      Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (6120609-BLK1)</b>													Extracted: 12/15/06 11:13			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/15/06 13:23			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.2%</i>		<i>Limits: 50-150%</i>		"								12/15/06 13:23		
<b>LCS (6120609-BS2)</b>													Extracted: 12/15/06 11:13			
Gasoline Range Hydrocarbons	NW TPH-Gx	448	---	80.0	ug/l	1x	--	500	89.6%	(70-130)	--	--	12/15/06 11:48			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 98.0%</i>		<i>Limits: 50-150%</i>		"								12/15/06 11:48		
<b>LCS Dup (6120609-BSD2)</b>													Extracted: 12/15/06 11:13			
Gasoline Range Hydrocarbons	NW TPH-Gx	460	---	80.0	ug/l	1x	--	500	92.0%	(70-130)	2.64%	(40)	12/15/06 12:19			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 98.8%</i>		<i>Limits: 50-150%</i>		"								12/15/06 12:19		
<b>Duplicate (6120609-DUP1)</b>													QC Source: PPL0455-03RE1		Extracted: 12/15/06 11:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	5970	---	400	ug/l	5x	6140	--	--	--	2.81%	(40)	12/15/06 18:39			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.2%</i>		<i>Limits: 50-150%</i>		1x								12/15/06 18:39		
<b>Duplicate (6120609-DUP2)</b>													QC Source: PPL0485-04RE1		Extracted: 12/15/06 11:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	10000	---	800	ug/l	10x	9560	--	--	--	4.50%	(40)	12/15/06 19:42			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 97.4%</i>		<i>Limits: 50-150%</i>		1x								12/15/06 19:42		

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/21/06 16:34
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6120646 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (6120646-BLK1)** Extracted: 12/17/06 09:48

1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	12/17/06 12:46	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB Recovery: 98.0% Limits: 80-120% " 12/17/06 12:46</i>														
<i>1,2-DCA-d4 94.5% 80-120% " "</i>														
<i>Dibromofluoromethane 92.0% 80-120% " "</i>														
<i>Toluene-d8 114% 80-120% " "</i>														

**LCS (6120646-BS1)** Extracted: 12/17/06 09:48

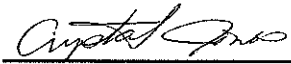
Benzene	EPA 8260B	23.6	---	0.200	ug/l	1x	--	20.0	118%	(80-120)	--	--	12/17/06 10:54	
Toluene	"	24.3	---	0.500	"	"	--	"	122%	(80-124)	--	--	"	
Ethylbenzene	"	21.1	---	0.500	"	"	--	"	106%	(80-120)	--	--	"	
Xylenes (total)	"	63.7	---	1.00	"	"	--	60.0	106%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	24.7	---	2.00	"	"	--	20.0	124%	(80-129)	--	--	"	
Naphthalene	"	24.6	---	2.00	"	"	--	"	123%	(72-149)	--	--	"	
<i>Surrogate(s): 4-BFB Recovery: 97.0% Limits: 80-120% " 12/17/06 10:54</i>														
<i>1,2-DCA-d4 92.5% 80-120% " "</i>														
<i>Dibromofluoromethane 86.0% 80-120% " "</i>														
<i>Toluene-d8 109% 80-120% " "</i>														

**Matrix Spike (6120646-MS1)** QC Source: PPL0487-01 Extracted: 12/17/06 09:48

Benzene	EPA 8260B	23.2	---	0.200	ug/l	1x	ND	20.0	116%	(80-124)	--	--	12/17/06 11:22	
Toluene	"	23.9	---	0.500	"	"	ND	"	120%	(79.7-131)	--	--	"	
Ethylbenzene	"	20.7	---	0.500	"	"	ND	"	104%	(80-124)	--	--	"	
Xylenes (total)	"	62.6	---	1.00	"	"	ND	60.0	104%	(44.6-154)	--	--	"	
Methyl tert-butyl ether	"	24.4	---	2.00	"	"	ND	20.0	122%	(80-130)	--	--	"	
Naphthalene	"	24.2	---	2.00	"	"	ND	"	121%	(69-163)	--	--	"	
<i>Surrogate(s): 4-BFB Recovery: 97.0% Limits: 80-120% " 12/17/06 11:22</i>														
<i>1,2-DCA-d4 93.0% 80-120% " "</i>														
<i>Dibromofluoromethane 91.5% 80-120% " "</i>														
<i>Toluene-d8 111% 80-120% " "</i>														

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager



<b>AMEC - Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
---	--	-----------------------------------

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6120646 Water Preparation Method: EPA 5030B**

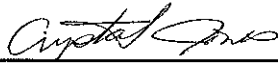
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike Dup (6120646-MSD1)</b>			QC Source: PPL0487-01					Extracted: 12/17/06 09:48							
Benzene	EPA 8260B	22.6	---	0.200	ug/l	1x	ND	20.0	113%	(80-124)	2.62%	(25)	12/17/06 11:50		
Toluene	"	23.2	---	0.500	"	"	ND	"	116%	(79.7-131)	2.97%	"	"		
Ethylbenzene	"	20.0	---	0.500	"	"	ND	"	100%	(80-124)	3.44%	"	"		
Xylenes (total)	"	60.4	---	1.00	"	"	ND	60.0	101%	(44.6-154)	3.58%	"	"		
Methyl tert-butyl ether	"	23.5	---	2.00	"	"	ND	20.0	118%	(80-130)	3.76%	"	"		
Naphthalene	"	22.7	---	2.00	"	"	ND	"	114%	(69-163)	6.40%	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.0%</i>		<i>Limits: 80-120%</i>		"								12/17/06 11:50	
<i>1,2-DCA-d4</i>		<i>92.0%</i>		<i>80-120%</i>		"								"	
<i>Dibromofluoromethane</i>		<i>92.5%</i>		<i>80-120%</i>		"								"	
<i>Toluene-d8</i>		<i>114%</i>		<i>80-120%</i>		"								"	

**QC Batch: 6120658 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Blank (6120658-BLK1)</b>								Extracted: 12/18/06 09:02							
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	12/18/06 13:29		
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"		
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"		
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"		
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"		
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"		
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"		
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.5%</i>		<i>Limits: 80-120%</i>		"								12/18/06 13:29	
<i>1,2-DCA-d4</i>		<i>93.0%</i>		<i>80-120%</i>		"								"	
<i>Dibromofluoromethane</i>		<i>88.5%</i>		<i>80-120%</i>		"								"	
<i>Toluene-d8</i>		<i>110%</i>		<i>80-120%</i>		"								"	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rookwell, Project Manager





<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	<b>Project Name:</b> Fred Meyer Port Orchard <b>Project Number:</b> 9-61M-10282-0 <b>Project Manager:</b> Paul Stull	<b>Report Created:</b> 12/21/06 16:34
--	--	--

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 6120658      Water Preparation Method: EPA 5030B**


Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS (6120658-BS1)</b>													<b>Extracted: 12/18/06 09:02</b>	
Benzene	EPA 8260B	22.2	---	0.200	ug/l	1x	--	20.0	111%	(80-120)	--	--	12/18/06 12:33	
Toluene	"	22.4	---	0.500	"	"	--	"	112%	(80-124)	--	--	"	
Ethylbenzene	"	19.7	---	0.500	"	"	--	"	98.5%	(80-120)	--	--	"	
Xylenes (total)	"	61.0	---	1.00	"	"	--	60.0	102%	(73-124)	--	--	"	
Methyl tert-butyl ether	"	23.1	---	2.00	"	"	--	20.0	116%	(80-129)	--	--	"	
Naphthalene	"	22.7	---	2.00	"	"	--	"	114%	(72-149)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 80-120%</i>								<i>12/18/06 12:33</i>		
<i>1,2-DCA-d4</i>		<i>92.0%</i>		<i>80-120%</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>93.5%</i>		<i>80-120%</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>114%</i>		<i>80-120%</i>								<i>"</i>		

<b>Matrix Spike (6120658-MS1)</b>													<b>QC Source: PPL0471-01</b>		<b>Extracted: 12/18/06 09:02</b>	
Benzene	EPA 8260B	23.0	---	0.200	ug/l	1x	ND	20.0	115%	(80-124)	--	--	12/18/06 11:37			
Toluene	"	23.4	---	0.500	"	"	ND	"	117%	(79.7-131)	--	--	"			
Ethylbenzene	"	20.2	---	0.500	"	"	ND	"	101%	(80-124)	--	--	"			
Xylenes (total)	"	61.4	---	1.00	"	"	ND	60.0	102%	(44.6-154)	--	--	"			
Methyl tert-butyl ether	"	23.8	---	2.00	"	"	ND	20.0	119%	(80-130)	--	--	"			
Naphthalene	"	22.8	---	2.00	"	"	ND	"	114%	(69-163)	--	--	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 98.0%</i>		<i>Limits: 80-120%</i>								<i>12/18/06 11:37</i>				
<i>1,2-DCA-d4</i>		<i>91.0%</i>		<i>80-120%</i>								<i>"</i>				
<i>Dibromofluoromethane</i>		<i>92.0%</i>		<i>80-120%</i>								<i>"</i>				
<i>Toluene-d8</i>		<i>112%</i>		<i>80-120%</i>								<i>"</i>				

<b>Matrix Spike Dup (6120658-MSD1)</b>													<b>QC Source: PPL0471-01</b>		<b>Extracted: 12/18/06 09:02</b>	
Benzene	EPA 8260B	22.2	---	0.200	ug/l	1x	ND	20.0	111%	(80-124)	3.54%	(25)	12/18/06 12:05			
Toluene	"	22.7	---	0.500	"	"	ND	"	114%	(79.7-131)	3.04%	"	"			
Ethylbenzene	"	19.1	---	0.500	"	"	ND	"	95.5%	(80-124)	5.60%	"	"			
Xylenes (total)	"	60.1	---	1.00	"	"	ND	60.0	100%	(44.6-154)	2.14%	"	"			
Methyl tert-butyl ether	"	23.5	---	2.00	"	"	ND	20.0	118%	(80-130)	1.27%	"	"			
Naphthalene	"	22.4	---	2.00	"	"	ND	"	112%	(69-163)	1.77%	"	"			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.0%</i>		<i>Limits: 80-120%</i>								<i>12/18/06 12:05</i>				
<i>1,2-DCA-d4</i>		<i>92.5%</i>		<i>80-120%</i>								<i>"</i>				
<i>Dibromofluoromethane</i>		<i>95.0%</i>		<i>80-120%</i>								<i>"</i>				
<i>Toluene-d8</i>		<i>112%</i>		<i>80-120%</i>								<i>"</i>				

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 12/21/06 16:34
--	--	-----------------------------------

**Notes and Definitions**

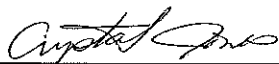
Report Specific Notes:

RL1 - Reporting limit raised due to sample matrix effects.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*





TAT: \_\_\_\_\_

Non-Conformances?  
Circle Y or N  
(If Y, see other side)

### TEST AMERICA SAMPLE RECEIPT CHECKLIST

**Received By:**

(applies to temp at receipt)

**Logged-in By:**

**Unpacked/Labeled By:**

**Cooler ID:** \_\_\_\_\_ ( \_\_\_ of \_\_\_ )

Date: 12/13/09

Date: 12/13

Date: 12/13

Work Order No. PPL0455

Time: 11:15

Initials: SM

Initials: LS

Client: Amag  
Project: Fred Meyer Port Orchard

Initials: BS

**Container Type:**

**COC Seals:**

**Packing Material**

Cooler \_\_\_\_\_  
 Box \_\_\_\_\_  
 None/Other \_\_\_\_\_  
 Ship. Container \_\_\_\_\_ Sign By \_\_\_\_\_  
 On Bottles \_\_\_\_\_ Date \_\_\_\_\_  
 None

Bubble Bags \_\_\_\_\_ Styrofoam \_\_\_\_\_  
 Foam Packs \_\_\_\_\_  
 None/Other Other bagged

**Refrigerant:**

Gel Ice Pack \_\_\_\_\_  
 Loose Ice \_\_\_\_\_  
 None/Other \_\_\_\_\_  
 None

**Received Via: Bill#**

Fed Ex \_\_\_\_\_ Client \_\_\_\_\_  
 UPS \_\_\_\_\_  
 NCA Courier  
 DHL \_\_\_\_\_ Mid Valley \_\_\_\_\_  
 Servoy \_\_\_\_\_ TDP \_\_\_\_\_  
 GS \_\_\_\_\_ Other \_\_\_\_\_

Cooler Temperature (IR): 3.8 °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt)  
(circle one)

Temperature Blank? \_\_\_\_\_ °C or NA

Trip Blank? Y or N or NA

**Sample Containers:**

Intact? Y or N \_\_\_\_\_ ID \_\_\_\_\_  
Provided by NCA? Y or N \_\_\_\_\_ Metals Preserved? Y or N or NA  
Correct Type? Y or N \_\_\_\_\_ Client QAPP Preserved? Y or N or NA  
#Containers match COC? Y or N \_\_\_\_\_ Adequate Volume? Y or N \_\_\_\_\_  
(for tests requested)  
IDs/time/date match COC? Y or N \_\_\_\_\_ Water VOAs: Headspace? Y or N or NA \_\_\_\_\_  
Hold Times in hold? Y or N \_\_\_\_\_ Comments: \_\_\_\_\_

#### PROJECT MANAGEMENT

Is the Chain of Custody complete? \_\_\_\_\_ Y or N If N, circle the items that were incomplete

Comments, Problems \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total access set up? \_\_\_\_\_

Has client been contacted regarding non-conformances? \_\_\_\_\_

Y or N  
Y or N If Y, \_\_\_\_\_ / \_\_\_\_\_  
Date Time

PM Initials: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

April 13, 2007

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 03/30/07 15:50.  
The following list is a summary of the Work Orders contained in this report, generated on 04/13/07  
08:57.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PQC1185	Fred Meyer Port Orchard	9-61M-10282-0

---



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103	PQC1185-01	Water	03/28/07 15:05	03/30/07 15:50
MW105	PQC1185-02	Water	03/28/07 15:15	03/30/07 15:50
Trip Blank	PQC1185-03	Water	03/28/07 00:00	03/30/07 15:50

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQC1185-01 (MW103)</b>		<b>Water</b>			<b>Sampled: 03/28/07 15:05</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	7040108	04/03/07 12:41	04/03/07 16:58	
<i>Surrogate(s): 4-BFB</i>			93.0%		50 - 150 %	"				"
<b>PQC1185-02RE1 (MW105)</b>		<b>Water</b>			<b>Sampled: 03/28/07 15:15</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	<b>702</b>	----	80.0	ug/l	1x	7040164	04/04/07 10:13	04/04/07 15:41	
<i>Surrogate(s): 4-BFB</i>			95.2%		50 - 150 %	"				"
<b>PQC1185-03 (Trip Blank)</b>		<b>Water</b>			<b>Sampled: 03/28/07 00:00</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	7040108	04/03/07 12:41	04/03/07 16:31	
<i>Surrogate(s): 4-BFB</i>			95.4%		50 - 150 %	"				"

TestAmerica - Portland, OR

  
Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQC1185-01 (MW103)</b>		<b>Water</b>			<b>Sampled: 03/28/07 15:05</b>					
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	7040194	04/04/07 15:23	04/05/07 00:17	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>104%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>92.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>95.5%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>106%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

<b>PQC1185-02 (MW105)</b>		<b>Water</b>			<b>Sampled: 03/28/07 15:15</b>					
n-Butylbenzene	EPA 8260B	ND	----	10.0	ug/l	2x	7040194	04/04/07 15:23	04/05/07 00:44	
p-Isopropyltoluene	"	ND	----	4.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
<b>Benzene</b>	"	<b>161</b>	----	0.400	"	"	"	"	"	
<b>Toluene</b>	"	<b>20.4</b>	----	1.00	"	"	"	"	"	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>34.5</b>	----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	4.00	"	"	"	"	"	
Naphthalene	"	ND	----	4.00	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>2.48</b>	----	2.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>2.48</b>	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	1.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>99.5%</i>		<i>80 - 120 %</i>	<i>1x</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>87.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>90.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager





<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQC1185-02 (MW105)</b>		<b>Water</b>			<b>Sampled: 03/28/07 15:15</b>					
<i>Toluene-d8</i>			<i>102%</i>		<i>80 - 120 %</i>	<i>1x</i>			<i>04/05/07 00:44</i>	
<b>PQC1185-03 (Trip Blank)</b>		<b>Water</b>			<b>Sampled: 03/28/07 00:00</b>					
n-Butylbenzene	EPA 8260B	ND	----	5.00	ug/l	1x	7040194	04/04/07 15:23	04/04/07 23:50	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	"
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,2-Dibromoethane	"	ND	----	0.500	"	"	"	"	"	"
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	"
Benzene	"	ND	----	0.200	"	"	"	"	"	"
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	"
Naphthalene	"	ND	----	2.00	"	"	"	"	"	"
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	"
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	"
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	"
<i>Surrogate(s): 4-BFB</i>			<i>98.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>87.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>90.0%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>101%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica - Portland, OR

  
Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 04/13/07 08:57
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7040108      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (7040108-BLK1)</b>													<b>Extracted: 04/03/07 12:41</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	04/03/07 16:04			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 92.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/03/07 16:04</i>				
<b>LCS (7040108-BS1)</b>													<b>Extracted: 04/03/07 12:41</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	373	---	80.0	ug/l	1x	--	500	74.6%	(70-130)	--	--	04/03/07 15:08			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/03/07 15:08</i>				
<b>LCS Dup (7040108-BSD1)</b>													<b>Extracted: 04/03/07 12:41</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	427	---	80.0	ug/l	1x	--	500	85.4%	(70-130)	13.5%	(35)	04/03/07 15:36			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/03/07 15:36</i>				
<b>Duplicate (7040108-DUP1)</b>													<b>QC Source: PQC1197-25</b>		<b>Extracted: 04/03/07 12:41</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	32700	---	8000	ug/l	100x	31600	--	--	--	3.42%	(35)	04/03/07 22:02			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 94.8%</i>		<i>Limits: 50-150%</i>		<i>1x</i>						<i>04/03/07 22:02</i>				
<b>Duplicate (7040108-DUP2)</b>													<b>QC Source: PQD0022-02</b>		<b>Extracted: 04/03/07 12:41</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	12200	---	800	ug/l	10x	11500	--	--	--	5.91%	(35)	04/03/07 23:51			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>		<i>1x</i>						<i>04/03/07 23:51</i>				

**QC Batch: 7040164      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (7040164-BLK1)</b>													<b>Extracted: 04/04/07 10:13</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	04/04/07 10:39			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.2%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/04/07 10:39</i>				
<b>LCS (7040164-BS2)</b>													<b>Extracted: 04/04/07 10:13</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	380	---	80.0	ug/l	1x	--	500	76.0%	(70-130)	--	--	04/04/07 11:33			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 98.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/04/07 11:33</i>				
<b>LCS Dup (7040164-BSD2)</b>													<b>Extracted: 04/04/07 10:13</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	413	---	80.0	ug/l	1x	--	500	82.6%	(70-130)	8.32%	(35)	04/04/07 12:01			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>04/04/07 12:01</i>				
<b>Duplicate (7040164-DUP1)</b>													<b>QC Source: PQD0022-04RE1</b>		<b>Extracted: 04/04/07 10:13</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	13000	---	800	ug/l	10x	12700	--	--	--	2.33%	(35)	04/04/07 16:36			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>		<i>1x</i>						<i>04/04/07 16:36</i>				

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

04/13/07 08:57

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**

TestAmerica - Portland, OR

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7040194**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (7040194-BLK1)**

Extracted: 04/04/07 15:23

1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	04/04/07 20:15	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>Recovery:</i>	<i>97.0%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>04/04/07 20:15</i>	
	<i>1,2-DCA-d4</i>		<i>85.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>89.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>100%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**LCS (7040194-BS1)**


Extracted: 04/04/07 15:23

1,2-Dibromoethane	EPA 8260B	21.4	---	0.500	ug/l	1x	--	20.0	107%	(80-140)	--	--	04/04/07 18:27	
1,2-Dichloroethane	"	18.5	---	0.500	"	"	--	"	92.5%	(75-135)	--	--	"	
Benzene	"	21.2	---	0.200	"	"	--	"	106%	(80-120)	--	--	"	
Toluene	"	22.4	---	0.500	"	"	--	"	112%	(80-125)	--	--	"	
Ethylbenzene	"	22.0	---	0.500	"	"	--	"	110%	(80-130)	--	--	"	
Xylenes (total)	"	66.7	---	1.00	"	"	--	60.0	111%	"	--	--	"	
Methyl tert-butyl ether	"	20.1	---	2.00	"	"	--	20.0	100%	(80-135)	--	--	"	
Naphthalene	"	19.2	---	2.00	"	"	--	"	96.0%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	23.9	---	1.00	"	"	--	"	120%	(75-125)	--	--	"	
1,3,5-Trimethylbenzene	"	23.9	---	0.500	"	"	--	"	120%	(75-135)	--	--	"	
Isopropylbenzene	"	21.9	---	2.00	"	"	--	"	110%	(80-140)	--	--	"	
n-Propylbenzene	"	22.3	---	0.500	"	"	--	"	112%	(80-130)	--	--	"	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>Recovery:</i>	<i>105%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>04/04/07 18:27</i>	
	<i>1,2-DCA-d4</i>		<i>89.5%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>97.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>107%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
 Crystal Jones For Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	04/13/07 08:57
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7040194      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike (7040194-MS1)</b>														
				QC Source: PQD0019-01				Extracted: 04/04/07 15:23						
1,2-Dibromoethane	EPA 8260B	17.7	---	0.500	ug/l	1x	ND	20.0	88.5%	(75-140)	--	--	04/04/07 18:54	
1,2-Dichloroethane	"	16.6	---	0.500	"	"	1.11	"	77.4%	(79-130)	--	--	"	M8
Benzene	"	17.7	---	0.200	"	"	ND	"	88.5%	(80-125)	--	--	"	
Toluene	"	18.9	---	0.500	"	"	0.190	"	93.6%	(65-135)	--	--	"	
Ethylbenzene	"	18.7	---	0.500	"	"	ND	"	93.5%	(80-125)	--	--	"	
Xylenes (total)	"	56.9	---	1.00	"	"	ND	60.0	94.8%	(70-130)	--	--	"	
Methyl tert-butyl ether	"	16.6	---	2.00	"	"	ND	20.0	83.0%	(70-150)	--	--	"	
Naphthalene	"	18.7	---	2.00	"	"	ND	"	93.5%	(55-145)	--	--	"	
1,2,4-Trimethylbenzene	"	21.1	---	1.00	"	"	ND	"	106%	(80-136)	--	--	"	
1,3,5-Trimethylbenzene	"	20.6	---	0.500	"	"	ND	"	103%	(70-140)	--	--	"	
Isopropylbenzene	"	18.4	---	2.00	"	"	ND	"	92.0%	(60-135)	--	--	"	
n-Propylbenzene	"	19.3	---	0.500	"	"	ND	"	96.5%	(70-135)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 80-120%</i>									<i>04/04/07 18:54</i>	
<i>1,2-DCA-d4</i>		<i>85.5%</i>		<i>80-120%</i>									<i>"</i>	
<i>Dibromofluoromethane</i>		<i>92.5%</i>		<i>80-120%</i>									<i>"</i>	
<i>Toluene-d8</i>		<i>103%</i>		<i>80-120%</i>									<i>"</i>	

<b>Matrix Spike Dup (7040194-MSD1)</b>														
				QC Source: PQD0019-01				Extracted: 04/04/07 15:23						
1,2-Dibromoethane	EPA 8260B	18.6	---	0.500	ug/l	1x	ND	20.0	93.0%	(75-140)	4.96% (25)		04/04/07 19:21	
1,2-Dichloroethane	"	17.4	---	0.500	"	"	1.11	"	81.4%	(79-130)	4.71%	"	"	
Benzene	"	18.7	---	0.200	"	"	ND	"	93.5%	(80-125)	5.49%	"	"	
Toluene	"	20.0	---	0.500	"	"	0.190	"	99.0%	(65-135)	5.66%	"	"	
Ethylbenzene	"	19.5	---	0.500	"	"	ND	"	97.5%	(80-125)	4.19%	"	"	
Xylenes (total)	"	59.5	---	1.00	"	"	ND	60.0	99.2%	(70-130)	4.47%	"	"	
Methyl tert-butyl ether	"	17.7	---	2.00	"	"	ND	20.0	88.5%	(70-150)	6.41%	"	"	
Naphthalene	"	19.9	---	2.00	"	"	ND	"	99.5%	(55-145)	6.22%	"	"	
1,2,4-Trimethylbenzene	"	22.1	---	1.00	"	"	ND	"	110%	(80-136)	4.63%	"	"	
1,3,5-Trimethylbenzene	"	21.6	---	0.500	"	"	ND	"	108%	(70-140)	4.74%	"	"	
Isopropylbenzene	"	19.2	---	2.00	"	"	ND	"	96.0%	(60-135)	4.26%	"	"	
n-Propylbenzene	"	20.2	---	0.500	"	"	ND	"	101%	(70-135)	4.56%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 80-120%</i>									<i>04/04/07 19:21</i>	
<i>1,2-DCA-d4</i>		<i>84.5%</i>		<i>80-120%</i>									<i>"</i>	
<i>Dibromofluoromethane</i>		<i>91.5%</i>		<i>80-120%</i>									<i>"</i>	
<i>Toluene-d8</i>		<i>102%</i>		<i>80-120%</i>									<i>"</i>	

TestAmerica - Portland, OR

  
 Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Report Created:  
04/13/07 08:57

**Notes and Definitions**

Report Specific Notes:

M8 - The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Portland, OR



Crystal Jones For Sarah Rockwell, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



## CHAIN OF CUSTODY REPORT

Work Order #: **PQC 1185**

CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD</small> Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD</small> OTHER Specify: * Turnaround Requests less than standard may incur Rush Charges.									
REPORT TO: <b>PANISTON</b>		P.O. NUMBER:											
ADDRESS: <b>7370 SW DURHAM RD PORTLAND OR 97223</b>		PRESERVATIVE:											
PHONE: <b>503 625 3400</b> FAX: <b>503 620 7812</b>		REQUESTED ANALYSES:											
PROJECT NAME: <b>fred Meyer Port Canal</b>		SAMPLING DATE/TIME											
PROJECT NUMBER: <b>94M10282-0</b>		SAMPLING DATE/TIME											
SAMPLER BY: <b>JASON GARDNER</b>		SAMPLING DATE/TIME											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NUM TRYS	EPH BUBB	7/28/07						MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1 MW103	3/28/07 1505	+	+							W	5		
2 MW105	}	+	+								5		
3 TRP BANK		+	+								2		
4													
5													
6													
7													
8													
9													
10													
RELEASED BY: <b>JASON GARDNER</b>		FIRM: <b>AMEC</b>		DATE: <b>3/28/07</b>		TIME: <b>2000</b>		RECEIVED BY: <b>PAUL SUMMERS</b>		FIRM: <b>SENUJEM</b>		DATE: <b>3/29</b>	
RELEASED BY: <b>PAUL SUMMERS</b>		FIRM: <b>SENUJEM</b>		DATE: <b>3/29/07</b>		TIME: <b>1550</b>		RECEIVED BY: <b>STEVE WATKINS</b>		FIRM: <b>TAP</b>		DATE: <b>3/29/07</b>	
PRINT NAME: <b>PAUL SUMMERS</b>		FIRM: <b>SENUJEM</b>		DATE: <b>3/29/07</b>		TIME: <b>1550</b>		PRINT NAME: <b>STEVE WATKINS</b>		FIRM: <b>TAP</b>		DATE: <b>3/29/07</b>	
PRINT NAME: <b>JASON GARDNER</b>		FIRM: <b>AMEC</b>		DATE: <b>3/28/07</b>		TIME: <b>2000</b>		PRINT NAME: <b>PAUL SUMMERS</b>		FIRM: <b>SENUJEM</b>		DATE: <b>3/29/07</b>	
ADDITIONAL REMARKS:												TEMP: <b>4.1</b>	

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and for any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice unless otherwise contracted. Sample(s) will be disposed of after 30 days unless otherwise contracted.

# TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: \_\_\_\_\_  
(applies to temp at receipt)

Logged-in By: \_\_\_\_\_

Unpacked/Labeled By: \_\_\_\_\_

Cooler ID: 353 (\_\_\_ of \_\_\_)

Date: 3/29

Date: 3/30

Date: 3/30

Work Order No. PQC1185

Time: 1550

Initials: SM

Initials: SM

Client: AMEC

Initials: SM

Project: Fred Meyer

### Container Type

Cooler  
 Box  
 None/Other \_\_\_\_\_

### COC Seals:

\_\_\_ Ship. Container Sign By \_\_\_\_\_  
\_\_\_ On Bottles Date \_\_\_\_\_  
 None

### Packing Material

\_\_\_ Bubble Bags \_\_\_ Styrofoam  
 Foam Packs  
\_\_\_ None/Other Other \_\_\_\_\_

### Refrigerant:

Gel Ice Pack \_\_\_\_\_ None  
\_\_\_ Loose Ice  
\_\_\_ None/Other \_\_\_\_\_

### Received Via: Bill#

\_\_\_ Fed Ex \_\_\_ Client  
\_\_\_ UPS \_\_\_ NCA Courier  
\_\_\_ DHL \_\_\_ Mid Valley  
 Senvoy \_\_\_ TDP  
\_\_\_ GS \_\_\_ Other \_\_\_\_\_

Cooler Temperature (IR): 41 °C Plastic Glass (Frozen filters, Tedlars and aqueous Metals exempt)  
(circle one)

Temperature Blank? \_\_\_ °C or NA

Trip Blank? Y or N or NA

### Sample Containers:

Intact?	<input checked="" type="checkbox"/> Y or N	_____	Metals Preserved?	Y or N or <u>NA</u>
Provided by NCA?	<input checked="" type="checkbox"/> Y or N	_____	Client QAPP Preserved?	<input checked="" type="checkbox"/> Y or N or <u>NA</u>
Correct Type?	<input checked="" type="checkbox"/> Y or N	_____	Adequate Volume? (for tests requested)	<input checked="" type="checkbox"/> Y or N
#Containers match COC?	<input checked="" type="checkbox"/> Y or N	_____	Water VOAs: Headspace?	Y or <u>N</u> or NA
IDs/time/date match COC?	<input checked="" type="checkbox"/> Y or N	_____	Comments:	_____
Hold Times in hold?	<input checked="" type="checkbox"/> Y or N	_____		_____

### PROJECT MANAGEMENT

Is the Chain of Custody complete? Y or N If N, circle the items that were incomplete

Comments, Problems \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Total access: set up?

Has client been notified regarding non-conformances?

Y or N

Y or N

If

Date \_\_\_\_\_ Time \_\_\_\_\_

PM Initials: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



June 29, 2007

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 06/15/07 14:20.  
The following list is a summary of the Work Orders contained in this report, generated on 06/29/07  
15:44.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PQF0619	Fred Meyer Port Orchard	9-61M-10282-0

---

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-061307	PQF0619-02	Water	06/13/07 15:40	06/15/07 14:20
MW105-061307	PQF0619-03	Water	06/13/07 15:00	06/15/07 14:20

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQF0619-02 (MW103-061307)</b>		<b>Water</b>			<b>Sampled: 06/13/07 15:40</b>					
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>2500</b>	----	80.0	ug/l	1x	7060736	06/18/07 10:28	06/19/07 04:00	
<i>Surrogate(s): 4-BFB</i>			84.4%		50 - 150 %	"				"
<b>PQF0619-03 (MW105-061307)</b>		<b>Water</b>			<b>Sampled: 06/13/07 15:00</b>					
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>647</b>	----	160	ug/l	2x	7060736	06/18/07 10:28	06/19/07 04:32	
<i>Surrogate(s): 4-BFB</i>			95.3%		50 - 150 %	1x				"

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQF0619-02RE1 (MW103-061307)</b>		<b>Water</b>				<b>Sampled: 06/13/07 15:40</b>				
n-Butylbenzene	EPA 8260B	ND	----	10.0	ug/l	2x	7060882	06/21/07 08:20	06/21/07 15:43	
p-Isopropyltoluene	"	ND	----	4.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
Benzene	"	ND	----	0.400	"	"	"	"	"	
Toluene	"	ND	----	1.00	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>17.5</b>	----	1.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>53.3</b>	----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	4.00	"	"	"	"	"	
<b>Naphthalene</b>	"	<b>16.0</b>	----	4.00	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>137</b>	----	2.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>46.5</b>	----	1.00	"	"	"	"	"	
<b>Isopropylbenzene</b>	"	<b>6.88</b>	----	4.00	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>25.0</b>	----	1.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>102%</i>		<i>80 - 120 %</i>	<i>1x</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>106%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>105%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>102%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

<b>PQF0619-03 (MW105-061307)</b>		<b>Water</b>				<b>Sampled: 06/13/07 15:00</b>				
n-Butylbenzene	EPA 8260B	ND	----	10.0	ug/l	2x	7060768	06/19/07 07:46	06/19/07 18:33	
p-Isopropyltoluene	"	ND	----	4.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	2.00	"	"	"	"	"	
1,2-Dibromoethane	"	ND	----	1.00	"	"	"	"	"	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	
<b>Benzene</b>	"	<b>176</b>	----	0.400	"	"	"	"	"	
<b>Toluene</b>	"	<b>39.2</b>	----	1.00	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>8.94</b>	----	1.00	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>65.5</b>	----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	4.00	"	"	"	"	"	
Naphthalene	"	ND	----	4.00	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>5.40</b>	----	2.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>4.94</b>	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	4.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	1.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>115%</i>		<i>80 - 120 %</i>	<i>1x</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>100%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>111%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQF0619-03</b>	<b>(MW105-061307)</b>	<b>Water</b>						<b>Sampled: 06/13/07 15:00</b>		
<i>Toluene-d8</i>		<i>111%</i>			<i>80 - 120 %</i>	<i>1x</i>			<i>06/19/07 18:33</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7060736      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7060736-BLK1)</b>							<b>Extracted: 06/18/07 10:28</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	06/18/07 13:15	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.1%</i>		<i>Limits: 50-150%</i>	<i>"</i>								06/18/07 13:15	
<b>LCS (7060736-BS1)</b>							<b>Extracted: 06/18/07 10:28</b>							
Gasoline Range Hydrocarbons	NW TPH-Gx	454	---	80.0	ug/l	1x	--	500	90.9%	(70-130)	--	--	06/18/07 12:44	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>	<i>"</i>								06/18/07 12:44	
<b>Duplicate (7060736-DUP1)</b>							<b>QC Source: PQF0597-01RE1</b>		<b>Extracted: 06/18/07 10:28</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	809	---	80.0	ug/l	1x	1080	--	--	--	28.6% (35)		06/18/07 15:50	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 91.1%</i>		<i>Limits: 50-150%</i>	<i>"</i>								06/18/07 15:50	
<b>Duplicate (7060736-DUP2)</b>							<b>QC Source: PQF0601-04RE1</b>		<b>Extracted: 06/18/07 10:28</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	18400	---	1600	ug/l	20x	17100	--	--	--	7.18% (35)		06/19/07 00:16	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.7%</i>		<i>Limits: 50-150%</i>	<i>1x</i>								06/19/07 00:16	
<b>Matrix Spike (7060736-MS1)</b>							<b>QC Source: PQF0600-02RE1</b>		<b>Extracted: 06/18/07 10:28</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	78800	---	4000	ug/l	50x	58700	25000	80.4%	(70-130)	--	--	06/18/07 21:06	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 96.1%</i>		<i>Limits: 50-150%</i>	<i>1x</i>								06/18/07 21:06	
<b>Matrix Spike Dup (7060736-MSD1)</b>							<b>QC Source: PQF0600-02RE1</b>		<b>Extracted: 06/18/07 10:28</b>					
Gasoline Range Hydrocarbons	NW TPH-Gx	80700	---	4000	ug/l	50x	58700	25000	88.0%	(70-130)	2.40% (30)		06/18/07 21:38	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 99.0%</i>		<i>Limits: 50-150%</i>	<i>1x</i>								06/18/07 21:38	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7060768 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7060768-BLK1)</b>													<b>Extracted: 06/19/07 07:46</b>	
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	06/19/07 11:21	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 116%</i>		<i>Limits: 80-120%</i>		<i>"</i>							<i>06/19/07 11:21</i>	
<i>1,2-DCA-d4</i>		<i>102%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>		<i>113%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>		<i>110%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	

<b>LCS (7060768-BS1)</b>													<b>Extracted: 06/19/07 07:46</b>	
1,2-Dibromoethane	EPA 8260B	23.9	---	0.500	ug/l	1x	--	20.0	120%	(80-140)	--	--	06/19/07 09:33	
1,2-Dichloroethane	"	21.3	---	0.500	"	"	--	"	107%	(75-135)	--	--	"	
Benzene	"	21.2	---	0.200	"	"	--	"	106%	(80-120)	--	--	"	
Toluene	"	21.9	---	0.500	"	"	--	"	110%	(80-125)	--	--	"	
Ethylbenzene	"	22.8	---	0.500	"	"	--	"	114%	(80-130)	--	--	"	
Xylenes (total)	"	72.0	---	1.00	"	"	--	60.0	120%	"	--	--	"	
Methyl tert-butyl ether	"	23.6	---	2.00	"	"	--	20.0	118%	(80-135)	--	--	"	
Naphthalene	"	21.5	---	2.00	"	"	--	"	108%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	25.4	---	1.00	"	"	--	"	127%	(75-125)	--	--	"	L1
1,3,5-Trimethylbenzene	"	25.6	---	0.500	"	"	--	"	128%	(75-135)	--	--	"	
Isopropylbenzene	"	24.6	---	2.00	"	"	--	"	123%	(80-140)	--	--	"	
n-Propylbenzene	"	23.8	---	0.500	"	"	--	"	119%	(80-130)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 111%</i>		<i>Limits: 80-120%</i>		<i>"</i>							<i>06/19/07 09:33</i>	
<i>1,2-DCA-d4</i>		<i>97.0%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>		<i>110%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>		<i>106%</i>		<i>80-120%</i>		<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7060768 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike (7060768-MS1)</b>			QC Source: PQF0665-01					Extracted: 06/19/07 07:46							
1,2-Dibromoethane	EPA 8260B	23.7	---	0.500	ug/l	1x	ND	20.0	118%	(75-140)	--	--	06/19/07 10:00		
1,2-Dichloroethane	"	21.2	---	0.500	"	"	ND	"	106%	(79-130)	--	--	"		
Benzene	"	161	---	0.200	"	"	130	"	156%	(80-125)	--	--	"	M1	
Toluene	"	26.5	---	0.500	"	"	3.80	"	114%	(65-135)	--	--	"		
Ethylbenzene	"	23.4	---	0.500	"	"	0.480	"	114%	(80-125)	--	--	"		
Xylenes (total)	"	74.7	---	1.00	"	"	2.50	60.0	120%	(70-130)	--	--	"		
Methyl tert-butyl ether	"	36.7	---	2.00	"	"	11.6	20.0	126%	(70-150)	--	--	"		
Naphthalene	"	22.8	---	2.00	"	"	ND	"	114%	(55-145)	--	--	"		
1,2,4-Trimethylbenzene	"	25.6	---	1.00	"	"	0.0900	"	128%	(80-136)	--	--	"		
1,3,5-Trimethylbenzene	"	25.4	---	0.500	"	"	ND	"	127%	(70-140)	--	--	"		
Isopropylbenzene	"	24.9	---	2.00	"	"	0.830	"	121%	(60-135)	--	--	"		
n-Propylbenzene	"	26.9	---	0.500	"	"	2.40	"	123%	(70-135)	--	--	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 117%</i>		<i>Limits: 80-120%</i>	<i>"</i>								<i>06/19/07 10:00</i>		
<i>1,2-DCA-d4</i>		<i>103%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>115%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>114%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		

<b>Matrix Spike Dup (7060768-MSD1)</b>			QC Source: PQF0665-01					Extracted: 06/19/07 07:46							
1,2-Dibromoethane	EPA 8260B	22.4	---	0.500	ug/l	1x	ND	20.0	112%	(75-140)	5.77% (25)		06/19/07 10:27		
1,2-Dichloroethane	"	19.5	---	0.500	"	"	ND	"	97.4%	(79-130)	8.70%	"	"		
Benzene	"	149	---	0.200	"	"	130	"	94.3%	(80-125)	7.90%	"	"		
Toluene	"	25.0	---	0.500	"	"	3.80	"	106%	(65-135)	5.75%	"	"		
Ethylbenzene	"	21.5	---	0.500	"	"	0.480	"	105%	(80-125)	8.33%	"	"		
Xylenes (total)	"	68.8	---	1.00	"	"	2.50	60.0	111%	(70-130)	8.11%	"	"		
Methyl tert-butyl ether	"	33.8	---	2.00	"	"	11.6	20.0	111%	(70-150)	8.19%	"	"		
Naphthalene	"	20.8	---	2.00	"	"	ND	"	104%	(55-145)	9.00%	"	"		
1,2,4-Trimethylbenzene	"	23.5	---	1.00	"	"	0.0900	"	117%	(80-136)	8.43%	"	"		
1,3,5-Trimethylbenzene	"	23.5	---	0.500	"	"	ND	"	117%	(70-140)	7.78%	"	"		
Isopropylbenzene	"	23.1	---	2.00	"	"	0.830	"	111%	(60-135)	7.83%	"	"		
n-Propylbenzene	"	25.0	---	0.500	"	"	2.40	"	113%	(70-135)	7.47%	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 112%</i>		<i>Limits: 80-120%</i>	<i>"</i>								<i>06/19/07 10:27</i>		
<i>1,2-DCA-d4</i>		<i>95.6%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>107%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>112%</i>		<i>80-120%</i>	<i>"</i>								<i>"</i>		

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager





<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7060882      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7060882-BLK1)</b>													<b>Extracted: 06/21/07 08:20</b>	
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	06/21/07 10:18	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB      Recovery: 96.7%      Limits: 80-120%      "</i>													<i>06/21/07 10:18</i>	
<i>1,2-DCA-d4      103%      80-120%      "</i>													<i>"</i>	
<i>Dibromofluoromethane      101%      80-120%      "</i>													<i>"</i>	
<i>Toluene-d8      97.6%      80-120%      "</i>													<i>"</i>	

<b>LCS (7060882-BS1)</b>													<b>Extracted: 06/21/07 08:20</b>	
1,2-Dibromoethane	EPA 8260B	25.4	---	0.500	ug/l	1x	--	20.0	127%	(80-140)	--	--	06/21/07 08:30	
1,2-Dichloroethane	"	23.6	---	0.500	"	"	--	"	118%	(75-135)	--	--	"	
Benzene	"	23.0	---	0.200	"	"	--	"	115%	(80-120)	--	--	"	
Toluene	"	22.5	---	0.500	"	"	--	"	113%	(80-125)	--	--	"	
Ethylbenzene	"	23.7	---	0.500	"	"	--	"	119%	(80-130)	--	--	"	
Xylenes (total)	"	71.2	---	1.00	"	"	--	60.0	119%	"	--	--	"	
Methyl tert-butyl ether	"	25.0	---	2.00	"	"	--	20.0	125%	(80-135)	--	--	"	
Naphthalene	"	25.0	---	2.00	"	"	--	"	125%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	22.0	---	1.00	"	"	--	"	110%	(75-125)	--	--	"	
1,3,5-Trimethylbenzene	"	22.8	---	0.500	"	"	--	"	114%	(75-135)	--	--	"	
Isopropylbenzene	"	24.3	---	2.00	"	"	--	"	122%	(80-140)	--	--	"	
n-Propylbenzene	"	24.0	---	0.500	"	"	--	"	120%	(80-130)	--	--	"	
<i>Surrogate(s): 4-BFB      Recovery: 103%      Limits: 80-120%      "</i>													<i>06/21/07 08:30</i>	
<i>1,2-DCA-d4      108%      80-120%      "</i>													<i>"</i>	
<i>Dibromofluoromethane      107%      80-120%      "</i>													<i>"</i>	
<i>Toluene-d8      103%      80-120%      "</i>													<i>"</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7060882      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike (7060882-MS1)</b>			QC Source: PQF0603-07					Extracted: 06/21/07 08:20							
1,2-Dibromoethane	EPA 8260B	23.3	---	0.500	ug/l	1x	ND	20.0	117%	(75-140)	--	--	06/21/07 08:57		
1,2-Dichloroethane	"	21.6	---	0.500	"	"	ND	"	108%	(79-130)	--	--	"		
Benzene	"	21.4	---	0.200	"	"	ND	"	107%	(80-125)	--	--	"		
Toluene	"	20.9	---	0.500	"	"	ND	"	105%	(65-135)	--	--	"		
Ethylbenzene	"	22.1	---	0.500	"	"	ND	"	110%	(80-125)	--	--	"		
Xylenes (total)	"	66.3	---	1.00	"	"	ND	60.0	111%	(70-130)	--	--	"		
Methyl tert-butyl ether	"	23.1	---	2.00	"	"	ND	20.0	116%	(70-150)	--	--	"		
Naphthalene	"	23.5	---	2.00	"	"	ND	"	118%	(55-145)	--	--	"		
1,2,4-Trimethylbenzene	"	20.3	---	1.00	"	"	ND	"	102%	(80-136)	--	--	"		
1,3,5-Trimethylbenzene	"	22.9	---	0.500	"	"	ND	"	114%	(70-140)	--	--	"		
Isopropylbenzene	"	22.5	---	2.00	"	"	ND	"	113%	(60-135)	--	--	"		
n-Propylbenzene	"	22.4	---	0.500	"	"	ND	"	112%	(70-135)	--	--	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>97.2%</i>	<i>Limits: 80-120%</i>		<i>"</i>							<i>06/21/07 08:57</i>		
<i>1,2-DCA-d4</i>		<i>102%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			
<i>Dibromofluoromethane</i>		<i>103%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			
<i>Toluene-d8</i>		<i>98.2%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			

<b>Matrix Spike Dup (7060882-MSD1)</b>			QC Source: PQF0603-07					Extracted: 06/21/07 08:20							
1,2-Dibromoethane	EPA 8260B	23.7	---	0.500	ug/l	1x	ND	20.0	118%	(75-140)	1.53% (25)		06/21/07 09:24		
1,2-Dichloroethane	"	22.4	---	0.500	"	"	ND	"	112%	(79-130)	3.45%	"	"		
Benzene	"	21.8	---	0.200	"	"	ND	"	109%	(80-125)	1.95%	"	"		
Toluene	"	22.2	---	0.500	"	"	ND	"	111%	(65-135)	5.62%	"	"		
Ethylbenzene	"	23.6	---	0.500	"	"	ND	"	118%	(80-125)	6.87%	"	"		
Xylenes (total)	"	71.1	---	1.00	"	"	ND	60.0	118%	(70-130)	6.96%	"	"		
Methyl tert-butyl ether	"	23.6	---	2.00	"	"	ND	20.0	118%	(70-150)	2.14%	"	"		
Naphthalene	"	23.8	---	2.00	"	"	ND	"	119%	(55-145)	1.39%	"	"		
1,2,4-Trimethylbenzene	"	21.7	---	1.00	"	"	ND	"	109%	(80-136)	6.56%	"	"		
1,3,5-Trimethylbenzene	"	22.6	---	0.500	"	"	ND	"	113%	(70-140)	1.28%	"	"		
Isopropylbenzene	"	24.1	---	2.00	"	"	ND	"	120%	(60-135)	6.57%	"	"		
n-Propylbenzene	"	24.2	---	0.500	"	"	ND	"	121%	(70-135)	7.59%	"	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>106%</i>	<i>Limits: 80-120%</i>		<i>"</i>							<i>06/21/07 09:24</i>		
<i>1,2-DCA-d4</i>		<i>106%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			
<i>Dibromofluoromethane</i>		<i>107%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			
<i>Toluene-d8</i>		<i>105%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>			

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	06/29/07 15:44
Portland, OR 97224	Project Manager: Paul Stull	

**Notes and Definitions**

Report Specific Notes:

- L1 - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above acceptance limits.
- M1 - The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

*Sarah Rockwell*

Sarah Rockwell, Project Manager





11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210  
 11922 E 1st Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
 20332 Empire Ave, Ste F1, Bend, OR 97701-5712 541-383-9310 FAX 382-7588  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

**CHAIN OF CUSTODY REPORT**

Work Order #: **PGF0619**

NCA CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input checked="" type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 Petroleum Hydrocarbon Analyses <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <1 OTHER Specify: <small>* Turnaround Request less than standard may incur Rush Charges.</small>						
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:								
ADDRESS: <b>7376 SW Durham Port OR</b>										
PHONE: <b>503 639 3400</b> FAX:										
PROJECT NAME: <b>Fred Meyer Port Orchard</b>		PRESERVATIVE								
PROJECT NUMBER: <b>7-611-10222-0</b>		REQUESTED ANALYSES								
SAMPLED BY: <b>McFarland</b>										
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8260	SW	MW	PH	G	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 Trip Blank	6/13/07 0800						H2O	2		
2 MW103-061307	6/13/07 1540	X	X				H2O	6		
3 MW105-061307	6/13/07 1500	X	X				H2O	6		
4										
5										
6										
7										
8										
9										
10										
RELEASED BY: <b>[Signature]</b>		DATE: <b>6/15/07</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>06/15/07</b>				
PRINT NAME: <b>W.J. McFarland</b> FIRM: <b>AMEC</b>		TIME: <b>1330</b>		PRINT NAME: <b>ERIK KIER</b> FIRM: <b>SENOY</b>		TIME: <b>1330</b>				
RELEASED BY: <b>[Signature]</b>		DATE: <b>06/15/07</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>06/15/07</b>				
PRINT NAME: <b>ERIK KIER</b> FIRM: <b>SENOY</b>		TIME: <b>1417</b>		PRINT NAME: <b>[Signature]</b> FIRM: <b>TAP</b>		TIME: <b>1420</b>				
ADDITIONAL REMARKS: <b>8260 to include BTEX, MTBE, EDC, EDB, Naphthalene; Alkylbenzene Suite</b>								TEMP: <b>29</b>	PAGE OF	
COC REV 09/04										

# TestAmerica Sample Receipt Checklist

Received by: Calvin 1/17  
 Date: 1/17/19  
 Time: 1420  
 Initials: ASD

Unpacked by: PA FOLG  
 Date: 1/17/19  
 Initials: AF

Work Order No. PA FOLG 19  
 Client: AMEC MEYER  
 Project: PORT CANTON

Cooler ID(s): 177

Logged-in by: \_\_\_\_\_  
 Date: 1/17/19  
 Initials: AF  
 Date: 1/17/19  
 Initials: AF

\*\*\*ESI Clients (see Section C)  
 Cooler Temperature (IR): 29 °C plastic glass NA (oil/air samples, ESI client)

Temperature out of range:  
 No Ice  
 Ice Melted  
 W/in 4 Hours  
 Other: \_\_\_\_\_

**A** Custody Seals: (#     )  
 Signature: Y N Dated: \_\_\_\_\_  
 None  
 Received from: \_\_\_\_\_  
 Container Type: TA Courier  
 Servoy  
 #Cooler(s) \_\_\_\_\_  
 #Box(s) \_\_\_\_\_  
 None (      ) #Other: \_\_\_\_\_  
 Coolant Type: Gel Ice  
 Gel Ice  
 Loose Ice \_\_\_\_\_  
 None \_\_\_\_\_  
 Packing Material: Styrofoam Cubbies  
 Bubble Bags  
 Styrofoam Cubbies  
 None (      ) Other: \_\_\_\_\_

**B** Sample Status: \_\_\_\_\_  
 (If N circled, see NOD)  
 General:  
 Intact? Y N  
 # Containers Match COC? Y N  
 IDs Match COC? Y N  
 For Analyses Requested:  
 Correct Type & Preservation? Y N  
 Adequate Volume? Y N  
 Within Hold Time? Y N  
 Volatiles:  
 VOAs Free of Headspace? Y N NA  
 TB on COC? not provided N NA  
 Metals:  
 HNO3 Preserved? Y N NA

**C** \*\*\*ESI Clients Only:  
 Temperature Blank: \_\_\_\_\_ °C not provided  
 All preserved bottles checked Y N  
 All preserved accordingly? Y N (see NOD)  
 NA (voas/soils/all unp.)  
 NA (voas/soils/all unp.)  
 Army Corp: \_\_\_\_\_  
 Geiger (ticks/min): \_\_\_\_\_  
 Temperatures (IR): \_\_\_\_\_ °C \_\_\_\_\_ °C \_\_\_\_\_ °C  
 (left) (middle) (right) (air)  
 Project Managers: \_\_\_\_\_  
 Comments: \_\_\_\_\_  
 PM Reviewed: \_\_\_\_\_ (Initial/Date)

September 21, 2007

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 08/29/07 15:15.  
The following list is a summary of the Work Orders contained in this report, generated on 09/21/07  
16:35.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PQH1213	Fred Meyer Port Orchard	9-61M-10282-0

---

**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name:

**Fred Meyer Port Orchard**

Project Number:

9-61M-10282-0

Project Manager:

Paul Stull

Report Created:

09/21/07 16:35

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB	PQH1213-01	Water	08/28/07 07:45	08/29/07 15:15
MW105	PQH1213-02	Water	08/28/07 09:00	08/29/07 15:15
MW103	PQH1213-03	Water	08/28/07 09:30	08/29/07 15:15

TestAmerica - Portland, OR

Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

## Gasoline Hydrocarbons per NW TPH-Gx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQH1213-02RE1 (MW105)</b>		<b>Water</b>			<b>Sampled: 08/28/07 09:00</b>					
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>4300</b>	----	400	ug/l	5x	7090264	09/07/07 12:30	09/08/07 15:45	
<i>Surrogate(s): 4-BFB</i>			107%		50 - 150 %	1x				"
<b>PQH1213-03RE1 (MW103)</b>		<b>Water</b>			<b>Sampled: 08/28/07 09:30</b>					
<b>Gasoline Range Hydrocarbons</b>	NW TPH-Gx	<b>264</b>	----	80.0	ug/l	1x	7090264	09/07/07 12:30	09/08/07 16:12	
<i>Surrogate(s): 4-BFB</i>			96.4%		50 - 150 %	"				"

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*





<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**BTEX Compounds per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQH1213-01 (TB)</b>		<b>Water</b>				<b>Sampled: 08/28/07 07:45</b>				
Benzene	EPA 8260B	ND	----	0.500	ug/l	1x	7090295	09/08/07 10:48	09/08/07 16:03	
Toluene	"	ND	----	0.500	"	"	"	"	"	"
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	"
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	"
<i>Surrogate(s):</i>	<i>4-BFB</i>		<i>101%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
	<i>1,2-DCA-d4</i>		<i>104%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
	<i>Dibromofluoromethane</i>		<i>104%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
	<i>Toluene-d8</i>		<i>100%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>




**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

09/21/07 16:35

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQH1213-02RE1 (MW105)</b>		<b>Water</b>		<b>Sampled: 08/28/07 09:00</b>						
1,2-Dibromoethane	EPA 8260B	ND	----	2.50	ug/l	5x	7090301	09/09/07 10:16	09/09/07 17:43	
1,2-Dichloroethane	"	ND	----	2.50	"	"	"	"	"	
Benzene	"	ND	----	1.00	"	"	"	"	"	
Toluene	"	ND	----	2.50	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>44.1</b>	----	2.50	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>159</b>	----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	10.0	"	"	"	"	"	
<b>Naphthalene</b>	"	<b>31.9</b>	----	10.0	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>383</b>	----	5.00	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	"	<b>109</b>	----	2.50	"	"	"	"	"	
n-Butylbenzene	"	ND	----	25.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
<b>Isopropylbenzene</b>	"	<b>17.2</b>	----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>62.9</b>	----	2.50	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	10.0	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>101%</i>		<i>80 - 120 %</i>	<i>1x</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>95.2%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>96.4%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>96.5%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

<b>PQH1213-03RE1 (MW103)</b>		<b>Water</b>		<b>Sampled: 08/28/07 09:30</b>						
1,2-Dibromoethane	EPA 8260B	ND	----	0.500	ug/l	1x	7090301	09/09/07 10:16	09/09/07 18:10	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
<b>Benzene</b>	"	<b>84.1</b>	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>6.60</b>	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	"	<b>1.47</b>	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>107%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>99.8%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>99.4%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica - Portland, OR

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.



Crystal Jones For Christina Woodcock, Project Manager



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
 TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQH1213-03RE1 (MW103)</b>		<b>Water</b>						<b>Sampled: 08/28/07 09:30</b>		
<i>Toluene-d8</i>		<i>99.7%</i>			<i>80 - 120 %</i>	<i>1x</i>			<i>09/09/07 18:10</i>	

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b> 7376 SW Durham Road Portland, OR 97224	Project Name: <b>Fred Meyer Port Orchard</b> Project Number: 9-61M-10282-0 Project Manager: Paul Stull	Report Created: 09/21/07 16:35
--	--	-----------------------------------

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
TestAmerica - Portland, OR

**QC Batch: 7090070 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (7090070-BLK1)</b>													<b>Extracted: 09/04/07 13:50</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/05/07 17:51			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 95.2%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/05/07 17:51			
<b>LCS (7090070-BS1)</b>													<b>Extracted: 09/04/07 13:50</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	384	---	80.0	ug/l	1x	--	500	76.9%	(70-130)	--	--	09/05/07 16:56			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 89.9%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/05/07 16:56			
<b>LCS Dup (7090070-BSD1)</b>													<b>Extracted: 09/04/07 13:50</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	477	---	80.0	ug/l	1x	--	500	95.3%	(70-130)	21.5%	(35)	09/05/07 17:24			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/05/07 17:24			
<b>Duplicate (7090070-DUP2)</b>													<b>QC Source: PQH1010-02RE1</b>		<b>Extracted: 09/04/07 13:50</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	13000	---	800	ug/l	10x	13300	--	--	--	2.26%	(35)	09/05/07 23:33			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 113%</i>		<i>Limits: 50-150%</i>		<i>1x</i>							09/05/07 23:33			

**QC Batch: 7090264 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (7090264-BLK1)</b>													<b>Extracted: 09/07/07 12:30</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/08/07 11:36	B		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 93.1%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/08/07 11:36			
<b>LCS (7090264-BS1)</b>													<b>Extracted: 09/07/07 12:30</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	393	---	80.0	ug/l	1x	--	500	78.7%	(70-130)	--	--	09/08/07 10:41			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 65.8%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/08/07 10:41			
<b>LCS Dup (7090264-BSD1)</b>													<b>Extracted: 09/07/07 12:30</b>			
Gasoline Range Hydrocarbons	NW TPH-Gx	499	---	80.0	ug/l	1x	--	500	99.8%	(70-130)	23.6%	(35)	09/08/07 11:09			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 97.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>							09/08/07 11:09			
<b>Duplicate (7090264-DUP1)</b>													<b>QC Source: PQH1351-04</b>		<b>Extracted: 09/07/07 12:30</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	8710	---	800	ug/l	10x	9120	--	--	--	4.53%	(35)	09/08/07 12:59			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 109%</i>		<i>Limits: 50-150%</i>		<i>1x</i>							09/08/07 12:59			
<b>Duplicate (7090264-DUP2)</b>													<b>QC Source: PQH1298-07RE1</b>		<b>Extracted: 09/07/07 12:30</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	10000	---	800	ug/l	10x	9840	--	--	--	1.80%	(35)	09/08/07 13:54			
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 136%</i>		<i>Limits: 50-150%</i>		<i>1x</i>							09/08/07 13:54			

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	09/21/07 16:35

**Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results**  
 TestAmerica - Portland, OR

**QC Batch: 7108002      Water Preparation Method: 7090264**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Instrument Blank (7108002-IBL2)</b>													<b>Extracted: 09/08/07 00:00</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/08/07 14:49	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: NR</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>09/08/07 14:49</i>		
<b>Instrument Blank (7108002-IBL4)</b>													<b>Extracted: 09/08/07 00:00</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	71.9	---	80.0	ug/l	1x	--	--	--	--	--	--	09/09/07 00:01	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: NR</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>09/09/07 00:01</i>		
<b>Instrument Blank (7108002-IBL5)</b>													<b>Extracted: 09/08/07 00:00</b>	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/09/07 00:28	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: NR</i>		<i>Limits: 50-150%</i>		<i>"</i>						<i>09/09/07 00:28</i>		

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**BTEX Compounds per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica - Portland, OR

**QC Batch: 7090295**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (7090295-BLK1)**

Extracted: 09/08/07 10:48

Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/08/07 15:36	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>98.3%</i>	<i>Limits: 80-120%</i>		<i>"</i>							<i>09/08/07 15:36</i>	
<i>1,2-DCA-d4</i>			<i>105%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>104%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>98.8%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

**LCS (7090295-BS1)**

Extracted: 09/08/07 10:48

Benzene	EPA 8260B	20.0	---	0.500	ug/l	1x	--	20.0	99.8%	(80-120)	--	--	09/08/07 13:48	
Toluene	"	20.0	---	0.500	"	"	--	"	100%	(80-125)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-130)	--	--	"	
Xylenes (total)	"	61.4	---	1.00	"	"	--	60.0	102%	"	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>97.4%</i>	<i>Limits: 80-120%</i>		<i>"</i>							<i>09/08/07 13:48</i>	
<i>1,2-DCA-d4</i>			<i>98.0%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>99.4%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>99.8%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

**LCS Dup (7090295-BSD1)**

Extracted: 09/08/07 10:48

Benzene	EPA 8260B	19.2	---	0.500	ug/l	1x	--	20.0	96.2%	(80-120)	3.78%	(25)	09/08/07 14:42	
Toluene	"	19.0	---	0.500	"	"	--	"	95.1%	(80-125)	5.07%	"	"	
Ethylbenzene	"	19.3	---	0.500	"	"	--	"	96.7%	(80-130)	5.19%	"	"	
Xylenes (total)	"	59.4	---	1.00	"	"	--	60.0	99.0%	"	3.30%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>98.2%</i>	<i>Limits: 80-120%</i>		<i>"</i>							<i>09/08/07 14:42</i>	
<i>1,2-DCA-d4</i>			<i>97.8%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>98.2%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>99.3%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica - Portland, OR

**QC Batch: 7090295      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7090295-BLK1)</b>													<b>Extracted: 09/08/07 10:48</b>	
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/08/07 15:36	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>98.3%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/08/07 15:36</i>	
<i>1,2-DCA-d4</i>			<i>105%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>104%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>98.8%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

<b>LCS (7090295-BS1)</b>													<b>Extracted: 09/08/07 10:48</b>	
1,2-Dibromoethane	EPA 8260B	21.3	---	0.500	ug/l	1x	--	20.0	106%	(80-140)	--	--	09/08/07 13:48	
1,2-Dichloroethane	"	19.5	---	0.500	"	"	--	"	97.4%	(75-135)	--	--	"	
Benzene	"	20.0	---	0.200	"	"	--	"	99.8%	(80-120)	--	--	"	
Toluene	"	20.0	---	0.500	"	"	--	"	100%	(80-125)	--	--	"	
Ethylbenzene	"	20.4	---	0.500	"	"	--	"	102%	(80-130)	--	--	"	
Xylenes (total)	"	61.4	---	1.00	"	"	--	60.0	102%	"	--	--	"	
Methyl tert-butyl ether	"	20.6	---	2.00	"	"	--	20.0	103%	(80-135)	--	--	"	
Naphthalene	"	29.9	---	2.00	"	"	--	"	150%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	20.4	---	1.00	"	"	--	"	102%	(75-125)	--	--	"	
1,3,5-Trimethylbenzene	"	20.7	---	0.500	"	"	--	"	104%	(75-135)	--	--	"	
Isopropylbenzene	"	20.2	---	2.00	"	"	--	"	101%	(80-140)	--	--	"	
n-Propylbenzene	"	19.8	---	0.500	"	"	--	"	99.0%	(80-130)	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>97.4%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/08/07 13:48</i>	
<i>1,2-DCA-d4</i>			<i>98.0%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>99.4%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>99.8%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica - Portland, OR

**QC Batch: 7090295**      **Water Preparation Method: EPA 5030B**


Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS Dup (7090295-BSD1)</b>										Extracted: 09/08/07 10:48				
1,2-Dibromoethane	EPA 8260B	20.5	---	0.500	ug/l	1x	--	20.0	102%	(80-140)	3.69%	(25)	09/08/07 14:42	
1,2-Dichloroethane	"	19.4	---	0.500	"	"	--	"	97.0%	(75-135)	0.463%	"	"	
Benzene	"	19.2	---	0.200	"	"	--	"	96.2%	(80-120)	3.78%	"	"	
Toluene	"	19.0	---	0.500	"	"	--	"	95.1%	(80-125)	5.07%	"	"	
Ethylbenzene	"	19.3	---	0.500	"	"	--	"	96.7%	(80-130)	5.19%	"	"	
Xylenes (total)	"	59.4	---	1.00	"	"	--	60.0	99.0%	"	3.30%	"	"	
Methyl tert-butyl ether	"	20.1	---	2.00	"	"	--	20.0	100%	(80-135)	2.70%	"	"	
Naphthalene	"	19.9	---	2.00	"	"	--	"	99.5%	(60-150)	40.2%	"	"	R7
1,2,4-Trimethylbenzene	"	19.8	---	1.00	"	"	--	"	99.2%	(75-125)	2.88%	"	"	
1,3,5-Trimethylbenzene	"	20.0	---	0.500	"	"	--	"	100%	(75-135)	3.58%	"	"	
Isopropylbenzene	"	19.2	---	2.00	"	"	--	"	96.0%	(80-140)	4.97%	"	"	
n-Propylbenzene	"	18.9	---	0.500	"	"	--	"	94.4%	(80-130)	4.76%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>98.2%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/08/07 14:42</i>	
<i>1,2-DCA-d4</i>			<i>97.8%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>98.2%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>99.3%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**QC Batch: 7090301**      **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7090301-BLK1)</b>										Extracted: 09/09/07 10:16				
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	09/09/07 14:06	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>103%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/09/07 14:06</i>	

TestAmerica - Portland, OR

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

  
Crystal Jones For Christina Woodcock, Project Manager





<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	09/21/07 16:35
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica - Portland, OR

**QC Batch: 7090301      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (7090301-BLK1)**

Extracted: 09/09/07 10:16

<i>Surrogate(s):</i>	<i>1,2-DCA-d4</i>	<i>Recovery:</i>	<i>95.2%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>1x</i>							<i>09/09/07 14:06</i>	
	<i>Dibromofluoromethane</i>		<i>97.4%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>97.8%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**LCS (7090301-BS1)**

Extracted: 09/09/07 10:16

1,2-Dibromoethane	EPA 8260B	19.5	---	0.500	ug/l	1x	--	20.0	97.6%	(80-140)	--	--	09/09/07 13:12	
1,2-Dichloroethane	"	18.1	---	0.500	"	"	--	"	90.4%	(75-135)	--	--	"	
Benzene	"	19.0	---	0.200	"	"	--	"	95.0%	(80-120)	--	--	"	
Toluene	"	19.1	---	0.500	"	"	--	"	95.6%	(80-125)	--	--	"	
Ethylbenzene	"	20.0	---	0.500	"	"	--	"	99.8%	(80-130)	--	--	"	
Xylenes (total)	"	62.0	---	1.00	"	"	--	60.0	103%	"	--	--	"	
Methyl tert-butyl ether	"	19.2	---	2.00	"	"	--	20.0	96.2%	(80-135)	--	--	"	
Naphthalene	"	21.6	---	2.00	"	"	--	"	108%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	20.9	---	1.00	"	"	--	"	104%	(75-125)	--	--	"	
1,3,5-Trimethylbenzene	"	21.0	---	0.500	"	"	--	"	105%	(75-135)	--	--	"	
Isopropylbenzene	"	20.7	---	2.00	"	"	--	"	104%	(80-140)	--	--	"	
n-Propylbenzene	"	21.0	---	0.500	"	"	--	"	105%	(80-130)	--	--	"	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>Recovery:</i>	<i>105%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/09/07 13:12</i>	
	<i>1,2-DCA-d4</i>		<i>96.7%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>101%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>103%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

**LCS Dup (7090301-BSD1)**

Extracted: 09/09/07 10:16

1,2-Dibromoethane	EPA 8260B	21.3	---	0.500	ug/l	1x	--	20.0	106%	(80-140)	8.62%	(25)	09/09/07 12:45	
1,2-Dichloroethane	"	19.6	---	0.500	"	"	--	"	97.8%	(75-135)	7.81%	"	"	
Benzene	"	20.9	---	0.200	"	"	--	"	105%	(80-120)	9.66%	"	"	
Toluene	"	21.2	---	0.500	"	"	--	"	106%	(80-125)	10.4%	"	"	
Ethylbenzene	"	22.3	---	0.500	"	"	--	"	111%	(80-130)	11.0%	"	"	
Xylenes (total)	"	68.2	---	1.00	"	"	--	60.0	114%	"	9.49%	"	"	
Methyl tert-butyl ether	"	20.6	---	2.00	"	"	--	20.0	103%	(80-135)	7.07%	"	"	
Naphthalene	"	24.1	---	2.00	"	"	--	"	121%	(60-150)	11.2%	"	"	
1,2,4-Trimethylbenzene	"	23.0	---	1.00	"	"	--	"	115%	(75-125)	9.80%	"	"	
1,3,5-Trimethylbenzene	"	23.2	---	0.500	"	"	--	"	116%	(75-135)	10.0%	"	"	
Isopropylbenzene	"	22.5	---	2.00	"	"	--	"	112%	(80-140)	8.06%	"	"	
n-Propylbenzene	"	22.7	---	0.500	"	"	--	"	114%	(80-130)	7.82%	"	"	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>Recovery:</i>	<i>113%</i>	<i>Limits:</i>	<i>80-120%</i>	<i>"</i>							<i>09/09/07 12:45</i>	
	<i>1,2-DCA-d4</i>		<i>103%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Dibromofluoromethane</i>		<i>108%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	
	<i>Toluene-d8</i>		<i>109%</i>		<i>80-120%</i>	<i>"</i>							<i>"</i>	

TestAmerica - Portland, OR



Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

09/21/07 16:35

## Notes and Definitions

### Report Specific Notes:

- B - Analyte was detected in the associated Method Blank.
- R7 - LCS/LCSD RPD exceeded the acceptance limit. Recovery met acceptance criteria.

### Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica - Portland, OR

Crystal Jones For Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*





11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244 425-420-9200 FAX 420-9210  
 11922 E 1st Ave, Spokane, WA 99206-5302 509-924-9200 FAX 924-9290  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210  
 20332 Empire Ave, Ste F1, Bend, OR 97701-5712 541-383-9310 FAX 382-7588  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

### CHAIN OF CUSTODY REPORT

Work Order #: **7941213**

NCA CLIENT: <b>AMEC</b>		INVOICE TO:		<b>TURNAROUND REQUEST</b> in Business Days * Organic & Inorganic Analyses <input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD</small> Petroleum Hydrocarbon Analyses <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 <small>STD</small> <input type="checkbox"/> OTHER Specify: <small>* Turnaround Requests less than standard may incur Rush Charges.</small>							
REPORT TO: <b>Paul Stull</b>		P.O. NUMBER:									
ADDRESS: <b>7376 SW Durham Port OR</b>											
PHONE: <b>503 639 3400</b> FAX:											
PROJECT NAME: <b>Freeze Mgr: Port Orchard (FWPC)</b>		PRESERVATIVE									
PROJECT NUMBER: <b>961M02E2</b>		REQUESTED ANALYSES									
SAMPLED BY: <b>McFarland</b>											
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPT 6x	BZ 2	BTE X	MTA E BAY EAD	High In k C	alkyl benz S C	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1 TB	8/28/07 0745			X							
2 MW105	↓ 0900	X	X	X	X	X	X				
3 MW103	↓ 0930	X	X	X	X	X	X				
4											
5											
6											
7											
8											
9											
10											
RELEASED BY: <b>[Signature]</b>		DATE: <b>8/28/07</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>8-28-07</b>					
PRINT NAME: <b>W. J. McFarland</b>		FIRM: <b>AMEC</b>		TIME: <b>1300</b>		PRINT NAME: <b>Jeremy Morgan</b>		FIRM: <b>TAP</b>		TIME: <b>1455</b>	
RELEASED BY:		DATE: <b>8/28/07</b>		RECEIVED BY: <b>[Signature]</b>		DATE: <b>8/28/07</b>					
PRINT NAME: <b>[Signature]</b>		FIRM: <b>TAP</b>		TIME: <b>1515</b>		PRINT NAME: <b>Peggy Siegfried</b>		FIRM: <b>TAP</b>		TIME: <b>1515</b>	
ADDITIONAL REMARKS:										TEMP: <b>1.1</b>	
COC REV 09/04										<b>0.7</b>	PAGE OF

# TestAmerica Sample Receipt Checklist

Cooler ID(s): 032  
070

Received by: \_\_\_\_\_  
Date: 8/28/07  
Time: 1515  
Initials: B

Unpacked by: \_\_\_\_\_  
Date: 8-29  
Initials: MP

Logged-in by: \_\_\_\_\_  
Date: 8/29  
Initials: TSJ

Work Order No. POH1213  
Client: Amc  
Project: Frankfurt

\*\*\*ESI Clients (see Section C)

Temperature out of range:  
 No Ice  
 Ice Melted  
 Within 4 Hours  
 Other \_\_\_\_\_

Cooler Temperature (IR): 0.7 °C plastic glass NA (oil/air samples, ESI client)

**A** Custody Seals: (# \_\_\_\_\_)

Signature: Y N Dated: \_\_\_\_\_  
 None

Received from:

Container Type: \_\_\_\_\_  
2 #Cooler(s) \_\_\_\_\_  
#Box(s) \_\_\_\_\_  
None ( Other: \_\_\_\_\_)

Coolant Type:  
 Gel Ice  
 Loose Ice  
 None

Packing Material:  
 Bubble Bags  
 Styrofoam Cubbies  
 None ( Other: \_\_\_\_\_)

TA Courier  
 Senvoy  
 UPS  
 Fed Ex  
 Client  
 TDP  
 DHL  
 SDS  
 Mid-Valley  
 GS/TA  
 GS/Senvoy  
 Other: \_\_\_\_\_

**B**

Sample Status:  
(If N circled, see NOD)

General:  
Intact?  Y  N  
# Containers Match COC?  Y  N  
IDs Match COC?  Y  N  
For Analyses Requested:  
Correct Type & Preservation?  Y  N  
Adequate Volume?  Y  N  
Within Hold Time?  Y  N  
Volatiles:  
VOAs Free of Headspace?  Y  N  
TB on COC?  Y  N  
Metals:  
HNO3 Preserved?  Y  H  HA  NA

**C** \*\*\*ESI Clients Only:

Army Corp: \_\_\_\_\_  
Geiger (ticks/min): \_\_\_\_\_  
Temperatures (IR): \_\_\_\_\_ °C (left) \_\_\_\_\_ °C (middle) \_\_\_\_\_ °C (right) \_\_\_\_\_ °C (air)

Temperature Blank: \_\_\_\_\_ °C not provided

All preserved bottles checked Y N  
All preserved accordingly? Y N (see NOD) NA (voas/soils/all unp.)  
NA (voas/soils/all unp.)

Project Managers:

Comments:

December 12, 2007

Paul Stull  
AMEC- Portland  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer Port Orchard

Enclosed are the results of analyses for samples received by the laboratory on 11/29/07 16:55.  
The following list is a summary of the Work Orders contained in this report, generated on 12/12/07  
18:15.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
PQK1047	Fred Meyer Port Orchard	9-61M-10282-0

---

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name:

**Fred Meyer Port Orchard**

Project Number:

9-61M-10282-0

Project Manager:

Paul Stull

Report Created:

12/12/07 18:15

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 105	PQK1047-01	Water	11/28/07 13:45	11/29/07 16:55
MW 103	PQK1047-02	Water	11/28/07 14:30	11/29/07 16:55
TB	PQK1047-03	Water	11/28/07 00:00	11/29/07 16:55

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*

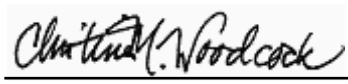


<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/12/07 18:15
Portland, OR 97224	Project Manager: Paul Stull	

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX per EPA Method 8021B**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQK1047-01 (MW 105)</b>		<b>Water</b>			<b>Sampled: 11/28/07 13:45</b>					
<b>Gasoline Range Hydrocarbons</b>	NW-G, 8021B	<b>99.4</b>	----	80.0	ug/l	1x	7120050	12/03/07 15:38	12/03/07 23:17	
<i>Surrogate(s): 4-BFB (FID)</i>			95.0%		50 - 150 %	"				"
<i>4-BFB (PID)</i>			93.3%		70 - 130 %	"				"
<b>PQK1047-02 (MW 103)</b>		<b>Water</b>			<b>Sampled: 11/28/07 14:30</b>					
<b>Gasoline Range Hydrocarbons</b>	NW-G, 8021B	<b>7130</b>	----	400	ug/l	5x	7120050	12/03/07 15:38	12/03/07 23:44	
<i>Surrogate(s): 4-BFB (FID)</i>			106%		50 - 150 %	1x				"
<i>4-BFB (PID)</i>			98.0%		70 - 130 %	"				"
<b>PQK1047-03 (TB)</b>		<b>Water</b>			<b>Sampled: 11/28/07 00:00</b>					
<b>Gasoline Range Hydrocarbons</b>	NW-G, 8021B	<b>ND</b>	----	80.0	ug/l	1x	7120050	12/03/07 15:38	12/03/07 22:49	
<i>Surrogate(s): 4-BFB (FID)</i>			90.8%		50 - 150 %	"				"
<i>4-BFB (PID)</i>			89.8%		70 - 130 %	"				"

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

12/12/07 18:15

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	-------

**PQK1047-01 (MW 105)**

Water

Sampled: 11/28/07 13:45

1,2-Dibromoethane	EPA 8260B	ND	----	0.500	ug/l	1x	7120002	12/01/07 09:19	12/01/07 13:07	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
<b>Benzene</b>	"	<b>45.6</b>	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>4.15</b>	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	

Surrogate(s):	4-BFB	101%		80 - 120 %	"					"
	1,2-DCA-d4	96.8%		80 - 120 %	"					"
	Dibromofluoromethane	95.4%		80 - 120 %	"					"
	Toluene-d8	97.9%		80 - 120 %	"					"

**PQK1047-02 (MW 103)**

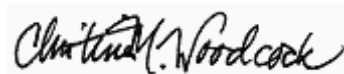
Water

Sampled: 11/28/07 14:30

1,2-Dibromoethane	EPA 8260B	ND	----	0.500	ug/l	1x	7120002	12/01/07 09:19	12/01/07 13:34	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
<b>Ethylbenzene</b>	"	<b>32.2</b>	----	0.500	"	"	"	"	"	
<b>Xylenes (total)</b>	"	<b>141</b>	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
<b>Naphthalene</b>	"	<b>39.3</b>	----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
<b>n-Propylbenzene</b>	"	<b>69.0</b>	----	0.500	"	"	"	"	"	
<b>p-Isopropyltoluene</b>	"	<b>10.8</b>	----	2.00	"	"	"	"	"	

Surrogate(s):	4-BFB	102%		80 - 120 %	"					"
	1,2-DCA-d4	96.4%		80 - 120 %	"					"
	Dibromofluoromethane	97.3%		80 - 120 %	"					"
	Toluene-d8	99.6%		80 - 120 %	"					"

TestAmerica Portland



Christina Woodcock, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.





**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**

Project Number: 9-61M-10282-0

Project Manager: Paul Stull

Report Created:

12/12/07 18:15

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B**  
TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
<b>PQK1047-02RE1 (MW 103)</b>		<b>Water</b>			<b>Sampled: 11/28/07 14:30</b>					<b>RL7</b>
1,2,4-Trimethylbenzene	EPA 8260B	<b>743</b>	----	5.00	ug/l	5x	7120045	12/03/07 13:47	12/04/07 00:46	
1,3,5-Trimethylbenzene	"	<b>287</b>	----	2.50	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>104%</i>		<i>80 - 120 %</i>	<i>1x</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>95.8%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>96.9%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>98.6%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<b>PQK1047-03 (TB)</b>		<b>Water</b>			<b>Sampled: 11/28/07 00:00</b>					
1,2-Dibromoethane	EPA 8260B	ND	----	0.500	ug/l	1x	7120002	12/01/07 09:19	12/01/07 12:40	
1,2-Dichloroethane	"	ND	----	0.500	"	"	"	"	"	
Benzene	"	ND	----	0.200	"	"	"	"	"	
Toluene	"	ND	----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	----	0.500	"	"	"	"	"	
Xylenes (total)	"	ND	----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	2.00	"	"	"	"	"	
Naphthalene	"	ND	----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	1.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	0.500	"	"	"	"	"	
n-Butylbenzene	"	ND	----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	----	1.00	"	"	"	"	"	
n-Propylbenzene	"	ND	----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	ND	----	2.00	"	"	"	"	"	
<i>Surrogate(s): 4-BFB</i>			<i>100%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>1,2-DCA-d4</i>			<i>101%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Dibromofluoromethane</i>			<i>98.6%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>
<i>Toluene-d8</i>			<i>98.7%</i>		<i>80 - 120 %</i>	<i>"</i>				<i>"</i>

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/12/07 18:15

**Gasoline Hydrocarbons per NW TPH-Gx Method and BTEX per EPA Method 8021B - Laboratory Quality Control Results**  
 TestAmerica Portland

**QC Batch: 7120050      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7120050-BLK1)</b>								<b>Extracted: 12/03/07 15:38</b>						
Gasoline Range Hydrocarbons	NW-G, 8021B	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/03/07 22:22	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 90.4%</i>		<i>Limits: 50-150%</i>		<i>"</i>							12/03/07 22:22	
<i>4-BFB (PID)</i>		<i>89.4%</i>		<i>70-130%</i>		<i>"</i>							"	
<b>LCS (7120050-BS2)</b>								<b>Extracted: 12/03/07 15:38</b>						
Gasoline Range Hydrocarbons	NW-G, 8021B	427	---	80.0	ug/l	1x	--	500	85.5%	(70-130)	--	--	12/03/07 21:27	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 97.6%</i>		<i>Limits: 50-150%</i>		<i>"</i>							12/03/07 21:27	
<b>LCS Dup (7120050-BSD2)</b>								<b>Extracted: 12/03/07 15:38</b>						
Gasoline Range Hydrocarbons	NW-G, 8021B	449	---	80.0	ug/l	1x	--	500	89.7%	(70-130)	4.80% (40)		12/03/07 21:55	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 99.0%</i>		<i>Limits: 50-150%</i>		<i>"</i>							12/03/07 21:55	
<i>4-BFB (PID)</i>		<i>95.1%</i>		<i>70-130%</i>		<i>"</i>							"	
<b>Duplicate (7120050-DUP1)</b>				<b>QC Source: PQK1047-02</b>				<b>Extracted: 12/03/07 15:38</b>						
Gasoline Range Hydrocarbons	NW-G, 8021B	7070	---	400	ug/l	5x	7130	--	--	--	0.880% (40)		12/04/07 00:12	
<i>Surrogate(s): 4-BFB (FID)</i>		<i>Recovery: 105%</i>		<i>Limits: 50-150%</i>		<i>1x</i>							12/04/07 00:12	

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/12/07 18:15
Portland, OR 97224	Project Manager: Paul Stull	

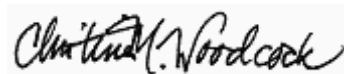
**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica Portland

**QC Batch: 7120002      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7120002-BLK1)</b>													<b>Extracted: 12/01/07 09:19</b>	
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	12/01/07 12:12	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 80-120%</i>									<i>12/01/07 12:12</i>	
<i>1,2-DCA-d4</i>		<i>104%</i>		<i>80-120%</i>									<i>"</i>	
<i>Dibromofluoromethane</i>		<i>102%</i>		<i>80-120%</i>									<i>"</i>	
<i>Toluene-d8</i>		<i>98.1%</i>		<i>80-120%</i>									<i>"</i>	

<b>LCS (7120002-BS1)</b>													<b>Extracted: 12/01/07 09:19</b>		<b>MNR1</b>
1,2-Dibromoethane	EPA 8260B	21.4	---	0.500	ug/l	1x	--	20.0	107%	(80-140)	--	--	12/01/07 10:50		
1,2-Dichloroethane	"	20.9	---	0.500	"	"	--	"	105%	(75-135)	--	--	"		
Benzene	"	19.5	---	0.200	"	"	--	"	97.5%	(80-120)	--	--	"		
Toluene	"	19.8	---	0.500	"	"	--	"	99.1%	(80-125)	--	--	"		
Ethylbenzene	"	20.8	---	0.500	"	"	--	"	104%	(80-130)	--	--	"		
Xylenes (total)	"	63.7	---	1.00	"	"	--	60.0	106%	"	--	--	"		
Methyl tert-butyl ether	"	21.4	---	2.00	"	"	--	20.0	107%	(80-135)	--	--	"		
Naphthalene	"	28.2	---	2.00	"	"	--	"	141%	(60-150)	--	--	"		
1,2,4-Trimethylbenzene	"	21.2	---	1.00	"	"	--	"	106%	(75-125)	--	--	"		
1,3,5-Trimethylbenzene	"	21.1	---	0.500	"	"	--	"	105%	(75-135)	--	--	"		
Isopropylbenzene	"	20.6	---	2.00	"	"	--	"	103%	(80-140)	--	--	"		
n-Propylbenzene	"	20.8	---	0.500	"	"	--	"	104%	(80-130)	--	--	"		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 104%</i>		<i>Limits: 80-120%</i>									<i>12/01/07 10:50</i>		
<i>1,2-DCA-d4</i>		<i>102%</i>		<i>80-120%</i>									<i>"</i>		
<i>Dibromofluoromethane</i>		<i>102%</i>		<i>80-120%</i>									<i>"</i>		
<i>Toluene-d8</i>		<i>99.4%</i>		<i>80-120%</i>									<i>"</i>		

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/12/07 18:15
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica Portland

**QC Batch: 7120002      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS Dup (7120002-BSD1)</b>										Extracted: 12/01/07 09:19			MNR1	
1,2-Dibromoethane	EPA 8260B	21.5	---	0.500	ug/l	1x	--	20.0	108%	(80-140)	0.559% (25)		12/01/07 11:17	
1,2-Dichloroethane	"	20.7	---	0.500	"	"	--	"	104%	(75-135)	1.01%	"	"	
Benzene	"	19.2	---	0.200	"	"	--	"	96.0%	(80-120)	1.55%	"	"	
Toluene	"	19.5	---	0.500	"	"	--	"	97.6%	(80-125)	1.58%	"	"	
Ethylbenzene	"	20.5	---	0.500	"	"	--	"	102%	(80-130)	1.60%	"	"	
Xylenes (total)	"	62.4	---	1.00	"	"	--	60.0	104%	"	2.00%	"	"	
Methyl tert-butyl ether	"	21.8	---	2.00	"	"	--	20.0	109%	(80-135)	1.62%	"	"	
Naphthalene	"	30.0	---	2.00	"	"	--	"	150%	(60-150)	6.29%	"	"	
1,2,4-Trimethylbenzene	"	21.0	---	1.00	"	"	--	"	105%	(75-125)	0.712%	"	"	
1,3,5-Trimethylbenzene	"	20.8	---	0.500	"	"	--	"	104%	(75-135)	1.38%	"	"	
Isopropylbenzene	"	20.4	---	2.00	"	"	--	"	102%	(80-140)	0.780%	"	"	
n-Propylbenzene	"	20.5	---	0.500	"	"	--	"	103%	(80-130)	1.40%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 80-120%</i>	"								<i>12/01/07 11:17</i>	
<i>1,2-DCA-d4</i>		<i>103%</i>		<i>80-120%</i>	"								"	
<i>Dibromofluoromethane</i>		<i>101%</i>		<i>80-120%</i>	"								"	
<i>Toluene-d8</i>		<i>97.6%</i>		<i>80-120%</i>	"								"	

**QC Batch: 7120045      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (7120045-BLK1)</b>										Extracted: 12/03/07 13:47				
1,2-Dibromoethane	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	12/03/07 16:51	
1,2-Dichloroethane	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	0.200	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methyl tert-butyl ether	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
n-Propylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
p-Isopropyltoluene	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 103%</i>		<i>Limits: 80-120%</i>	"								<i>12/03/07 16:51</i>	

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



<b>AMEC- Portland</b>	Project Name: <b>Fred Meyer Port Orchard</b>	Report Created:
7376 SW Durham Road	Project Number: 9-61M-10282-0	12/12/07 18:15
Portland, OR 97224	Project Manager: Paul Stull	

**Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Quality Control Results**  
TestAmerica Portland

**QC Batch: 7120045      Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (7120045-BLK1)** Extracted: 12/03/07 13:47

<i>Surrogate(s): 1,2-DCA-d4</i>	<i>Recovery: 98.2%</i>	<i>Limits: 80-120%</i>	<i>1x</i>	<i>12/03/07 16:51</i>
<i>Dibromofluoromethane</i>	<i>101%</i>	<i>80-120%</i>	<i>"</i>	<i>"</i>
<i>Toluene-d8</i>	<i>99.7%</i>	<i>80-120%</i>	<i>"</i>	<i>"</i>

**LCS (7120045-BS1)** Extracted: 12/03/07 13:47 MNR1

1,2-Dibromoethane	EPA 8260B	20.0	---	0.500	ug/l	1x	--	20.0	100%	(80-140)	--	--	12/03/07 15:57	
1,2-Dichloroethane	"	19.4	---	0.500	"	"	--	"	97.2%	(75-135)	--	--	"	
Benzene	"	19.7	---	0.200	"	"	--	"	98.6%	(80-120)	--	--	"	
Toluene	"	20.2	---	0.500	"	"	--	"	101%	(80-125)	--	--	"	
Ethylbenzene	"	20.7	---	0.500	"	"	--	"	104%	(80-130)	--	--	"	
Xylenes (total)	"	63.2	---	1.00	"	"	--	60.0	105%	"	--	--	"	
Methyl tert-butyl ether	"	19.7	---	2.00	"	"	--	20.0	98.4%	(80-135)	--	--	"	
Naphthalene	"	20.3	---	2.00	"	"	--	"	102%	(60-150)	--	--	"	
1,2,4-Trimethylbenzene	"	21.2	---	1.00	"	"	--	"	106%	(75-125)	--	--	"	
1,3,5-Trimethylbenzene	"	21.1	---	0.500	"	"	--	"	106%	(75-135)	--	--	"	
Isopropylbenzene	"	20.5	---	2.00	"	"	--	"	103%	(80-140)	--	--	"	
n-Propylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(80-130)	--	--	"	

*Surrogate(s): 4-BFB      Recovery: 102%      Limits: 80-120%      "      12/03/07 15:57*

*1,2-DCA-d4      92.6%      80-120%      "      "*

*Dibromofluoromethane      97.6%      80-120%      "      "*

*Toluene-d8      99.8%      80-120%      "      "*

**LCS Dup (7120045-BS1)** Extracted: 12/03/07 13:47 MNR1

1,2-Dibromoethane	EPA 8260B	20.0	---	0.500	ug/l	1x	--	20.0	99.9%	(80-140)	0.0500% (25)		12/03/07 14:42	
1,2-Dichloroethane	"	19.5	---	0.500	"	"	--	"	97.4%	(75-135)	0.308%	"	"	
Benzene	"	19.3	---	0.200	"	"	--	"	96.4%	(80-120)	2.26%	"	"	
Toluene	"	19.8	---	0.500	"	"	--	"	99.0%	(80-125)	1.90%	"	"	
Ethylbenzene	"	20.5	---	0.500	"	"	--	"	103%	(80-130)	0.969%	"	"	
Xylenes (total)	"	62.2	---	1.00	"	"	--	60.0	104%	"	1.67%	"	"	
Methyl tert-butyl ether	"	20.1	---	2.00	"	"	--	20.0	101%	(80-135)	2.21%	"	"	
Naphthalene	"	25.3	---	2.00	"	"	--	"	127%	(60-150)	21.9%	"	"	
1,2,4-Trimethylbenzene	"	20.8	---	1.00	"	"	--	"	104%	(75-125)	1.95%	"	"	
1,3,5-Trimethylbenzene	"	20.6	---	0.500	"	"	--	"	103%	(75-135)	2.69%	"	"	
Isopropylbenzene	"	20.2	---	2.00	"	"	--	"	101%	(80-140)	1.77%	"	"	
n-Propylbenzene	"	20.3	---	0.500	"	"	--	"	102%	(80-130)	1.17%	"	"	

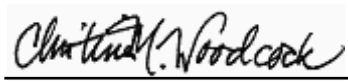
*Surrogate(s): 4-BFB      Recovery: 104%      Limits: 80-120%      "      12/03/07 14:42*

*1,2-DCA-d4      95.8%      80-120%      "      "*

*Dibromofluoromethane      99.4%      80-120%      "      "*

*Toluene-d8      101%      80-120%      "      "*

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



**AMEC- Portland**

7376 SW Durham Road  
Portland, OR 97224

Project Name: **Fred Meyer Port Orchard**  
Project Number: 9-61M-10282-0  
Project Manager: Paul Stull

Report Created:  
12/12/07 18:15

## Notes and Definitions

### Report Specific Notes:

- MNR1 - There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- RL7 - Sample required dilution due to high concentrations of target analyte.

### Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Portland



Christina Woodcock, Project Manager

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report shall not be reproduced except in full, without the written approval of the laboratory.*



## CHAIN OF CUSTODY

PROJECT (PMP) Port of Astoria Fred Meyer 961102820				PROJECT No.		ANALYSIS REQUESTED (circle, check box or write preferred method in box)														
REPORT TO: Paul Stull				PHONE No.																
PROJECT MANAGER " "				PHONE No.																
SAMPLER'S NAME (please print) Jason Garover				PHONE No.																
SAMPLER'S SIGNATURE 						8260 Suite ** NWTPH-GX NWTPH-GX 8021 *														
SAMPLE I.D.	DATE	TIME	MARK	PRESERVATIVE	CONTAINERS															
					No.															VOL.
1. MW105	11/20/07	1345	140	HCL/ICE																
2. MW103	"	1430																		
3. TB	NA	NA																		
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				

SAMPLE RECEIPT		LABORATORY			TURNAROUND TIME		QC Reporting Requirements		COMMENTS / INSTRUCTIONS	
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #			<input type="checkbox"/> 8 HOUR <input type="checkbox"/> 24 HOUR <input checked="" type="checkbox"/> 1 WEEK J4 <input type="checkbox"/> 2 WEEK (standard) <input type="checkbox"/> OTHER _____				* NWTPH-GX AND ** 8260 Suite = BTEX, MTBE, EDL, LID B, NAPH., AIRY BENZE SUITE	
CONDITION OF CONTAINERS		CARRIER								
CONDITION OF SEALS		DOT DESTINATION								
REINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION			DATE	TIME		PAGE 1 OF 1
		11/29/07	1100	1.			11-29-07	1330		
		11/29/07	1655	2.			11/29/07	16:55		

# TestAmerica Sample Receipt Checklist

Cooler ID(s): \_\_\_\_\_

Received by: \_\_\_\_\_

Unpacked by: \_\_\_\_\_

Logged-in by: \_\_\_\_\_

Work Order No. POX1047

*(section A)*

*(section B)*

Date: 11/29/07

Date: 11/29/07

Date: 11/29/07

Client: AMEC

Time: 16:55

Initials: SI

Initials: SI

Project: Fred Meyer Port Orchard

Initials: SI

Temperature out of range: \_\_\_\_\_

\*\*\*ESI Clients (see Section C)

- Not enough Ice
- No Ice
- Ice Melted
- Win 4 Hours
- Other: \_\_\_\_\_

Cooler Temperature (IR): 2.3 °C plastic glass NA (oil/air samples, ESI client)

Temperature Blank: \_\_\_\_\_ °C

**A** Custody Seals: (# \_\_\_\_\_)

Signature: Y  N  None Dated: \_\_\_\_\_

Received from:  TA Courier

Container Type:  
 #Cooler(s)  
 #Box(s)  
 None ( #Other: \_\_\_\_\_)

Senvoy  
 UPS  
 Fed Ex  
 Client

Coolant Type:  
 Gel Ice  
 Loose Ice  
 None

TDP  
 DHL  
 SDS  
 Mid-Valley

Packing Material:  
 Bubble Bags  
 Styrofoam Cubbies  
 None ( Other: \_\_\_\_\_)

GS/TA  
 GS/Senvoy  
 Other: \_\_\_\_\_

**B**

Sample Status:  
 (If N circled, see NOD)

General:

Intact?  Y  N  
 # Containers Match COC?  Y  N none given  
 IDs Match COC?  Y  N

For Analyses Requested:

Correct Type & Preservation?  Y  N  
 Adequate Volume?  Y  N  
 Within Hold Time?  Y  N

Volatiles/ Oil Quality:

VOAs/ Syringes free of Headspace?  Y  N  NA  
 TB on COC? not provided  Y  N  NA

Metals:

HNO3 Preserved?  Y  N  NA  
 Dissolved Metals Filtered?  Y  N  NA

**C** \*\*\*ESI Clients Only:

Temperature Blank \_\_\_\_\_ °C not provided

All preserved bottles checked Y  N  NA (voas/soils/all unp)  
 All preserved accordingly? Y  N (see NOD)  NA (voas/soils/all unp)

FED EX/ UPS: Was the tracking paper keepable? YES  NO

If circled NO, what is the Tracking number? \_\_\_\_\_

FED EX Goldstreak UPS DHL Other: \_\_\_\_\_

Project Managers

Comments: \_\_\_\_\_

PM Reviewed \_\_\_\_\_ (Initial/Date)



# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Friday, May 23, 2008

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M10282-0

Enclosed are the results of analyses for samples received by the laboratory on 4/17/2008 at 3:15:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [AGreiner@Apex-Labs.com](mailto:AGreiner@Apex-Labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Allison Greiner For Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
05/23/08 09:35

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-041508	A804182-01	Water	04/15/08 14:05	04/17/08 15:15
MW105-041508	A804182-02	Water	04/15/08 13:00	04/17/08 15:15
TB	A804182-03	Water	04/15/08 12:00	04/17/08 15:15

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Allison Greiner For Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW103-041508 (A804182-01)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	4.02	---	0.0800	mg/L	1	04/22/08 15:07	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 118 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			93 %	Limits: 50-150 %	"	"	"	
<b>MW105-041508 (A804182-02)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	04/22/08 15:39	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 119 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			92 %	Limits: 50-150 %	"	"	"	
<b>TB (A804182-03)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	04/22/08 17:13	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 119 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			92 %	Limits: 50-150 %	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Allison Greiner For Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-041508 (A804182-01)</b>			<b>Matrix: Water</b>					
Acetone	ND	---	20.0	ug/L	1	04/22/08 15:07	EPA 8260B	
Benzene	ND	---	0.500	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	0.500	"	"	"	"	
Bromodichloromethane	ND	---	0.500	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	13.0	"	"	"	"	
n-Butylbenzene	ND	---	5.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
<b>Chloroethane</b>	<b>2.23</b>	---	2.00	"	"	"	"	
Chloroform	ND	---	5.00	"	"	"	"	
Chloromethane	ND	---	2.00	"	"	"	"	
2-Chlorotoluene	ND	---	0.500	"	"	"	"	
4-Chlorotoluene	ND	---	0.500	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	"	"	
Dibromochloromethane	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	0.500	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	0.500	"	"	"	"	
2,2-Dichloropropane	ND	---	0.500	"	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-041508 (A804182-01)</b>								
<b>Matrix: Water</b>								
1,1-Dichloropropene	ND	---	0.500	ug/L	1	"	EPA 8260B	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	"	"	
<b>Ethylbenzene</b>	<b>51.8</b>	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
<b>Isopropylbenzene</b>	<b>11.4</b>	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.500	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
<b>Naphthalene</b>	<b>27.5</b>	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>33.3</b>	---	0.500	"	"	"	"	
Styrene	ND	---	0.500	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	1.00	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	"	"	
Toluene	ND	---	2.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	1.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>63.5</b>	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
<b>m,p-Xylene</b>	<b>197</b>	---	1.00	"	"	"	"	
<b>o-Xylene</b>	<b>54.9</b>	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW103-041508 (A804182-01RE1)</b>			<b>Matrix: Water</b>					
<b>1,2,4-Trimethylbenzene</b>	<b>453</b>	---	10.0	ug/L	10	04/22/08 16:10	EPA 8260B	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 80-120 %</i>	1	"	"	"
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"
<b>MW105-041508 (A804182-02)</b>			<b>Matrix: Water</b>					
Acetone	ND	---	20.0	ug/L	1	04/22/08 15:39	EPA 8260B	
<b>Benzene</b>	<b>2.89</b>	---	0.500	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	0.500	"	"	"	"	
Bromodichloromethane	ND	---	0.500	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	5.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	ND	---	2.00	"	"	"	"	
Chloroform	ND	---	5.00	"	"	"	"	
Chloromethane	ND	---	2.00	"	"	"	"	
2-Chlorotoluene	ND	---	0.500	"	"	"	"	
4-Chlorotoluene	ND	---	0.500	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	"	"	
Dibromochloromethane	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	0.500	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc

Project: Fred Meyer (FMPO) Port Orchard

7376 SW Durham Road  
 Portland, OR 97224

Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-041508 (A804182-02)</b>			<b>Matrix: Water</b>					
1,1-Dichloroethene	ND	---	0.500	ug/L	1	"	EPA 8260B	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	0.500	"	"	"	"	
2,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,1-Dichloropropene	ND	---	0.500	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.500	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Styrene	ND	---	0.500	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	1.00	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	"	"	
Toluene	ND	---	2.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	1.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW105-041508 (A804182-02)</b>			<b>Matrix: Water</b>					
o-Xylene	ND	---	0.500	ug/L	1	"	EPA 8260B	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW105-041508 (A804182-02RE1)</b>			<b>Matrix: Water</b>					
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	04/22/08 16:42	EPA 8260B	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>TB (A804182-03)</b>			<b>Matrix: Water</b>					
Acetone	ND	---	20.0	ug/L	1	04/22/08 17:13	EPA 8260B	
Benzene	ND	---	0.500	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	0.500	"	"	"	"	
Bromodichloromethane	ND	---	0.500	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	5.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	ND	---	2.00	"	"	"	"	
Chloroform	ND	---	5.00	"	"	"	"	
Chloromethane	ND	---	2.00	"	"	"	"	
2-Chlorotoluene	ND	---	0.500	"	"	"	"	
4-Chlorotoluene	ND	---	0.500	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	"	"	
Dibromochloromethane	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>TB (A804182-03)</b>			<b>Matrix: Water</b>					
Dibromomethane	ND	---	0.500	ug/L	1	"	EPA 8260B	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	0.500	"	"	"	"	
2,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,1-Dichloropropene	ND	---	0.500	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	0.500	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Styrene	ND	---	0.500	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	1.00	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	"	"	
Toluene	ND	---	2.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>TB (A804182-03)</b>			<b>Matrix: Water</b>					
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	"	EPA 8260B	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	1.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Allison Greiner For Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8040246 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8040246-BLK1)</b>						<b>Analyzed: 04/22/08 11:49</b>						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 122 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<i>1,4-Difluorobenzene (Sur)</i>			<i>94 %</i>		<i>50-150 %</i>		<i>"</i>					
<b>LCS (8040246-BS2)</b>						<b>Analyzed: 04/22/08 11:16</b>						
NWTPH-Gx												
Gasoline Range Organics	0.465	---	0.0800	mg/L	1	0.500	---	93	70-130%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 125 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>					
<i>1,4-Difluorobenzene (Sur)</i>			<i>94 %</i>		<i>50-150 %</i>		<i>"</i>					

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 05/23/08 09:35

## SAMPLE PREPARATION INFORMATION

### Apex Laboratories

#### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>EPA 5030B</b>							
Batch: 8040246							
A804182-01	Water	NWTPH-Gx	04/15/08 14:05	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-02	Water	NWTPH-Gx	04/15/08 13:00	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-03	Water	NWTPH-Gx	04/15/08 12:00	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00

#### Volatile Organic Compounds by EPA 8260B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>EPA 5030B</b>							
Batch: 8040246							
A804182-01	Water	EPA 8260B	04/15/08 14:05	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-01RE1	Water	EPA 8260B	04/15/08 14:05	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-02	Water	EPA 8260B	04/15/08 13:00	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-02RE1	Water	EPA 8260B	04/15/08 13:00	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00
A804182-03	Water	EPA 8260B	04/15/08 12:00	04/22/08 08:43	5mL/5mL	5mL/5mL	1.00

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
05/23/08 09:35

## Notes and Definitions

### Qualifiers:

### Notes and Conventions:

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.

Batch QC Unless specifically stated, all analyses include full Batch QC, including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates, in order to meet or exceed method and regulatory requirements. This report contains only results for Batch QC derived from samples included in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Allison Greiner For Philip Nerenberg, Lab Director



# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Monday, July 7, 2008

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M10282-0

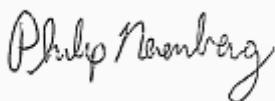
Enclosed are the results of analyses for work order A806180, which was received by the laboratory on 6/20/2008 at 12:45:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M10282-0  
Project Manager: Paul Stull

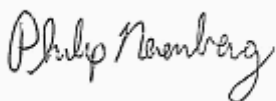
Reported:  
07/07/08 17:22

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-061908	A806180-01	Water	06/19/08 11:10	06/20/08 12:45
MW105-061908	A806180-02	Water	06/19/08 11:55	06/20/08 12:45

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

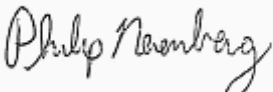
Reported:  
 07/07/08 17:22

## ANALYTICAL SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW103-061908 (A806180-01RE1)</b>			<b>Matrix: Water</b>					
<b>Gasoline Range Organics</b>	<b>10.6</b>	---	0.800	mg/L	10	06/24/08 13:38	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 101 %</i>	<i>Limits: 50-150 %</i>	1	"	"	"
<i>1,4-Difluorobenzene (Sur)</i>			<i>99 %</i>	<i>Limits: 50-150 %</i>	"	"	"	"
<b>MW105-061908 (A806180-02)</b>			<b>Matrix: Water</b>					
<b>Gasoline Range Organics</b>	<b>ND</b>	---	0.0800	mg/L	1	06/23/08 21:02	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 94 %</i>	<i>Limits: 50-150 %</i>	"	"	"	"
<i>1,4-Difluorobenzene (Sur)</i>			<i>96 %</i>	<i>Limits: 50-150 %</i>	"	"	"	"

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

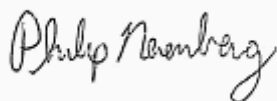
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-061908 (A806180-01)</b>			<b>Matrix: Water</b>					
Acetone	ND	---	20.0	ug/L	1	06/23/08 20:31	EPA 8260B	
Benzene	ND	---	0.250	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	0.500	"	"	"	"	
Bromodichloromethane	ND	---	0.500	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
<b>sec-Butylbenzene</b>	<b>6.76</b>	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
<b>Chloroethane</b>	<b>3.37</b>	---	2.00	"	"	"	"	
Chloroform	ND	---	2.00	"	"	"	"	
Chloromethane	ND	---	5.00	"	"	"	"	
2-Chlorotoluene	ND	---	0.500	"	"	"	"	
4-Chlorotoluene	ND	---	0.500	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	2.00	"	"	"	"	
Dibromochloromethane	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	0.500	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	0.500	"	"	"	"	
2,2-Dichloropropane	ND	---	0.500	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

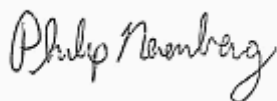
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-061908 (A806180-01)</b>								
<b>Matrix: Water</b>								
1,1-Dichloropropene	ND	---	0.500	ug/L	1	"	EPA 8260B	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
<b>Ethylbenzene</b>	<b>91.1</b>	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	2.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
<b>Isopropylbenzene</b>	<b>20.9</b>	---	0.500	"	"	"	"	
<b>4-Isopropyltoluene</b>	<b>26.0</b>	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
<b>Naphthalene</b>	<b>41.3</b>	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>81.1</b>	---	0.500	"	"	"	"	
Styrene	ND	---	0.500	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	1.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
<b>m,p-Xylene</b>	<b>323</b>	---	1.00	"	"	"	"	
<b>o-Xylene</b>	<b>48.0</b>	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>97 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>Limits: 80-120 %</i>		"	"	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
07/07/08 17:22

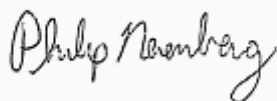
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-061908 (A806180-01RE1)</b>			<b>Matrix: Water</b>					
1,2,4-Trimethylbenzene	783	---	10.0	ug/L	10	06/24/08 13:38	EPA 8260B	
1,3,5-Trimethylbenzene	272	---	10.0	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW105-061908 (A806180-02RE1)</b>			<b>Matrix: Water</b>					
Acetone	ND	---	20.0	ug/L	1	06/24/08 17:10	EPA 8260B	
<b>Benzene</b>	<b>3.44</b>	---	0.250	"	"	"	"	
Bromobenzene	ND	---	0.500	"	"	"	"	
Bromochloromethane	ND	---	0.500	"	"	"	"	
Bromodichloromethane	ND	---	0.500	"	"	"	"	
Bromoform	ND	---	1.00	"	"	"	"	
Bromomethane	ND	---	5.00	"	"	"	"	
2-Butanone (MEK)	ND	---	10.0	"	"	"	"	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	ND	---	2.00	"	"	"	"	
Chloroform	ND	---	2.00	"	"	"	"	
Chloromethane	ND	---	5.00	"	"	"	"	
2-Chlorotoluene	ND	---	0.500	"	"	"	"	
4-Chlorotoluene	ND	---	0.500	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	---	2.00	"	"	"	"	
Dibromochloromethane	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
Dibromomethane	ND	---	0.500	"	"	"	"	
1,2-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,3-Dichlorobenzene	ND	---	0.500	"	"	"	"	
1,4-Dichlorobenzene	ND	---	0.500	"	"	"	"	
Dichlorodifluoromethane	ND	---	1.00	"	"	"	"	
1,1-Dichloroethane	ND	---	0.500	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

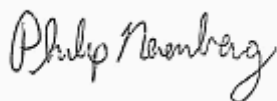
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-061908 (A806180-02RE1)</b>			<b>Matrix: Water</b>					
1,2-Dichloroethane (EDC)	ND	---	0.500	ug/L	1	"	EPA 8260B	
1,1-Dichloroethene	ND	---	0.500	"	"	"	"	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	"	"	
1,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,3-Dichloropropane	ND	---	0.500	"	"	"	"	
2,2-Dichloropropane	ND	---	0.500	"	"	"	"	
1,1-Dichloropropene	ND	---	0.500	"	"	"	"	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	2.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Styrene	ND	---	0.500	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	"	"	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	"	"	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	"	"	
1,1,1-Trichloroethane	ND	---	0.500	"	"	"	"	
1,1,2-Trichloroethane	ND	---	0.500	"	"	"	"	
Trichloroethene (TCE)	ND	---	0.500	"	"	"	"	
Trichlorofluoromethane	ND	---	1.00	"	"	"	"	
1,2,3-Trichloropropane	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

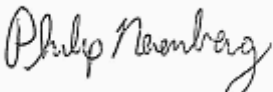
Reported:  
 07/07/08 17:22

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW105-061908 (A806180-02RE1)</b>			<b>Matrix: Water</b>					
Vinyl chloride	ND	---	0.500	ug/L	1	"	EPA 8260B	
m,p-Xylene	ND	---	1.00	"	"	"	"	
<b>o-Xylene</b>	<b>0.540</b>	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>102 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>110 %</i>		<i>Limits: 80-120 %</i>		"	"	"

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	------	--------------	---------------	------	-------------	-----	-----------	-------

#### Batch 8060207 - EPA 5030B

#### Water

##### Blank (8060207-BLK1)

Analyzed: 06/23/08 12:25

##### NWTPH-Gx

Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 96 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			96 %		50-150 %		"					

##### LCS (8060207-BS2)

Analyzed: 06/23/08 11:55

##### NWTPH-Gx

Gasoline Range Organics	0.446	---	0.0800	mg/L	1	0.500	---	89	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 97 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			95 %		50-150 %		"					

#### Batch 8060228 - EPA 5030B

#### Water

##### Blank (8060228-BLK1)

Analyzed: 06/24/08 11:05

##### NWTPH-Gx

Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 98 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			98 %		50-150 %		"					

##### LCS (8060228-BS2)

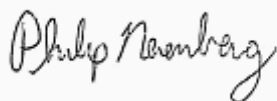
Analyzed: 06/24/08 10:34

##### NWTPH-Gx

Gasoline Range Organics	0.449	---	0.0800	mg/L	1	0.500	---	90	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 98 %		Limits: 50-150 %		Dilution: 1x					
1,4-Difluorobenzene (Sur)			98 %		50-150 %		"					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

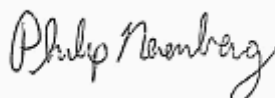
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060207 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8060207-BLK1)</b>						<b>Analyzed: 06/23/08 12:25</b>						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

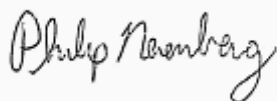
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060207 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8060207-BLK1)</b>						<b>Analyzed: 06/23/08 12:25</b>						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 95 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	97 %	80-120 %	"
Toluene-d8 (Surr)	100 %	80-120 %	"
4-Bromofluorobenzene (Surr)	106 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

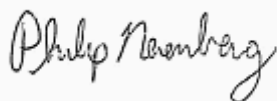
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060207 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8060207-BS1)</b>						<b>Analyzed: 06/23/08 11:25</b>						
<b>EPA 8260B</b>												
Acetone	29.2	---	20.0	ug/L	1	40.0	---	73	70-130%	---	---	
Benzene	18.8	---	0.250	"	"	20.0	---	94	"	---	---	
Bromobenzene	18.7	---	0.500	"	"	"	---	94	"	---	---	
Bromochloromethane	18.7	---	0.500	"	"	"	---	94	"	---	---	
Bromodichloromethane	17.8	---	0.500	"	"	"	---	89	"	---	---	
Bromoform	19.0	---	1.00	"	"	"	---	95	"	---	---	
Bromomethane	18.7	---	5.00	"	"	"	---	94	"	---	---	
2-Butanone (MEK)	29.0	---	10.0	"	"	40.0	---	73	"	---	---	
n-Butylbenzene	16.3	---	1.00	"	"	20.0	---	82	"	---	---	
sec-Butylbenzene	18.4	---	1.00	"	"	"	---	92	"	---	---	
tert-Butylbenzene	18.1	---	0.500	"	"	"	---	90	"	---	---	
Carbon tetrachloride	18.7	---	0.500	"	"	"	---	93	"	---	---	
Chlorobenzene	18.3	---	0.500	"	"	"	---	92	"	---	---	
Chloroethane	20.8	---	2.00	"	"	"	---	104	"	---	---	
Chloroform	17.3	---	2.00	"	"	"	---	86	"	---	---	
Chloromethane	17.6	---	5.00	"	"	"	---	88	"	---	---	
2-Chlorotoluene	20.8	---	0.500	"	"	"	---	104	"	---	---	
4-Chlorotoluene	20.2	---	0.500	"	"	"	---	101	"	---	---	
1,2-Dibromo-3-chloropropane	15.1	---	2.00	"	"	"	---	76	"	---	---	
Dibromochloromethane	19.3	---	0.500	"	"	"	---	96	"	---	---	
1,2-Dibromoethane (EDB)	19.0	---	0.500	"	"	"	---	95	"	---	---	
Dibromomethane	17.4	---	0.500	"	"	"	---	87	"	---	---	
1,2-Dichlorobenzene	20.2	---	0.500	"	"	"	---	101	"	---	---	
1,3-Dichlorobenzene	20.6	---	0.500	"	"	"	---	103	"	---	---	
1,4-Dichlorobenzene	18.6	---	0.500	"	"	"	---	93	"	---	---	
Dichlorodifluoromethane	17.7	---	1.00	"	"	"	---	89	"	---	---	
1,1-Dichloroethane	18.3	---	0.500	"	"	"	---	91	"	---	---	
1,2-Dichloroethane (EDC)	18.1	---	0.500	"	"	"	---	90	"	---	---	
1,1-Dichloroethene	18.5	---	0.500	"	"	"	---	93	"	---	---	
cis-1,2-Dichloroethene	19.2	---	0.500	"	"	"	---	96	"	---	---	
trans-1,2-Dichloroethene	18.6	---	0.500	"	"	"	---	93	"	---	---	
1,2-Dichloropropane	17.8	---	0.500	"	"	"	---	89	"	---	---	
1,3-Dichloropropane	19.5	---	0.500	"	"	"	---	97	"	---	---	
2,2-Dichloropropane	21.6	---	0.500	"	"	"	---	108	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

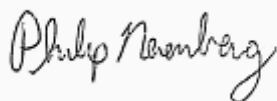
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060207 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8060207-BS1)</b>						<b>Analyzed: 06/23/08 11:25</b>						
1,1-Dichloropropene	17.8	---	0.500	ug/L	"	"	---	89	"	---	---	
cis-1,3-Dichloropropene	17.4	---	0.500	"	"	"	---	87	"	---	---	
trans-1,3-Dichloropropene	18.2	---	0.500	"	"	"	---	91	"	---	---	
Ethylbenzene	19.9	---	0.500	"	"	"	---	100	"	---	---	
Hexachlorobutadiene	18.4	---	2.00	"	"	"	---	92	"	---	---	
2-Hexanone	28.2	---	10.0	"	"	40.0	---	70	"	---	---	
Isopropylbenzene	18.3	---	0.500	"	"	20.0	---	92	"	---	---	
4-Isopropyltoluene	17.7	---	0.500	"	"	"	---	88	"	---	---	
4-Methyl-2-pentanone (MiBK)	30.4	---	10.0	"	"	40.0	---	76	"	---	---	
Methyl tert-butyl ether (MTBE)	16.5	---	2.00	"	"	20.0	---	82	"	---	---	
Methylene chloride	16.8	---	5.00	"	"	"	---	84	"	---	---	
Naphthalene	17.5	---	5.00	"	"	"	---	87	"	---	---	
n-Propylbenzene	20.7	---	0.500	"	"	"	---	104	"	---	---	
Styrene	17.5	---	0.500	"	"	"	---	88	"	---	---	
1,1,1,2-Tetrachloroethane	18.8	---	0.500	"	"	"	---	94	"	---	---	
1,1,2,2-Tetrachloroethane	18.0	---	0.500	"	"	"	---	90	"	---	---	
Tetrachloroethene (PCE)	18.4	---	0.500	"	"	"	---	92	"	---	---	
Toluene	17.0	---	1.00	"	"	"	---	85	"	---	---	
1,2,3-Trichlorobenzene	15.9	---	2.00	"	"	"	---	80	"	---	---	
1,2,4-Trichlorobenzene	16.6	---	2.00	"	"	"	---	83	"	---	---	
1,1,1-Trichloroethane	18.9	---	0.500	"	"	"	---	95	"	---	---	
1,1,2-Trichloroethane	17.8	---	0.500	"	"	"	---	89	"	---	---	
Trichloroethene (TCE)	17.5	---	0.500	"	"	"	---	88	"	---	---	
Trichlorofluoromethane	18.6	---	1.00	"	"	"	---	93	"	---	---	
1,2,3-Trichloropropane	18.3	---	1.00	"	"	"	---	92	"	---	---	
1,2,4-Trimethylbenzene	18.8	---	1.00	"	"	"	---	94	"	---	---	
1,3,5-Trimethylbenzene	18.8	---	1.00	"	"	"	---	94	"	---	---	
Vinyl chloride	18.3	---	0.500	"	"	"	---	92	"	---	---	
m,p-Xylene	35.4	---	1.00	"	"	40.0	---	88	"	---	---	
o-Xylene	17.8	---	0.500	"	"	20.0	---	89	"	---	---	

Surr: Dibromofluoromethane (Surr) Recovery: 94 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 96 % 80-120 % "  
 Toluene-d8 (Surr) 99 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 97 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

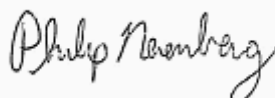
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8060228-BLK1)</b>						<b>Analyzed: 06/24/08 11:05</b>						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

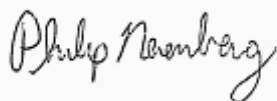
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8060228-BLK1)</b>						<b>Analyzed: 06/24/08 11:05</b>						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 99 % 80-120 % "  
 Toluene-d8 (Surr) 101 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 105 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

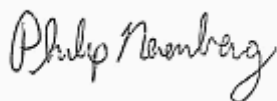
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8060228-BS1)</b>						<b>Analyzed: 06/24/08 10:00</b>						
<b>EPA 8260B</b>												
Acetone	33.7	---	20.0	ug/L	1	40.0	---	84	70-130%	---	---	
Benzene	19.6	---	0.250	"	"	20.0	---	98	"	---	---	
Bromobenzene	18.6	---	0.500	"	"	"	---	93	"	---	---	
Bromochloromethane	20.2	---	0.500	"	"	"	---	101	"	---	---	
Bromodichloromethane	19.0	---	0.500	"	"	"	---	95	"	---	---	
Bromoform	18.7	---	1.00	"	"	"	---	94	"	---	---	
Bromomethane	20.4	---	5.00	"	"	"	---	102	"	---	---	
2-Butanone (MEK)	31.0	---	10.0	"	"	40.0	---	78	"	---	---	
n-Butylbenzene	15.9	---	1.00	"	"	20.0	---	80	"	---	---	
sec-Butylbenzene	18.3	---	1.00	"	"	"	---	91	"	---	---	
tert-Butylbenzene	17.7	---	0.500	"	"	"	---	89	"	---	---	
Carbon tetrachloride	19.6	---	0.500	"	"	"	---	98	"	---	---	
Chlorobenzene	18.3	---	0.500	"	"	"	---	91	"	---	---	
Chloroethane	21.4	---	2.00	"	"	"	---	107	"	---	---	
Chloroform	18.2	---	2.00	"	"	"	---	91	"	---	---	
Chloromethane	18.2	---	5.00	"	"	"	---	91	"	---	---	
2-Chlorotoluene	20.2	---	0.500	"	"	"	---	101	"	---	---	
4-Chlorotoluene	20.6	---	0.500	"	"	"	---	103	"	---	---	
1,2-Dibromo-3-chloropropane	14.3	---	2.00	"	"	"	---	72	"	---	---	
Dibromochloromethane	18.7	---	0.500	"	"	"	---	93	"	---	---	
1,2-Dibromoethane (EDB)	19.0	---	0.500	"	"	"	---	95	"	---	---	
Dibromomethane	18.8	---	0.500	"	"	"	---	94	"	---	---	
1,2-Dichlorobenzene	19.8	---	0.500	"	"	"	---	99	"	---	---	
1,3-Dichlorobenzene	20.3	---	0.500	"	"	"	---	102	"	---	---	
1,4-Dichlorobenzene	18.5	---	0.500	"	"	"	---	92	"	---	---	
Dichlorodifluoromethane	18.4	---	1.00	"	"	"	---	92	"	---	---	
1,1-Dichloroethane	18.5	---	0.500	"	"	"	---	93	"	---	---	
1,2-Dichloroethane (EDC)	19.1	---	0.500	"	"	"	---	95	"	---	---	
1,1-Dichloroethene	19.7	---	0.500	"	"	"	---	98	"	---	---	
cis-1,2-Dichloroethene	19.9	---	0.500	"	"	"	---	99	"	---	---	
trans-1,2-Dichloroethene	19.4	---	0.500	"	"	"	---	97	"	---	---	
1,2-Dichloropropane	18.8	---	0.500	"	"	"	---	94	"	---	---	
1,3-Dichloropropane	19.7	---	0.500	"	"	"	---	99	"	---	---	
2,2-Dichloropropane	19.9	---	0.500	"	"	"	---	100	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

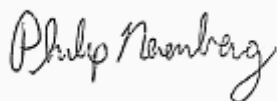
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8060228-BS1)</b>						<b>Analyzed: 06/24/08 10:00</b>						
1,1-Dichloropropene	17.7	---	0.500	ug/L	"	"	---	88	"	---	---	
cis-1,3-Dichloropropene	17.2	---	0.500	"	"	"	---	86	"	---	---	
trans-1,3-Dichloropropene	18.0	---	0.500	"	"	"	---	90	"	---	---	
Ethylbenzene	20.3	---	0.500	"	"	"	---	102	"	---	---	
Hexachlorobutadiene	18.2	---	2.00	"	"	"	---	91	"	---	---	
2-Hexanone	28.2	---	10.0	"	"	40.0	---	71	"	---	---	
Isopropylbenzene	17.8	---	0.500	"	"	20.0	---	89	"	---	---	
4-Isopropyltoluene	17.5	---	0.500	"	"	"	---	88	"	---	---	
4-Methyl-2-pentanone (MiBK)	29.8	---	10.0	"	"	40.0	---	74	"	---	---	
Methyl tert-butyl ether (MTBE)	16.3	---	2.00	"	"	20.0	---	82	"	---	---	
Methylene chloride	17.0	---	5.00	"	"	"	---	85	"	---	---	
Naphthalene	16.2	---	5.00	"	"	"	---	81	"	---	---	
n-Propylbenzene	20.8	---	0.500	"	"	"	---	104	"	---	---	
Styrene	17.3	---	0.500	"	"	"	---	86	"	---	---	
1,1,1,2-Tetrachloroethane	19.7	---	0.500	"	"	"	---	98	"	---	---	
1,1,2,2-Tetrachloroethane	18.6	---	0.500	"	"	"	---	93	"	---	---	
Tetrachloroethene (PCE)	18.7	---	0.500	"	"	"	---	93	"	---	---	
Toluene	17.5	---	1.00	"	"	"	---	88	"	---	---	
1,2,3-Trichlorobenzene	15.6	---	2.00	"	"	"	---	78	"	---	---	
1,2,4-Trichlorobenzene	16.0	---	2.00	"	"	"	---	80	"	---	---	
1,1,1-Trichloroethane	19.7	---	0.500	"	"	"	---	98	"	---	---	
1,1,2-Trichloroethane	18.0	---	0.500	"	"	"	---	90	"	---	---	
Trichloroethene (TCE)	18.6	---	0.500	"	"	"	---	93	"	---	---	
Trichlorofluoromethane	19.8	---	1.00	"	"	"	---	99	"	---	---	
1,2,3-Trichloropropane	18.4	---	1.00	"	"	"	---	92	"	---	---	
1,2,4-Trimethylbenzene	19.1	---	1.00	"	"	"	---	96	"	---	---	
1,3,5-Trimethylbenzene	19.1	---	1.00	"	"	"	---	95	"	---	---	
Vinyl chloride	19.1	---	0.500	"	"	"	---	95	"	---	---	
m,p-Xylene	35.6	---	1.00	"	"	40.0	---	89	"	---	---	
o-Xylene	17.4	---	0.500	"	"	20.0	---	87	"	---	---	

Surr: Dibromofluoromethane (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 99 % 80-120 % "  
 Toluene-d8 (Surr) 99 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 99 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

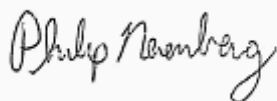
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (8060228-MS1)</b>			<b>Source: A806180-02RE1</b>			<b>Analyzed: 06/24/08 17:40</b>						
<b>EPA 8260B</b>												
Acetone	22.4	---	20.0	ug/L	1	40.0	ND	56	70-130%	---	---	Q-01
Benzene	24.6	---	0.250	"	"	20.0	3.44	106	"	---	---	
Bromobenzene	19.1	---	0.500	"	"	"	ND	95	"	---	---	
Bromochloromethane	20.4	---	0.500	"	"	"	ND	102	"	---	---	
Bromodichloromethane	19.7	---	0.500	"	"	"	ND	98	"	---	---	
Bromoform	17.0	---	1.00	"	"	"	ND	85	"	---	---	
Bromomethane	22.2	---	5.00	"	"	"	ND	111	"	---	---	
2-Butanone (MEK)	25.7	---	10.0	"	"	40.0	ND	64	"	---	---	Q-01
n-Butylbenzene	15.4	---	1.00	"	"	20.0	ND	77	"	---	---	
sec-Butylbenzene	18.3	---	1.00	"	"	"	ND	92	"	---	---	
tert-Butylbenzene	18.1	---	0.500	"	"	"	ND	91	"	---	---	
Carbon tetrachloride	20.5	---	0.500	"	"	"	ND	102	"	---	---	
Chlorobenzene	19.0	---	0.500	"	"	"	ND	95	"	---	---	
Chloroethane	23.0	---	2.00	"	"	"	ND	115	"	---	---	
Chloroform	19.2	---	2.00	"	"	"	ND	96	"	---	---	
Chloromethane	19.2	---	5.00	"	"	"	ND	96	"	---	---	
2-Chlorotoluene	20.6	---	0.500	"	"	"	ND	103	"	---	---	
4-Chlorotoluene	20.4	---	0.500	"	"	"	ND	102	"	---	---	
1,2-Dibromo-3-chloropropane	14.0	---	2.00	"	"	"	ND	70	"	---	---	
Dibromochloromethane	18.0	---	0.500	"	"	"	ND	90	"	---	---	
1,2-Dibromoethane (EDB)	18.7	---	0.500	"	"	"	ND	93	"	---	---	
Dibromomethane	19.2	---	0.500	"	"	"	ND	96	"	---	---	
1,2-Dichlorobenzene	19.8	---	0.500	"	"	"	ND	99	"	---	---	
1,3-Dichlorobenzene	20.2	---	0.500	"	"	"	ND	101	"	---	---	
1,4-Dichlorobenzene	18.4	---	0.500	"	"	"	ND	92	"	---	---	
Dichlorodifluoromethane	20.4	---	1.00	"	"	"	ND	102	"	---	---	
1,1-Dichloroethane	19.5	---	0.500	"	"	"	ND	97	"	---	---	
1,2-Dichloroethane (EDC)	20.6	---	0.500	"	"	"	ND	103	"	---	---	
1,1-Dichloroethene	20.5	---	0.500	"	"	"	ND	103	"	---	---	
cis-1,2-Dichloroethene	20.5	---	0.500	"	"	"	ND	103	"	---	---	
trans-1,2-Dichloroethene	19.7	---	0.500	"	"	"	ND	98	"	---	---	
1,2-Dichloropropane	19.2	---	0.500	"	"	"	ND	96	"	---	---	
1,3-Dichloropropane	19.5	---	0.500	"	"	"	ND	97	"	---	---	
2,2-Dichloropropane	20.0	---	0.500	"	"	"	ND	100	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/07/08 17:22

## QUALITY CONTROL (QC) SAMPLE RESULTS

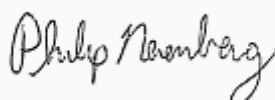
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8060228 - EPA 5030B</b>												
						<b>Water</b>						
<b>Matrix Spike (8060228-MS1)</b>			<b>Source: A806180-02RE1</b>			<b>Analyzed: 06/24/08 17:40</b>						
1,1-Dichloropropene	19.0	---	0.500	ug/L	"	"	ND	95	"	---	---	
cis-1,3-Dichloropropene	16.1	---	0.500	"	"	"	ND	80	"	---	---	
trans-1,3-Dichloropropene	17.5	---	0.500	"	"	"	ND	88	"	---	---	
Ethylbenzene	20.5	---	0.500	"	"	"	ND	102	"	---	---	
Hexachlorobutadiene	15.6	---	2.00	"	"	"	ND	78	"	---	---	
2-Hexanone	24.2	---	10.0	"	"	40.0	ND	60	"	---	---	Q-01
Isopropylbenzene	17.8	---	0.500	"	"	20.0	ND	89	"	---	---	
4-Isopropyltoluene	16.5	---	0.500	"	"	"	ND	83	"	---	---	
4-Methyl-2-pentanone (MiBK)	29.2	---	10.0	"	"	40.0	ND	73	"	---	---	
Methyl tert-butyl ether (MTBE)	15.7	---	2.00	"	"	20.0	ND	78	"	---	---	
Methylene chloride	17.8	---	5.00	"	"	"	ND	89	"	---	---	
Naphthalene	13.2	---	5.00	"	"	"	ND	66	"	---	---	Q-01
n-Propylbenzene	20.8	---	0.500	"	"	"	ND	104	"	---	---	
Styrene	7.88	---	0.500	"	"	"	ND	39	"	---	---	Q-01
1,1,1,2-Tetrachloroethane	19.6	---	0.500	"	"	"	ND	98	"	---	---	
1,1,2,2-Tetrachloroethane	18.8	---	0.500	"	"	"	ND	94	"	---	---	
Tetrachloroethene (PCE)	19.1	---	0.500	"	"	"	ND	96	"	---	---	
Toluene	17.6	---	1.00	"	"	"	ND	88	"	---	---	
1,2,3-Trichlorobenzene	13.4	---	2.00	"	"	"	ND	67	"	---	---	Q-01
1,2,4-Trichlorobenzene	13.6	---	2.00	"	"	"	ND	68	"	---	---	Q-01
1,1,1-Trichloroethane	21.4	---	0.500	"	"	"	ND	107	"	---	---	
1,1,2-Trichloroethane	18.6	---	0.500	"	"	"	ND	93	"	---	---	
Trichloroethene (TCE)	19.5	---	0.500	"	"	"	ND	98	"	---	---	
Trichlorofluoromethane	21.6	---	1.00	"	"	"	ND	108	"	---	---	
1,2,3-Trichloropropane	18.2	---	1.00	"	"	"	ND	91	"	---	---	
1,2,4-Trimethylbenzene	14.8	---	1.00	"	"	"	0.320	72	"	---	---	
1,3,5-Trimethylbenzene	17.5	---	1.00	"	"	"	ND	88	"	---	---	
Vinyl chloride	20.5	---	0.500	"	"	"	ND	102	"	---	---	
m,p-Xylene	34.9	---	1.00	"	"	40.0	0.530	86	"	---	---	
o-Xylene	17.7	---	0.500	"	"	20.0	0.540	86	"	---	---	

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>99 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>97 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>98 %</i>	<i>80-120 %</i>	<i>"</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
 Project Manager: Paul Stull

**Reported:**  
 07/07/08 17:22

### SAMPLE PREPARATION INFORMATION

#### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8060207</b>							
A806180-02	Water	NWTPH-Gx	06/19/08 11:55	06/23/08 10:42	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8060228</b>							
A806180-01RE1	Water	NWTPH-Gx	06/19/08 11:10	06/24/08 09:08	5mL/5mL	5mL/5mL	1.00

#### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8060207</b>							
A806180-01	Water	EPA 8260B	06/19/08 11:10	06/23/08 10:42	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8060228</b>							
A806180-01RE1	Water	EPA 8260B	06/19/08 11:10	06/24/08 09:08	5mL/5mL	5mL/5mL	1.00
A806180-02RE1	Water	EPA 8260B	06/19/08 11:55	06/24/08 09:08	5mL/5mL	5mL/5mL	1.00

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
07/07/08 17:22

## Notes and Definitions

### Qualifiers:

Q-01 The percent recovery and/or RPD was outside acceptance limits for this spiked sample. The batch was accepted based on LCS recovery.

### Notes and Conventions:

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

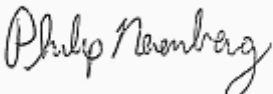
RPD Relative Percent Difference

MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.

Batch Unless specifically stated, all analyses include full Batch QC, including Sample Duplicates, Matrix Spikes and/or Matrix Spike  
QC Duplicates, in order to meet or exceed method and regulatory requirements. This report contains only results for Batch QC derived from samples included in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
07/07/08 17:22

Lab # **A866186** coc 1 of 1

### CHAIN OF CUSTODY

### APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: **AMEC** Project Mgr: **Paul Stull** Project Name: **Fred Meyer Port** Project # **961M10282-0**  
 Address: **7376 SW Durham Rd Port, Or** Phone: **629-8400** Fax: **626-7899** Email: **Paul.Stull@Amec.co**

Sampled by: **JASON GARDNER** (F-17)

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTR-HCD	NWTR-D	NWTR-CX	BTEX	\$360 RHDM VOCS	\$360 HAP VOCS	\$360 VOCS	\$370 SIM PAHS	8082 PCBs	8081 Chlor. Pest	RCRA Metals (9)	Priority Metals (13)	AL, SH, AS, BA, BI, BR, CR, CU, CO, CA, CE, FE, PB, HG, MG, MN, NI, NR, K, SC, AG, NA, TR, V, ZN	TCLP Metals (8)	1200-COLS	1200-Z		
MW103-061908		6/19/08	11:00 W		4			X														X X 8260 suite	
MW105-061908		6/19/08	11:55 W		4			X															

SPECIAL INSTRUCTIONS:

Normal Turn Around Time (TAT) = 5-10 Business Days

TAT Requested (circle): 24 HR 48 HR 72 HR 4 DAY 5 DAY Other: **50**

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: **JASON GARDNER** (Signature) Date: **6/19/08**  
 Title: **Lab Dir**  
 Company: **AMEC**

RECEIVED BY: **Paul Stull** (Signature) Date: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Company: \_\_\_\_\_

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Wednesday, October 15, 2008

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M10282-0

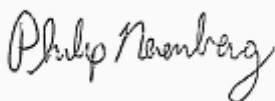
Enclosed are the results of analyses for work order A809173, which was received by the laboratory on 9/17/2008 at 1:50:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M10282-0  
Project Manager: Paul Stull

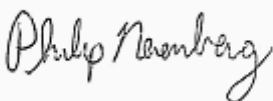
Reported:  
10/15/08 16:57

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-091608	A809173-01	Water	09/16/08 10:35	09/17/08 13:50
MW105-091608	A809173-02	Water	09/16/08 11:15	09/17/08 13:50
AS9-091608	A809173-03	Water	09/16/08 12:00	09/17/08 13:50
AS5-091608	A809173-04	Water	09/16/08 12:50	09/17/08 13:50
AS10-091608	A809173-05	Water	09/16/08 13:35	09/17/08 13:50
EB-091608	A809173-06	Water	09/16/08 14:15	09/17/08 13:50

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

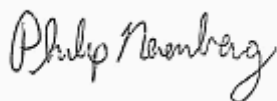
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-091608 (A809173-01) Matrix: Water</b>								
Gasoline Range Organics	2.57	---	0.800	mg/L	10	09/26/08 00:51	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 103 %	Limits: 50-150 %	1	"	"	"
1,4-Difluorobenzene (Sur)			99 %	Limits: 50-150 %	"	"	"	"
<b>MW105-091608 (A809173-02) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/26/08 01:21	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 104 %	Limits: 50-150 %	"	"	"	"
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	"
<b>AS9-091608 (A809173-03) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/26/08 01:51	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %	"	"	"	"
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	"
<b>AS5-091608 (A809173-04) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/26/08 02:22	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 102 %	Limits: 50-150 %	"	"	"	"
1,4-Difluorobenzene (Sur)			98 %	Limits: 50-150 %	"	"	"	"
<b>AS10-091608 (A809173-05) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/26/08 02:52	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 104 %	Limits: 50-150 %	"	"	"	"
1,4-Difluorobenzene (Sur)			97 %	Limits: 50-150 %	"	"	"	"
<b>EB-091608 (A809173-06) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/26/08 03:22	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 105 %	Limits: 50-150 %	"	"	"	"
1,4-Difluorobenzene (Sur)			101 %	Limits: 50-150 %	"	"	"	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

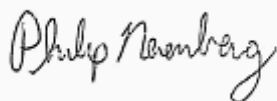
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-091608 (A809173-01RE1) Matrix: Water</b>								
Benzene	ND	---	0.500	ug/L	2	09/26/08 12:28	EPA 8260B	
Toluene	ND	---	2.00	"	"	"	"	
Ethylbenzene	24.8	---	1.00	"	"	"	"	
Xylenes, total	207	---	3.00	"	"	"	"	
Naphthalene	22.3	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	"	"	
Isopropylbenzene	3.30	---	1.00	"	"	"	"	
n-Propylbenzene	8.90	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	282	---	2.00	"	"	"	"	
1,3,5-Trimethylbenzene	96.0	---	2.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	1.00	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	1.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		1	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>102 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<b>MW105-091608 (A809173-02) Matrix: Water</b>								
Benzene	ND	---	0.250	ug/L	1	09/26/08 01:21	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>104 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 80-120 %</i>		"	"	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

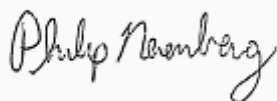
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW105-091608 (A809173-02) Matrix: Water</b>								
<i>Surrogate: 4-Bromofluorobenzene (Surr)</i>			<i>Recovery: 114 %</i>	<i>Limits: 80-120 %</i>	1	"	EPA 8260B	
<b>AS9-091608 (A809173-03) Matrix: Water</b>								
Benzene	ND	---	0.250	ug/L	1	09/26/08 01:51	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>AS5-091608 (A809173-04) Matrix: Water</b>								
Benzene	ND	---	0.250	ug/L	1	09/26/08 02:22	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

## ANALYTICAL SAMPLE RESULTS

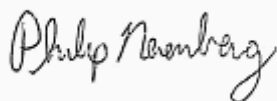
### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>AS5-091608 (A809173-04)</b>			<b>Matrix: Water</b>					
1,2-Dichloroethane (EDC)	ND	---	0.500	ug/L	1	"	EPA 8260B	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>		<i>Limits: 80-120 %</i>		"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>		<i>Limits: 80-120 %</i>		"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>		<i>Limits: 80-120 %</i>		"	
<b>AS10-091608 (A809173-05)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/26/08 02:52	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>		<i>Limits: 80-120 %</i>		"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>		<i>Limits: 80-120 %</i>		"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>		<i>Limits: 80-120 %</i>		"	

<b>EB-091608 (A809173-06)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/26/08 03:22	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

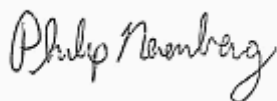
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>EB-091608 (A809173-06)</b>								
<b>Matrix: Water</b>								
n-Propylbenzene	ND	---	0.500	ug/L	1	"	EPA 8260B	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>1,4-Difluorobenzene (Surr)</i>		<i>107 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>Limits: 80-120 %</i>		"	"	"
<i>4-Bromofluorobenzene (Surr)</i>		<i>112 %</i>		<i>Limits: 80-120 %</i>		"	"	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
10/15/08 16:57

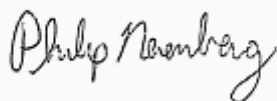
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW103-091608 (A809173-01)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	10.1	---	10.0	ug/L	10	09/26/08 00:51	EPA 8260B	
sec-Butylbenzene	ND	---	100	"	"	"	"	
tert-Butylbenzene	ND	---	5.00	"	"	"	"	
4-Isopropyltoluene	ND	---	10.0	"	"	"	"	
<b>MW105-091608 (A809173-02)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 01:21	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<b>AS9-091608 (A809173-03)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 01:51	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<b>AS5-091608 (A809173-04)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 02:22	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<b>AS10-091608 (A809173-05)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 02:52	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<b>EB-091608 (A809173-06)</b>			<b>Matrix: Water</b>					<b>A-02</b>
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 03:22	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director


<b>Amec Earth and Environmental, Inc</b> 7376 SW Durham Road Portland, OR 97224	Project: <b>Fred Meyer (FMPO) Port Orchard</b> Project Number: 961M10282-0 Project Manager: Paul Stull	<b>Reported:</b> 10/15/08 16:57
---	--	------------------------------------

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>EB-091608 (A809173-06)</b>			<b>Matrix: Water</b>					<b>A-02</b>
tert-Butylbenzene	ND	---	0.500	ug/L	1	"	EPA 8260B	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

**Reported:**  
 10/15/08 16:57

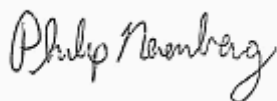
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090307 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8090307-BLK1)</b>						<b>Analyzed: 09/25/08 20:50</b>						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>96 %</i>		<i>50-150 %</i>		<i>"</i>						
<b>LCS (8090307-BS2)</b>						<b>Analyzed: 09/25/08 20:20</b>						
NWTPH-Gx												
Gasoline Range Organics	0.585	---	0.0800	mg/L	1	0.500	---	117	70-130%	---	---	---
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>94 %</i>		<i>50-150 %</i>		<i>"</i>						

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
10/15/08 16:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090307 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8090307-BLK1)</b>						<b>Analyzed: 09/25/08 20:50</b>						
<b>EPA 8260B</b>												
Benzene	ND	---	0.250	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	---
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---

Surr: Dibromofluoromethane (Surr) Recovery: 103 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 102 % 80-120 % "  
 Toluene-d8 (Surr) 100 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 105 % 80-120 % "

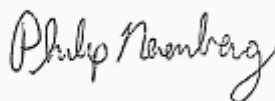
### LCS (8090307-BS1) Analyzed: 09/25/08 19:50

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>EPA 8260B</b>												
Benzene	21.0	---	0.250	ug/L	1	20.0	---	105	70-130%	---	---	---
Toluene	19.7	---	1.00	"	"	"	---	99	"	---	---	---
Ethylbenzene	21.3	---	0.500	"	"	"	---	106	"	---	---	---
Xylenes, total	68.3	---	1.50	"	"	60.0	---	114	"	---	---	---
Naphthalene	25.2	---	5.00	"	"	20.0	---	126	"	---	---	---
Methyl tert-butyl ether (MTBE)	23.4	---	1.00	"	"	"	---	117	"	---	---	---
Isopropylbenzene	22.4	---	0.500	"	"	"	---	112	"	---	---	---
n-Propylbenzene	22.2	---	0.500	"	"	"	---	111	"	---	---	---
1,2,4-Trimethylbenzene	22.3	---	1.00	"	"	"	---	111	"	---	---	---
1,3,5-Trimethylbenzene	23.2	---	1.00	"	"	"	---	116	"	---	---	---
1,2-Dibromoethane (EDB)	20.8	---	0.500	"	"	"	---	104	"	---	---	---
1,2-Dichloroethane (EDC)	20.2	---	0.500	"	"	"	---	101	"	---	---	---

Surr: Dibromofluoromethane (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 101 % 80-120 % "  
 Toluene-d8 (Surr) 98 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
 Project Manager: Paul Stull

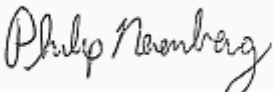
**Reported:**  
 10/15/08 16:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090307 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8090307-BS1)</b>						<b>Analyzed: 09/25/08 19:50</b>						
<i>Surr: 4-Bromofluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
10/15/08 16:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090313 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8090313-BLK1)</b>						<b>Analyzed: 09/26/08 11:58</b>						
<b>EPA 8260B</b>												
Benzene	ND	---	0.250	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	---
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---

Surr: Dibromofluoromethane (Surr) Recovery: 106 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 103 % 80-120 % "  
 Toluene-d8 (Surr) 98 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 107 % 80-120 % "

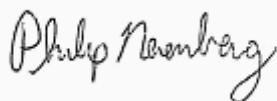
**LCS (8090313-BS1)** Analyzed: 09/26/08 10:57

<b>EPA 8260B</b>												
Benzene	21.8	---	0.250	ug/L	1	20.0	---	109	70-130%	---	---	---
Toluene	20.4	---	1.00	"	"	"	---	102	"	---	---	---
Ethylbenzene	21.8	---	0.500	"	"	"	---	109	"	---	---	---
Xylenes, total	69.6	---	1.50	"	"	60.0	---	116	"	---	---	---
Naphthalene	21.7	---	5.00	"	"	20.0	---	109	"	---	---	---
Methyl tert-butyl ether (MTBE)	23.8	---	1.00	"	"	"	---	119	"	---	---	---
Isopropylbenzene	22.5	---	0.500	"	"	"	---	112	"	---	---	---
n-Propylbenzene	22.5	---	0.500	"	"	"	---	112	"	---	---	---
1,2,4-Trimethylbenzene	22.2	---	1.00	"	"	"	---	111	"	---	---	---
1,3,5-Trimethylbenzene	23.1	---	1.00	"	"	"	---	115	"	---	---	---
1,2-Dibromoethane (EDB)	22.1	---	0.500	"	"	"	---	111	"	---	---	---
1,2-Dichloroethane (EDC)	22.0	---	0.500	"	"	"	---	110	"	---	---	---

Surr: Dibromofluoromethane (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 102 % 80-120 % "  
 Toluene-d8 (Surr) 98 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
 Project Manager: Paul Stull

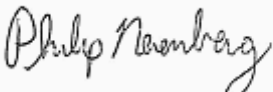
**Reported:**  
 10/15/08 16:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090313 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (8090313-BS1)</b>						<b>Analyzed: 09/26/08 10:57</b>						
<i>Surr: 4-Bromofluorobenzene (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

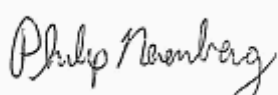
Reported:  
 10/15/08 16:57

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 8090307 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (8090307-BLK1)</b>						<b>Analyzed: 09/25/08 20:50</b>						
<b>EPA 8260B</b>												
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	10.0	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
<b>LCS (8090307-BS1)</b>						<b>Analyzed: 09/25/08 19:50</b>						
<b>EPA 8260B</b>												
n-Butylbenzene	22.5	---	1.00	ug/L	1	20.0	---	112	70-130%	---	---	---
sec-Butylbenzene	23.0	---	10.0	"	"	"	---	115	"	---	---	---
tert-Butylbenzene	21.8	---	0.500	"	"	"	---	109	"	---	---	---
4-Isopropyltoluene	22.7	---	1.00	"	"	"	---	113	"	---	---	---

Apex Laboratories



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Paul Stull

Reported:  
 10/15/08 16:57

## SAMPLE PREPARATION INFORMATION

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8090307</b>							
A809173-01	Water	NWTPH-Gx	09/16/08 10:35	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-02	Water	NWTPH-Gx	09/16/08 11:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-03	Water	NWTPH-Gx	09/16/08 12:00	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-04	Water	NWTPH-Gx	09/16/08 12:50	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-05	Water	NWTPH-Gx	09/16/08 13:35	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-06	Water	NWTPH-Gx	09/16/08 14:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00

### RBCA Compounds (BTEX+) by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8090307</b>							
A809173-02	Water	EPA 8260B	09/16/08 11:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-03	Water	EPA 8260B	09/16/08 12:00	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-04	Water	EPA 8260B	09/16/08 12:50	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-05	Water	EPA 8260B	09/16/08 13:35	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-06	Water	EPA 8260B	09/16/08 14:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
<b>Batch: 8090313</b>							
A809173-01RE1	Water	EPA 8260B	09/16/08 10:35	09/26/08 09:09	5mL/5mL	5mL/5mL	1.00

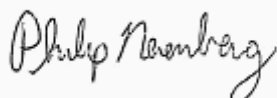
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 8090307</b>							
A809173-01	Water	EPA 8260B	09/16/08 10:35	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-02	Water	EPA 8260B	09/16/08 11:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-03	Water	EPA 8260B	09/16/08 12:00	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-04	Water	EPA 8260B	09/16/08 12:50	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-05	Water	EPA 8260B	09/16/08 13:35	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00
A809173-06	Water	EPA 8260B	09/16/08 14:15	09/25/08 12:48	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
Project Manager: Paul Stull

**Reported:**  
10/15/08 16:57

## Notes and Definitions

### Qualifiers:

A-02 See RBCA Results for Surrogate Recoveries.

### Notes and Conventions:

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis


RPD Relative Percent Difference

MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.

WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.

Batch Unless specifically stated, all analyses include full Batch QC, including Sample Duplicates, Matrix Spikes and/or Matrix Spike  
QC Duplicates, in order to meet or exceed method and regulatory requirements. This report contains only results for Batch QC derived from samples included in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M10282-0  
Project Manager: Paul Stull

Reported:  
10/15/08 16:57

Lab # 1809173 coc 1 of 1

### CHAIN OF CUSTODY

APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: AMEC	Project Mgr: Paul Stull	Project Name: Fred Meyer Port Orchard	Project # 961M10282-0
Address: 7376 SW Durham Rd. Portland, OR 97224	Phone: 503-718-2323	Fax: 503-718-0333	E-mail: Paul.Stull@Amec.com
Sampled by: Jason Gredner	Matrix: Soil	Containers: 4	Limit: 1000 mg/kg
ANALYSIS REQUEST			
SAMPLE ID	DATE	TIME	MATRIX
MW105-091008	01/19/08	1035	W
MW105-11	02	1115	X
AS9-11	03	1200	X
AS10-091026	04/19/08	1250	W
AS10-11	05	1335	X
EG-11	06	1445	X
ANALYSIS REQUEST			
1300-2			X
1300-COLS			X
TCLP Metals (9)			X
As, Cd, Cr, Ni, Pb, Se, V, Zn			X
Mn, Ni, Cu, Fe, Pb			X
M, Sn, As, Ba, Br, Ca			X
Priority Metals (13)			X
RCA Metals (9)			X
8051 Chlor. Post			X
8082 PCBs			X
8270 SIM PAHs			X
8260 VOCs			X
8260 HAP VOCs			X
8260 RHDM VOCs			X
BTEX			X
NWTPH-Gs			X
NWTPH-Dx			X
NWTPH-ICID			X
# OF CONTAINERS			4
MATRIX			W
DATE			01/19/08
TIME			1035
LAB ID #			01
SPECIAL INSTRUCTIONS: * EPA ELUO = GTEX, MATSE, EDC, EDB, NAPH, ALKYL benzene suite			
TAT Requested (circle): 24 HR 48 HR 72 HR 5 DAY Other: 5D		RECEIVED BY: [Signature]	
SAMPLES ARE HELD FOR 30 DAYS		Date: 01/17/08	
RECEIVED BY: [Signature]		Time: 1350	
Project Name: [Signature]		Company: APEX	
Company: AMEC		Company: APEX	

Apex Laboratories

*Philip Nerenberg*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Philip Nerenberg, Lab Director

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Tuesday, February 10, 2009

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 96M-10282-0

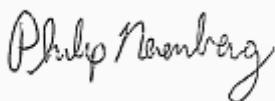
Enclosed are the results of analyses for work order A901169, which was received by the laboratory on 1/26/2009 at 2:10:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 96M-10282-0  
Project Manager: Paul Stull

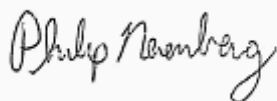
Reported:  
02/10/09 14:47

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-012409	A901169-01	Water	01/24/09 12:05	01/26/09 14:10
MW104A-012409	A901169-02	Water	01/24/09 15:10	01/26/09 14:10
MW105-012409	A901169-03	Water	01/24/09 13:00	01/26/09 14:10
MW106A-012409	A901169-04	Water	01/24/09 13:40	01/26/09 14:10
MW107A-012409	A901169-05	Water	01/24/09 16:05	01/26/09 14:10
MW108A-012409	A901169-06	Water	01/24/09 14:20	01/26/09 14:10

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

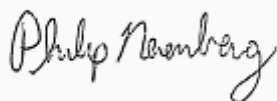
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-012409 (A901169-01)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	0.202	---	0.0800	mg/L	1	01/27/09 19:07	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 110 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			109 %	Limits: 50-150 %	"	"	"	
<b>MW104A-012409 (A901169-02)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/27/09 20:07	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 111 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			111 %	Limits: 50-150 %	"	"	"	
<b>MW105-012409 (A901169-03)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/27/09 20:37	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 111 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			110 %	Limits: 50-150 %	"	"	"	
<b>MW106A-012409 (A901169-04)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	10.9	---	0.800	mg/L	10	01/27/09 21:07	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 113 %	Limits: 50-150 %	1	"	"	
1,4-Difluorobenzene (Sur)			111 %	Limits: 50-150 %	"	"	"	
<b>MW107A-012409 (A901169-05)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/27/09 21:37	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 110 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			113 %	Limits: 50-150 %	"	"	"	
<b>MW108A-012409 (A901169-06)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/27/09 23:38	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			110 %	Limits: 50-150 %	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

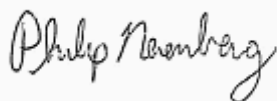
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-012409 (A901169-01)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	01/27/09 19:07	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.620</b>	---	0.500	"	"	"	"	
<b>Xylenes, total</b>	<b>4.36</b>	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>8.11</b>	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>3.24</b>	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>111 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW104A-012409 (A901169-02)</b>			<b>Matrix: Water</b>					
<b>Benzene</b>	<b>1.51</b>	---	0.250	ug/L	1	01/27/09 20:07	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW105-012409 (A901169-03)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	01/27/09 20:37	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

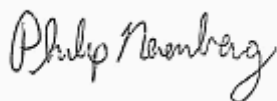
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-012409 (A901169-03)</b>			<b>Matrix: Water</b>					
Ethylbenzene	ND	---	0.500	ug/L	1	"	EPA 8260B	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW106A-012409 (A901169-04)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	2.50	ug/L	10	01/27/09 21:07	EPA 8260B	
Toluene	ND	---	10.0	"	"	"	"	
<b>Ethylbenzene</b>	<b>251</b>	---	5.00	"	"	"	"	
<b>Xylenes, total</b>	<b>938</b>	---	15.0	"	"	"	"	
Naphthalene	ND	---	50.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	10.0	"	"	"	"	
<b>Isopropylbenzene</b>	<b>22.4</b>	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>84.1</b>	---	5.00	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>246</b>	---	10.0	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>193</b>	---	10.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	5.00	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	5.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>114 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW107A-012409 (A901169-05)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	01/27/09 21:37	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

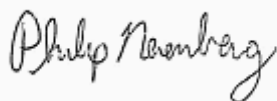
## ANALYTICAL SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW107A-012409 (A901169-05)</b>			<b>Matrix: Water</b>					
Naphthalene	ND	---	5.00	ug/L	1	"	EPA 8260B	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>113 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW108A-012409 (A901169-06)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	01/27/09 23:38	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>111 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

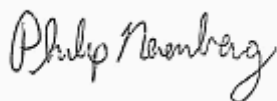
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-012409 (A901169-01)</b>			<b>Matrix: Water</b>					
n-Butylbenzene	ND	---	1.00	ug/L	1	01/27/09 19:07	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>111 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW104A-012409 (A901169-02)</b>			<b>Matrix: Water</b>					
n-Butylbenzene	ND	---	1.00	ug/L	1	01/27/09 20:07	EPA 8260B	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW105-012409 (A901169-03)</b>			<b>Matrix: Water</b>					
n-Butylbenzene	ND	---	1.00	ug/L	1	01/27/09 20:37	EPA 8260B	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>112 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW106A-012409 (A901169-04)</b>			<b>Matrix: Water</b>					
n-Butylbenzene	26.1	---	10.0	ug/L	10	01/27/09 21:07	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	
4-Isopropyltoluene	17.7	---	10.0	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 80-120 %</i>	1	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>114 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<b>MW107A-012409 (A901169-05)</b>			<b>Matrix: Water</b>					
n-Butylbenzene	ND	---	1.00	ug/L	1	01/27/09 21:37	EPA 8260B	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

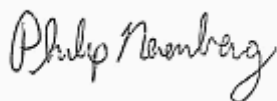
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Units	Dilution	Date Analyzed	Method	Notes
			Limit						
<b>MW107A-012409 (A901169-05)</b>			<b>Matrix: Water</b>						
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 113 %</i>	<i>Limits: 80-120 %</i>	1	"	"	EPA 8260B	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	
<b>MW108A-012409 (A901169-06)</b>			<b>Matrix: Water</b>						
n-Butylbenzene	ND	---	1.00		ug/L	1	01/27/09 23:38	EPA 8260B	
sec-Butylbenzene	ND	---	10.0		"	"	"	"	
4-Isopropyltoluene	ND	---	1.00		"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>111 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

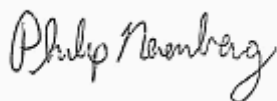
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9010277-BLK1)</b>						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 107 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			109 %	50-150 %		"						
<b>LCS (9010277-BS2)</b>						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:34						
NWTPH-Gx												
Gasoline Range Organics	0.571	---	0.0800	mg/L	1	0.500	---	114	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 108 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			109 %	50-150 %		"						
<b>Duplicate (9010277-DUP2)</b>						Source: A901169-01 Prepared: 01/27/09 12:20 Analyzed: 01/27/09 19:37						
NWTPH-Gx												
Gasoline Range Organics	0.240	---	0.0800	mg/L	1	---	0.202	---	---	17	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 111 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			111 %	50-150 %		"						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
<b>Water</b>												
<b>Blank (9010277-BLK1)</b>												
Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05												
<b>EPA 8260B</b>												
Benzene	ND	---	0.250	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	---
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>109 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>101 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>101 %</i>	<i>80-120 %</i>	<i>"</i>

### LCS (9010277-BS1)

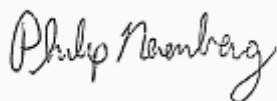
Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:04

<b>EPA 8260B</b>												
Benzene	23.0	---	0.250	ug/L	1	20.0	---	115	70-130%	---	---	---
Toluene	20.3	---	1.00	"	"	"	---	101	"	---	---	---
Ethylbenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	---
Xylenes, total	64.0	---	1.50	"	"	60.0	---	107	"	---	---	---
Naphthalene	21.3	---	5.00	"	"	20.0	---	107	"	---	---	---
Methyl tert-butyl ether (MTBE)	23.2	---	1.00	"	"	"	---	116	"	---	---	---
Isopropylbenzene	19.9	---	0.500	"	"	"	---	100	"	---	---	---
n-Propylbenzene	22.5	---	0.500	"	"	"	---	113	"	---	---	---
1,2,4-Trimethylbenzene	20.8	---	1.00	"	"	"	---	104	"	---	---	---
1,3,5-Trimethylbenzene	20.2	---	1.00	"	"	"	---	101	"	---	---	---
1,2-Dibromoethane (EDB)	21.3	---	0.500	"	"	"	---	106	"	---	---	---
1,2-Dichloroethane (EDC)	20.1	---	0.500	"	"	"	---	100	"	---	---	---

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>108 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>101 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>99 %</i>	<i>80-120 %</i>	<i>"</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (9010277-DUP2)</b>			<b>Source: A901169-01</b>			Prepared: 01/27/09 12:20			Analyzed: 01/27/09 19:37			
<b>EPA 8260B</b>												
Benzene	ND	---	0.250	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	<b>0.660</b>	---	0.500	"	"	---	0.620	---	---	6	30%	
Xylenes, total	<b>4.73</b>	---	1.50	"	"	---	4.36	---	---	8	30%	
Naphthalene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	<b>10.1</b>	---	1.00	"	"	---	8.11	---	---	22	30%	
1,3,5-Trimethylbenzene	<b>3.98</b>	---	1.00	"	"	---	3.24	---	---	20	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>112 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>98 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>99 %</i>	<i>80-120 %</i>	<i>"</i>

### Matrix Spike (9010277-MS1)

Source: A901169-06

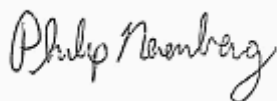
Prepared: 01/27/09 12:20 Analyzed: 01/28/09 00:08

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>EPA 8260B</b>												
Benzene	26.4	---	0.250	ug/L	1	20.0	ND	132	70-130%	---	---	Q-01
Toluene	21.4	---	1.00	"	"	"	ND	107	"	---	---	
Ethylbenzene	21.9	---	0.500	"	"	"	ND	110	"	---	---	
Xylenes, total	64.8	---	1.50	"	"	60.0	ND	108	"	---	---	
Naphthalene	16.4	---	5.00	"	"	20.0	ND	82	"	---	---	
Methyl tert-butyl ether (MTBE)	23.4	---	1.00	"	"	"	ND	117	"	---	---	
Isopropylbenzene	21.2	---	0.500	"	"	"	0.200	105	"	---	---	
n-Propylbenzene	22.2	---	0.500	"	"	"	ND	111	"	---	---	
1,2,4-Trimethylbenzene	16.8	---	1.00	"	"	"	0.210	83	"	---	---	
1,3,5-Trimethylbenzene	16.8	---	1.00	"	"	"	0.190	83	"	---	---	
1,2-Dibromoethane (EDB)	21.5	---	0.500	"	"	"	ND	108	"	---	---	
1,2-Dichloroethane (EDC)	22.0	---	0.500	"	"	"	ND	110	"	---	---	

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>111 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>96 %</i>	<i>80-120 %</i>	<i>"</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 96M-10282-0  
 Project Manager: Paul Stull

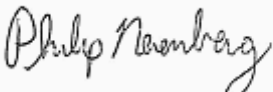
Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

### RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9010277-MS1)</b>			<b>Source: A901169-06</b>			Prepared: 01/27/09 12:20 Analyzed: 01/28/09 00:08						
<i>Surr: 4-Bromofluorobenzene (Surr)</i>			<i>Recovery: 97 % Limits: 80-120 %</i>			<i>Dilution: 1x</i>						

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

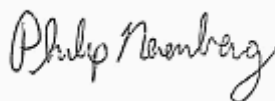
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9010277-BLK1)</b>						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	10.0	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

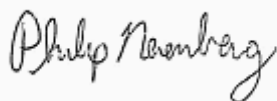
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9010277-BLK1)</b>						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 105 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	109 %	80-120 %	"
Toluene-d8 (Surr)	101 %	80-120 %	"
4-Bromofluorobenzene (Surr)	101 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

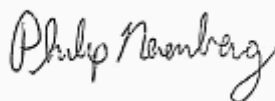
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9010277-BS1)</b>						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:04						
<b>EPA 8260B</b>												
Acetone	54.5	---	20.0	ug/L	1	40.0	---	136	70-130%	---	---	Q-29
Benzene	23.0	---	0.250	"	"	20.0	---	115	"	---	---	
Bromobenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
Bromochloromethane	21.2	---	0.500	"	"	"	---	106	"	---	---	
Bromodichloromethane	22.4	---	0.500	"	"	"	---	112	"	---	---	
Bromoform	19.8	---	1.00	"	"	"	---	99	"	---	---	
Bromomethane	17.6	---	5.00	"	"	"	---	88	"	---	---	
2-Butanone (MEK)	54.2	---	10.0	"	"	40.0	---	135	"	---	---	Q-29
n-Butylbenzene	20.3	---	1.00	"	"	20.0	---	101	"	---	---	
sec-Butylbenzene	20.4	---	10.0	"	"	"	---	102	"	---	---	
tert-Butylbenzene	21.6	---	0.500	"	"	"	---	108	"	---	---	
Carbon tetrachloride	20.8	---	0.500	"	"	"	---	104	"	---	---	
Chlorobenzene	19.5	---	0.500	"	"	"	---	97	"	---	---	
Chloroethane	12.5	---	2.00	"	"	"	---	62	"	---	---	Q-30
Chloroform	20.4	---	2.00	"	"	"	---	102	"	---	---	
Chloromethane	22.0	---	5.00	"	"	"	---	110	"	---	---	
2-Chlorotoluene	21.2	---	0.500	"	"	"	---	106	"	---	---	
4-Chlorotoluene	22.2	---	0.500	"	"	"	---	111	"	---	---	
1,2-Dibromo-3-chloropropane	21.6	---	5.00	"	"	"	---	108	"	---	---	
Dibromochloromethane	20.0	---	0.500	"	"	"	---	100	"	---	---	
1,2-Dibromoethane (EDB)	21.3	---	0.500	"	"	"	---	106	"	---	---	
Dibromomethane	23.0	---	0.500	"	"	"	---	115	"	---	---	
1,2-Dichlorobenzene	21.3	---	0.500	"	"	"	---	106	"	---	---	
1,3-Dichlorobenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
1,4-Dichlorobenzene	19.3	---	0.500	"	"	"	---	96	"	---	---	
Dichlorodifluoromethane	19.5	---	1.00	"	"	"	---	97	"	---	---	
1,1-Dichloroethane	21.0	---	0.500	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	20.1	---	0.500	"	"	"	---	100	"	---	---	
1,1-Dichloroethene	20.1	---	0.500	"	"	"	---	100	"	---	---	
cis-1,2-Dichloroethene	22.4	---	0.500	"	"	"	---	112	"	---	---	
trans-1,2-Dichloroethene	21.3	---	0.500	"	"	"	---	106	"	---	---	
1,2-Dichloropropane	21.9	---	0.500	"	"	"	---	110	"	---	---	
1,3-Dichloropropane	19.7	---	0.500	"	"	"	---	98	"	---	---	
2,2-Dichloropropane	20.9	---	0.500	"	"	"	---	105	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

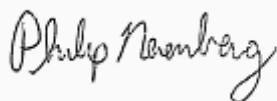
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
<b>Water</b>												
LCS (9010277-BS1) <span style="float: right;">Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:04</span>												
1,1-Dichloropropene	23.2	---	0.500	ug/L	"	"	---	116	"	---	---	
cis-1,3-Dichloropropene	21.1	---	1.00	"	"	"	---	106	"	---	---	
trans-1,3-Dichloropropene	20.7	---	0.500	"	"	"	---	104	"	---	---	
Ethylbenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
Hexachlorobutadiene	20.4	---	5.00	"	"	"	---	102	"	---	---	
2-Hexanone	48.6	---	10.0	"	"	40.0	---	122	"	---	---	
Isopropylbenzene	19.9	---	0.500	"	"	20.0	---	100	"	---	---	
4-Isopropyltoluene	20.0	---	1.00	"	"	"	---	100	"	---	---	
4-Methyl-2-pentanone (MiBK)	48.2	---	10.0	"	"	40.0	---	120	"	---	---	
Methyl tert-butyl ether (MTBE)	23.2	---	1.00	"	"	20.0	---	116	"	---	---	
Methylene chloride	22.4	---	5.00	"	"	"	---	112	"	---	---	
Naphthalene	21.3	---	5.00	"	"	"	---	107	"	---	---	
n-Propylbenzene	22.5	---	0.500	"	"	"	---	113	"	---	---	
Styrene	19.8	---	0.500	"	"	"	---	99	"	---	---	
1,1,1,2-Tetrachloroethane	19.2	---	0.500	"	"	"	---	96	"	---	---	
1,1,2,2-Tetrachloroethane	21.4	---	0.500	"	"	"	---	107	"	---	---	
Tetrachloroethene (PCE)	19.2	---	0.500	"	"	"	---	96	"	---	---	
Toluene	20.3	---	1.00	"	"	"	---	101	"	---	---	
1,2,3-Trichlorobenzene	19.9	---	5.00	"	"	"	---	99	"	---	---	
1,2,4-Trichlorobenzene	21.5	---	5.00	"	"	"	---	107	"	---	---	
1,1,1-Trichloroethane	20.0	---	0.500	"	"	"	---	100	"	---	---	
1,1,2-Trichloroethane	21.0	---	0.500	"	"	"	---	105	"	---	---	
Trichloroethene (TCE)	22.2	---	0.500	"	"	"	---	111	"	---	---	
Trichlorofluoromethane	19.1	---	1.00	"	"	"	---	95	"	---	---	
1,2,3-Trichloropropane	21.3	---	1.00	"	"	"	---	106	"	---	---	
1,2,4-Trimethylbenzene	20.8	---	1.00	"	"	"	---	104	"	---	---	
1,3,5-Trimethylbenzene	20.2	---	1.00	"	"	"	---	101	"	---	---	
Vinyl chloride	23.2	---	0.500	"	"	"	---	116	"	---	---	
m,p-Xylene	43.2	---	1.00	"	"	40.0	---	108	"	---	---	
o-Xylene	20.8	---	0.500	"	"	20.0	---	104	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 104 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	108 %	80-120 %	"
Toluene-d8 (Surr)	101 %	80-120 %	"
4-Bromofluorobenzene (Surr)	99 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

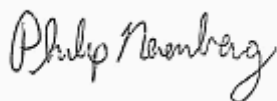
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (9010277-DUP2)</b>			<b>Source: A901169-01</b>			Prepared: 01/27/09 12:20 Analyzed: 01/27/09 19:37						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.250	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	<b>14.4</b>	---	10.0	"	"	---	ND	---	---	---	30%	Q-05
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	10.0	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

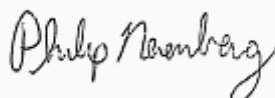
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (9010277-DUP2)</b>			<b>Source: A901169-01</b>			Prepared: 01/27/09 12:20			Analyzed: 01/27/09 19:37			
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Ethylbenzene	<b>0.660</b>	---	0.500	"	"	---	0.620	---	---	6	30%	
Hexachlorobutadiene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Styrene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	<b>10.1</b>	---	1.00	"	"	---	8.11	---	---	22	30%	
1,3,5-Trimethylbenzene	<b>3.98</b>	---	1.00	"	"	---	3.24	---	---	20	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	<b>3.82</b>	---	1.00	"	"	---	3.55	---	---	7	30%	
o-Xylene	<b>0.910</b>	---	0.500	"	"	---	0.810	---	---	12	30%	

Surr: Dibromofluoromethane (Surr)	Recovery: 107 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	112 %	80-120 %	"
Toluene-d8 (Surr)	98 %	80-120 %	"
4-Bromofluorobenzene (Surr)	99 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

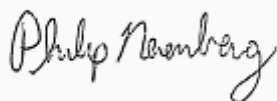
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9010277-MS1)</b>			<b>Source: A901169-06</b>			Prepared: 01/27/09 12:20 Analyzed: 01/28/09 00:08						
<b>EPA 8260B</b>												
Acetone	29.0	---	20.0	ug/L	1	40.0	ND	73	70-130%	---	---	
Benzene	26.4	---	0.250	"	"	20.0	ND	132	"	---	---	Q-01
Bromobenzene	20.5	---	0.500	"	"	"	ND	102	"	---	---	
Bromochloromethane	22.2	---	0.500	"	"	"	ND	111	"	---	---	
Bromodichloromethane	24.9	---	0.500	"	"	"	ND	125	"	---	---	
Bromoform	18.8	---	1.00	"	"	"	0.160	93	"	---	---	
Bromomethane	26.2	---	5.00	"	"	"	ND	131	"	---	---	Q-01
2-Butanone (MEK)	36.4	---	10.0	"	"	40.0	ND	91	"	---	---	
n-Butylbenzene	20.0	---	1.00	"	"	20.0	ND	100	"	---	---	
sec-Butylbenzene	20.7	---	10.0	"	"	"	ND	104	"	---	---	
tert-Butylbenzene	23.5	---	0.500	"	"	"	ND	117	"	---	---	
Carbon tetrachloride	25.2	---	0.500	"	"	"	ND	126	"	---	---	
Chlorobenzene	21.4	---	0.500	"	"	"	ND	107	"	---	---	
Chloroethane	30.4	---	2.00	"	"	"	ND	152	"	---	---	Q-30
Chloroform	23.8	---	2.00	"	"	"	ND	119	"	---	---	
Chloromethane	25.9	---	5.00	"	"	"	ND	130	"	---	---	
2-Chlorotoluene	22.4	---	0.500	"	"	"	ND	112	"	---	---	
4-Chlorotoluene	22.4	---	0.500	"	"	"	ND	112	"	---	---	
1,2-Dibromo-3-chloropropane	18.4	---	5.00	"	"	"	ND	92	"	---	---	
Dibromochloromethane	20.1	---	0.500	"	"	"	ND	100	"	---	---	
1,2-Dibromoethane (EDB)	21.5	---	0.500	"	"	"	ND	108	"	---	---	
Dibromomethane	23.5	---	0.500	"	"	"	ND	118	"	---	---	
1,2-Dichlorobenzene	20.7	---	0.500	"	"	"	ND	103	"	---	---	
1,3-Dichlorobenzene	21.3	---	0.500	"	"	"	ND	106	"	---	---	
1,4-Dichlorobenzene	19.6	---	0.500	"	"	"	ND	98	"	---	---	
Dichlorodifluoromethane	31.6	---	1.00	"	"	"	ND	158	"	---	---	Q-01
1,1-Dichloroethane	23.9	---	0.500	"	"	"	ND	120	"	---	---	
1,2-Dichloroethane (EDC)	22.0	---	0.500	"	"	"	ND	110	"	---	---	
1,1-Dichloroethene	29.2	---	0.500	"	"	"	ND	146	"	---	---	Q-01
cis-1,2-Dichloroethene	25.0	---	0.500	"	"	"	ND	125	"	---	---	
trans-1,2-Dichloroethene	23.1	---	0.500	"	"	"	ND	115	"	---	---	
1,2-Dichloropropane	24.0	---	0.500	"	"	"	ND	120	"	---	---	
1,3-Dichloropropane	20.4	---	0.500	"	"	"	ND	102	"	---	---	
2,2-Dichloropropane	21.9	---	0.500	"	"	"	ND	110	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 96M-10282-0  
 Project Manager: Paul Stull

Reported:  
 02/10/09 14:47

## QUALITY CONTROL (QC) SAMPLE RESULTS

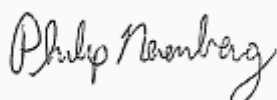
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9010277 - EPA 5030B</b>												
						<b>Water</b>						
<b>Matrix Spike (9010277-MS1)</b>			<b>Source: A901169-06</b>			Prepared: 01/27/09 12:20			Analyzed: 01/28/09 00:08			
1,1-Dichloropropene	26.6	---	0.500	ug/L	"	"	ND	133	"	---	---	Q-01
cis-1,3-Dichloropropene	22.2	---	1.00	"	"	"	ND	111	"	---	---	
trans-1,3-Dichloropropene	20.5	---	0.500	"	"	"	ND	102	"	---	---	
Ethylbenzene	21.9	---	0.500	"	"	"	ND	110	"	---	---	
Hexachlorobutadiene	18.7	---	5.00	"	"	"	ND	94	"	---	---	
2-Hexanone	32.8	---	10.0	"	"	40.0	ND	82	"	---	---	
Isopropylbenzene	21.2	---	0.500	"	"	20.0	0.200	105	"	---	---	
4-Isopropyltoluene	19.7	---	1.00	"	"	"	ND	99	"	---	---	
4-Methyl-2-pentanone (MiBK)	38.1	---	10.0	"	"	40.0	ND	95	"	---	---	
Methyl tert-butyl ether (MTBE)	23.4	---	1.00	"	"	20.0	ND	117	"	---	---	
Methylene chloride	23.4	---	5.00	"	"	"	ND	117	"	---	---	
Naphthalene	16.4	---	5.00	"	"	"	ND	82	"	---	---	
n-Propylbenzene	22.2	---	0.500	"	"	"	ND	111	"	---	---	
Styrene	14.0	---	0.500	"	"	"	ND	70	"	---	---	
1,1,1,2-Tetrachloroethane	21.4	---	0.500	"	"	"	ND	107	"	---	---	
1,1,2,2-Tetrachloroethane	20.4	---	0.500	"	"	"	ND	102	"	---	---	
Tetrachloroethene (PCE)	21.2	---	0.500	"	"	"	ND	106	"	---	---	
Toluene	21.4	---	1.00	"	"	"	ND	107	"	---	---	
1,2,3-Trichlorobenzene	18.5	---	5.00	"	"	"	ND	93	"	---	---	
1,2,4-Trichlorobenzene	19.8	---	5.00	"	"	"	ND	99	"	---	---	
1,1,1-Trichloroethane	24.3	---	0.500	"	"	"	ND	121	"	---	---	
1,1,2-Trichloroethane	21.1	---	0.500	"	"	"	ND	105	"	---	---	
Trichloroethene (TCE)	25.0	---	0.500	"	"	"	ND	125	"	---	---	
Trichlorofluoromethane	25.8	---	1.00	"	"	"	ND	129	"	---	---	
1,2,3-Trichloropropane	18.7	---	1.00	"	"	"	ND	94	"	---	---	
1,2,4-Trimethylbenzene	16.8	---	1.00	"	"	"	0.210	83	"	---	---	
1,3,5-Trimethylbenzene	16.8	---	1.00	"	"	"	0.190	83	"	---	---	
Vinyl chloride	29.4	---	0.500	"	"	"	ND	147	"	---	---	Q-01
m,p-Xylene	44.0	---	1.00	"	"	40.0	ND	110	"	---	---	
o-Xylene	20.7	---	0.500	"	"	20.0	ND	104	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 107 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	111 %	80-120 %	"
Toluene-d8 (Surr)	96 %	80-120 %	"
4-Bromofluorobenzene (Surr)	97 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

## SAMPLE PREPARATION INFORMATION

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9010277</b>							
A901169-01	Water	NWTPH-Gx	01/24/09 12:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-02	Water	NWTPH-Gx	01/24/09 15:10	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-03	Water	NWTPH-Gx	01/24/09 13:00	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-04	Water	NWTPH-Gx	01/24/09 13:40	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-05	Water	NWTPH-Gx	01/24/09 16:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-06	Water	NWTPH-Gx	01/24/09 14:20	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00

### RBCA Compounds (BTEX+) by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9010277</b>							
A901169-01	Water	EPA 8260B	01/24/09 12:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-02	Water	EPA 8260B	01/24/09 15:10	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-03	Water	EPA 8260B	01/24/09 13:00	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-04	Water	EPA 8260B	01/24/09 13:40	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-05	Water	EPA 8260B	01/24/09 16:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-06	Water	EPA 8260B	01/24/09 14:20	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00

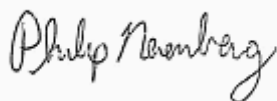
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9010277</b>							
A901169-01	Water	EPA 8260B	01/24/09 12:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-02	Water	EPA 8260B	01/24/09 15:10	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-03	Water	EPA 8260B	01/24/09 13:00	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-04	Water	EPA 8260B	01/24/09 13:40	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-05	Water	EPA 8260B	01/24/09 16:05	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00
A901169-06	Water	EPA 8260B	01/24/09 14:20	01/27/09 12:20	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

## Notes and Definitions

### Qualifiers:

- Q-01 The percent recovery and/or RPD was outside acceptance limits for this spiked sample. The batch was accepted based on LCS recovery.
- Q-05 Analyses are not controlled on RPD values from sample or duplicate concentrations near or below the reporting level.
- Q-29 Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-30 Recovery for Lab Control Spike (LCS) is below the lower control limit. Data may be biased low.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 96M-10282-0  
Project Manager: Paul Stull

Reported:  
02/10/09 14:47

Lab # **190116** coc 1 of 1

### CHAIN OF CUSTODY

### APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <b>AMEC</b>		Project Mgr: <b>Paul Stull</b>		Project Name: <b>Fred Meyer (FMPO)</b>		Project # <b>96M-10282-0</b>	
Address:		Phone: <b>503 439 9300</b>		Fax: <b>503 439 9300</b>		Email: <b>Paul.Stull@amec.com</b>	
ANALYSIS REQUEST							
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWPH-DC	NWPH-DC Box
1	112404	1/12/09	1205	W	3		X
2	112404	1/15/09	1510	W	3		X
3	112404	1/15/09	1500	W	3		X
4	112404	1/24/09	1240	W	3		X
5	112404	1/24/09	1605	W	3		X
6	112404	1/27/09	1420	W	3		X

Normal Turn Around Time (TAT) = 5-10 Business Days			
TAT Requested (circle)	24 HR	48 HR	72 HR
	4 DAY	5 DAY	Other:

RECEIVED BY:	RECEIVED BY:
Signature: <b>Paul Stull</b>	Signature: <b>Paul Stull</b>
Date: <b>1/24/09</b>	Date: <b>1/24/09</b>
Printed Name: <b>Paul Stull</b>	Printed Name: <b>Paul Stull</b>
Company: <b>AMEC</b>	Company: <b>AMEC</b>

SPECIAL INSTRUCTIONS:  
\* **BTEX, MTBE, EDC, DOB, NAPM, ALKYL BENZENE**

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Tuesday, April 14, 2009

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M-10282-0

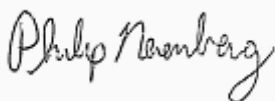
Enclosed are the results of analyses for work order A903220, which was received by the laboratory on 3/30/2009 at 3:08:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

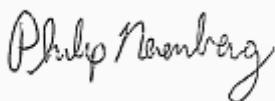
Reported:  
04/14/09 15:09

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	A903220-01	Water	03/28/09 07:30	03/30/09 15:08
EB-032809	A903220-02	Water	03/28/09 08:00	03/30/09 15:08
MW103-032809	A903220-03	Water	03/28/09 09:00	03/30/09 15:08
MW109-032809	A903220-04	Water	03/28/09 09:45	03/30/09 15:08
MW105-032809	A903220-05	Water	03/28/09 10:35	03/30/09 15:08
MW110-032809	A903220-06	Water	03/28/09 11:10	03/30/09 15:08
MW111-032809	A903220-07	Water	03/28/09 11:40	03/30/09 15:08
MW108A-032809	A903220-08	Water	03/28/09 12:30	03/30/09 15:08

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

## ANALYTICAL CASE NARRATIVE


---

**Work Order: A903220**

The client requested the ID on three samples be changed from what was listed on the chain of custody.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

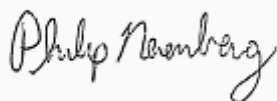
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>Trip Blank (A903220-01)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 11:40	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 124 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>105 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>EB-032809 (A903220-02)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 12:11	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 121 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>104 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW103-032809 (A903220-03)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/30/09 20:24	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 127 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>106 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW109-032809 (A903220-04)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/30/09 20:54	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 124 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>107 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW105-032809 (A903220-05)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 12:58	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 123 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>107 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW110-032809 (A903220-06)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	0.162	---	0.0800	mg/L	1	03/31/09 13:59	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 124 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>105 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW111-032809 (A903220-07)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 15:31	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 121 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>106 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW108A-032809 (A903220-08)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 16:02	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 123 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>106 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

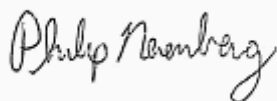
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-032809 (A903220-03)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	03/30/09 20:24	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>92 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

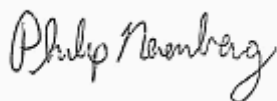
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW109-032809 (A903220-04)</b>			<b>Matrix: Water</b>					
Benzene	2.02	---	0.250	ug/L	1	03/30/09 20:54	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>92 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

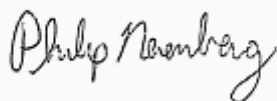
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-032809 (A903220-05)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	03/31/09 12:58	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

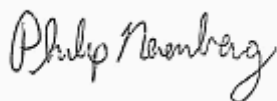
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW110-032809 (A903220-06)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	03/31/09 13:59	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<b>Ethylbenzene</b>	<b>1.26</b>	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>1.25</b>	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>1.21</b>	---	1.00	"	"	"	"	
<b>m,p-Xylene</b>	<b>4.57</b>	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>106 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

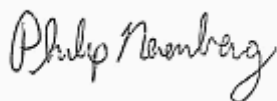
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW111-032809 (A903220-07)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	03/31/09 15:31	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>91 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

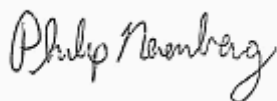
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW108A-032809 (A903220-08)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	03/31/09 16:02	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	1.00	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>92 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>109 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

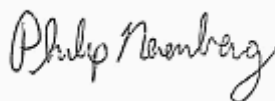
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030311 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030311-BLK1)</b>						Prepared: 03/30/09 09:33 Analyzed: 03/30/09 11:43						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 124 %			Limits: 50-150 %		Dilution: 1x				
1,4-Difluorobenzene (Sur)			105 %			50-150 %		"				
<b>LCS (9030311-BS2)</b>						Prepared: 03/30/09 09:33 Analyzed: 03/30/09 11:13						
NWTPH-Gx												
Gasoline Range Organics	0.560	---	0.0800	mg/L	1	0.500	---	112	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 123 %			Limits: 50-150 %		Dilution: 1x				
1,4-Difluorobenzene (Sur)			107 %			50-150 %		"				
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030323-BLK1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 11:10						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 123 %			Limits: 50-150 %		Dilution: 1x				
1,4-Difluorobenzene (Sur)			104 %			50-150 %		"				
<b>LCS (9030323-BS2)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 10:39						
NWTPH-Gx												
Gasoline Range Organics	0.537	---	0.0800	mg/L	1	0.500	---	107	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 122 %			Limits: 50-150 %		Dilution: 1x				
1,4-Difluorobenzene (Sur)			106 %			50-150 %		"				
<b>Duplicate (9030323-DUP1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28						
QC Source Sample: MW105-032809 (A903220-05)												
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 123 %			Limits: 50-150 %		Dilution: 1x				
1,4-Difluorobenzene (Sur)			105 %			50-150 %		"				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

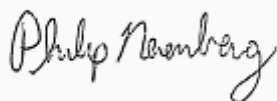
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030311 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030311-BLK1)</b>						Prepared: 03/30/09 09:33 Analyzed: 03/30/09 11:43						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

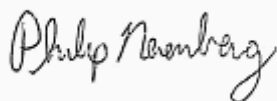
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030311 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030311-BLK1)</b>						Prepared: 03/30/09 09:33 Analyzed: 03/30/09 11:43						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 95 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	95 %	80-120 %	"
Toluene-d8 (Surr)	91 %	80-120 %	"
4-Bromofluorobenzene (Surr)	105 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

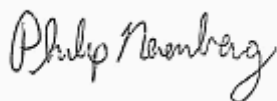
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030311 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9030311-BS1)</b>						Prepared: 03/30/09 09:33 Analyzed: 03/30/09 10:42						
<b>EPA 8260B</b>												
Acetone	36.3	---	20.0	ug/L	1	40.0	---	91	70-130%	---	---	
Benzene	22.2	---	0.250	"	"	20.0	---	111	"	---	---	
Bromobenzene	19.3	---	0.500	"	"	"	---	97	"	---	---	
Bromochloromethane	24.2	---	0.500	"	"	"	---	121	"	---	---	
Bromodichloromethane	23.4	---	0.500	"	"	"	---	117	"	---	---	
Bromoform	22.0	---	1.00	"	"	"	---	110	"	---	---	
Bromomethane	21.6	---	5.00	"	"	"	---	108	"	---	---	
2-Butanone (MEK)	43.6	---	10.0	"	"	40.0	---	109	"	---	---	
n-Butylbenzene	17.0	---	1.00	"	"	20.0	---	85	"	---	---	
sec-Butylbenzene	17.1	---	1.00	"	"	"	---	85	"	---	---	
tert-Butylbenzene	17.4	---	0.500	"	"	"	---	87	"	---	---	
Carbon tetrachloride	21.6	---	0.500	"	"	"	---	108	"	---	---	
Chlorobenzene	18.6	---	0.500	"	"	"	---	93	"	---	---	
Chloroethane	23.8	---	2.00	"	"	"	---	119	"	---	---	
Chloroform	22.6	---	2.00	"	"	"	---	113	"	---	---	
Chloromethane	23.4	---	5.00	"	"	"	---	117	"	---	---	
2-Chlorotoluene	18.0	---	0.500	"	"	"	---	90	"	---	---	
4-Chlorotoluene	18.8	---	0.500	"	"	"	---	94	"	---	---	
1,2-Dibromo-3-chloropropane	17.2	---	5.00	"	"	"	---	86	"	---	---	
Dibromochloromethane	20.4	---	0.500	"	"	"	---	102	"	---	---	
1,2-Dibromoethane (EDB)	18.8	---	0.500	"	"	"	---	94	"	---	---	
Dibromomethane	21.5	---	0.500	"	"	"	---	107	"	---	---	
1,2-Dichlorobenzene	19.1	---	0.500	"	"	"	---	96	"	---	---	
1,3-Dichlorobenzene	17.8	---	0.500	"	"	"	---	89	"	---	---	
1,4-Dichlorobenzene	17.0	---	0.500	"	"	"	---	85	"	---	---	
Dichlorodifluoromethane	23.0	---	1.00	"	"	"	---	115	"	---	---	
1,1-Dichloroethane	23.8	---	0.500	"	"	"	---	119	"	---	---	
1,2-Dichloroethane (EDC)	23.3	---	0.500	"	"	"	---	116	"	---	---	
1,1-Dichloroethene	18.1	---	0.500	"	"	"	---	91	"	---	---	
cis-1,2-Dichloroethene	25.7	---	0.500	"	"	"	---	129	"	---	---	
trans-1,2-Dichloroethene	23.3	---	0.500	"	"	"	---	116	"	---	---	
1,2-Dichloropropane	24.2	---	0.500	"	"	"	---	121	"	---	---	
1,3-Dichloropropane	21.4	---	0.500	"	"	"	---	107	"	---	---	
2,2-Dichloropropane	24.5	---	0.500	"	"	"	---	122	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

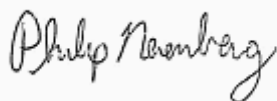
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030311 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (9030311-BS1)</b>												
						Prepared: 03/30/09 09:33	Analyzed: 03/30/09 10:42					
1,1-Dichloropropene	24.1	---	0.500	ug/L	"	"	---	121	"	---	---	
cis-1,3-Dichloropropene	23.1	---	1.00	"	"	"	---	115	"	---	---	
trans-1,3-Dichloropropene	21.2	---	0.500	"	"	"	---	106	"	---	---	
Ethylbenzene	20.2	---	0.500	"	"	"	---	101	"	---	---	
Hexachlorobutadiene	16.1	---	5.00	"	"	"	---	80	"	---	---	
2-Hexanone	40.4	---	10.0	"	"	40.0	---	101	"	---	---	
Isopropylbenzene	19.6	---	0.500	"	"	20.0	---	98	"	---	---	
4-Isopropyltoluene	17.1	---	1.00	"	"	"	---	86	"	---	---	
4-Methyl-2-pentanone (MiBK)	43.9	---	10.0	"	"	40.0	---	110	"	---	---	
Methyl tert-butyl ether (MTBE)	23.4	---	1.00	"	"	20.0	---	117	"	---	---	
Methylene chloride	22.1	---	5.00	"	"	"	---	110	"	---	---	
Naphthalene	17.4	---	5.00	"	"	"	---	87	"	---	---	
n-Propylbenzene	17.8	---	0.500	"	"	"	---	89	"	---	---	
Styrene	18.6	---	0.500	"	"	"	---	93	"	---	---	
1,1,1,2-Tetrachloroethane	20.4	---	0.500	"	"	"	---	102	"	---	---	
1,1,2,2-Tetrachloroethane	18.6	---	0.500	"	"	"	---	93	"	---	---	
Tetrachloroethene (PCE)	19.8	---	0.500	"	"	"	---	99	"	---	---	
Toluene	19.2	---	1.00	"	"	"	---	96	"	---	---	
1,2,3-Trichlorobenzene	18.7	---	5.00	"	"	"	---	94	"	---	---	
1,2,4-Trichlorobenzene	20.0	---	5.00	"	"	"	---	100	"	---	---	
1,1,1-Trichloroethane	21.1	---	0.500	"	"	"	---	106	"	---	---	
1,1,2-Trichloroethane	20.3	---	0.500	"	"	"	---	101	"	---	---	
Trichloroethene (TCE)	19.9	---	0.500	"	"	"	---	99	"	---	---	
Trichlorofluoromethane	19.9	---	1.00	"	"	"	---	99	"	---	---	
1,2,3-Trichloropropane	18.5	---	1.00	"	"	"	---	92	"	---	---	
1,2,4-Trimethylbenzene	18.0	---	1.00	"	"	"	---	90	"	---	---	
1,3,5-Trimethylbenzene	18.2	---	1.00	"	"	"	---	91	"	---	---	
Vinyl chloride	23.8	---	0.500	"	"	"	---	119	"	---	---	
m,p-Xylene	41.1	---	1.00	"	"	40.0	---	103	"	---	---	
o-Xylene	21.6	---	0.500	"	"	20.0	---	108	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 95 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	97 %	80-120 %	"
Toluene-d8 (Surr)	92 %	80-120 %	"
4-Bromofluorobenzene (Surr)	106 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

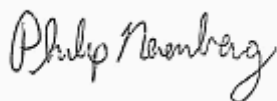
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030323-BLK1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 11:10						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

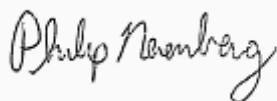
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9030323-BLK1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 11:10						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 94 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	95 %	80-120 %	"
Toluene-d8 (Surr)	92 %	80-120 %	"
4-Bromofluorobenzene (Surr)	105 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

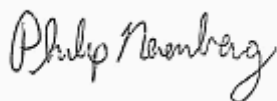
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9030323-BS1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 10:09						
<b>EPA 8260B</b>												
Acetone	38.0	---	20.0	ug/L	1	40.0	---	95	70-130%	---	---	
Benzene	23.6	---	0.250	"	"	20.0	---	118	"	---	---	
Bromobenzene	19.5	---	0.500	"	"	"	---	98	"	---	---	
Bromochloromethane	24.3	---	0.500	"	"	"	---	122	"	---	---	
Bromodichloromethane	25.0	---	0.500	"	"	"	---	125	"	---	---	
Bromoform	23.2	---	1.00	"	"	"	---	116	"	---	---	
Bromomethane	21.3	---	5.00	"	"	"	---	107	"	---	---	
2-Butanone (MEK)	48.2	---	10.0	"	"	40.0	---	121	"	---	---	
n-Butylbenzene	16.8	---	1.00	"	"	20.0	---	84	"	---	---	
sec-Butylbenzene	16.6	---	1.00	"	"	"	---	83	"	---	---	
tert-Butylbenzene	16.7	---	0.500	"	"	"	---	84	"	---	---	
Carbon tetrachloride	21.7	---	0.500	"	"	"	---	109	"	---	---	
Chlorobenzene	18.8	---	0.500	"	"	"	---	94	"	---	---	
Chloroethane	18.1	---	2.00	"	"	"	---	90	"	---	---	
Chloroform	23.0	---	2.00	"	"	"	---	115	"	---	---	
Chloromethane	23.0	---	5.00	"	"	"	---	115	"	---	---	
2-Chlorotoluene	18.0	---	0.500	"	"	"	---	90	"	---	---	
4-Chlorotoluene	18.6	---	0.500	"	"	"	---	93	"	---	---	
1,2-Dibromo-3-chloropropane	17.4	---	5.00	"	"	"	---	87	"	---	---	
Dibromochloromethane	20.1	---	0.500	"	"	"	---	100	"	---	---	
1,2-Dibromoethane (EDB)	19.7	---	0.500	"	"	"	---	99	"	---	---	
Dibromomethane	23.1	---	0.500	"	"	"	---	115	"	---	---	
1,2-Dichlorobenzene	19.0	---	0.500	"	"	"	---	95	"	---	---	
1,3-Dichlorobenzene	17.8	---	0.500	"	"	"	---	89	"	---	---	
1,4-Dichlorobenzene	16.9	---	0.500	"	"	"	---	85	"	---	---	
Dichlorodifluoromethane	21.7	---	1.00	"	"	"	---	109	"	---	---	
1,1-Dichloroethane	24.1	---	0.500	"	"	"	---	120	"	---	---	
1,2-Dichloroethane (EDC)	25.0	---	0.500	"	"	"	---	125	"	---	---	
1,1-Dichloroethene	18.6	---	0.500	"	"	"	---	93	"	---	---	
cis-1,2-Dichloroethene	25.8	---	0.500	"	"	"	---	129	"	---	---	
trans-1,2-Dichloroethene	23.6	---	0.500	"	"	"	---	118	"	---	---	
1,2-Dichloropropane	25.2	---	0.500	"	"	"	---	126	"	---	---	
1,3-Dichloropropane	21.1	---	0.500	"	"	"	---	106	"	---	---	
2,2-Dichloropropane	23.0	---	0.500	"	"	"	---	115	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

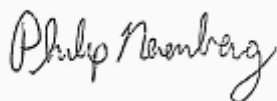
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9030323-BS1)</b>						Prepared: 03/31/09 08:49		Analyzed: 03/31/09 10:09				
1,1-Dichloropropene	23.6	---	0.500	ug/L	"	"	---	118	"	---	---	
cis-1,3-Dichloropropene	22.4	---	1.00	"	"	"	---	112	"	---	---	
trans-1,3-Dichloropropene	21.3	---	0.500	"	"	"	---	107	"	---	---	
Ethylbenzene	20.2	---	0.500	"	"	"	---	101	"	---	---	
Hexachlorobutadiene	16.7	---	5.00	"	"	"	---	83	"	---	---	
2-Hexanone	41.7	---	10.0	"	"	40.0	---	104	"	---	---	
Isopropylbenzene	19.7	---	0.500	"	"	20.0	---	98	"	---	---	
4-Isopropyltoluene	16.6	---	1.00	"	"	"	---	83	"	---	---	
4-Methyl-2-pentanone (MiBK)	45.7	---	10.0	"	"	40.0	---	114	"	---	---	
Methyl tert-butyl ether (MTBE)	24.0	---	1.00	"	"	20.0	---	120	"	---	---	
Methylene chloride	23.1	---	5.00	"	"	"	---	116	"	---	---	
Naphthalene	17.8	---	5.00	"	"	"	---	89	"	---	---	
n-Propylbenzene	17.6	---	0.500	"	"	"	---	88	"	---	---	
Styrene	18.2	---	0.500	"	"	"	---	91	"	---	---	
1,1,1,2-Tetrachloroethane	20.0	---	0.500	"	"	"	---	100	"	---	---	
1,1,2,2-Tetrachloroethane	19.2	---	0.500	"	"	"	---	96	"	---	---	
Tetrachloroethene (PCE)	19.5	---	0.500	"	"	"	---	97	"	---	---	
Toluene	18.9	---	1.00	"	"	"	---	95	"	---	---	
1,2,3-Trichlorobenzene	19.7	---	5.00	"	"	"	---	99	"	---	---	
1,2,4-Trichlorobenzene	19.7	---	5.00	"	"	"	---	98	"	---	---	
1,1,1-Trichloroethane	21.3	---	0.500	"	"	"	---	107	"	---	---	
1,1,2-Trichloroethane	20.8	---	0.500	"	"	"	---	104	"	---	---	
Trichloroethene (TCE)	21.0	---	0.500	"	"	"	---	105	"	---	---	
Trichlorofluoromethane	20.5	---	1.00	"	"	"	---	103	"	---	---	
1,2,3-Trichloropropane	18.3	---	1.00	"	"	"	---	92	"	---	---	
1,2,4-Trimethylbenzene	18.1	---	1.00	"	"	"	---	90	"	---	---	
1,3,5-Trimethylbenzene	18.0	---	1.00	"	"	"	---	90	"	---	---	
Vinyl chloride	24.2	---	0.500	"	"	"	---	121	"	---	---	
m,p-Xylene	41.9	---	1.00	"	"	40.0	---	105	"	---	---	
o-Xylene	21.1	---	0.500	"	"	20.0	---	105	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 98 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	99 %	80-120 %	"
Toluene-d8 (Surr)	92 %	80-120 %	"
4-Bromofluorobenzene (Surr)	106 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

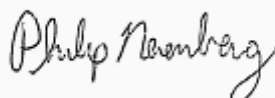
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9030323-DUP1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28						
<b>QC Source Sample: MW105-032809 (A903220-05)</b>												
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.250	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>												
<b>Water</b>												
<b>Duplicate (9030323-DUP1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28						
<b>QC Source Sample: MW105-032809 (A903220-05)</b>												
2,2-Dichloropropane	ND	---	0.500	ug/L	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Styrene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)  
 1,4-Difluorobenzene (Surr)

Recovery: 95 % Limits: 80-120 %  
 96 % 80-120 %

Dilution: 1x  
 "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

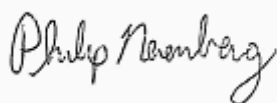
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9030323-DUP1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28						
<b>QC Source Sample: MW105-032809 (A903220-05)</b>												
Surr: Toluene-d8 (Surr) Recovery: 92 % Limits: 80-120 % Dilution: 1x												
4-Bromofluorobenzene (Surr) 106 % 80-120 % "												
<b>Matrix Spike (9030323-MS1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30						
<b>QC Source Sample: MW110-032809 (A903220-06)</b>												
<b>EPA 8260B</b>												
Acetone	29.4	---	20.0	ug/L	1	40.0	ND	73	70-130%	---	---	
Benzene	23.3	---	0.250	"	"	20.0	ND	116	"	---	---	
Bromobenzene	20.3	---	0.500	"	"	"	ND	101	"	---	---	
Bromochloromethane	24.6	---	0.500	"	"	"	ND	123	"	---	---	
Bromodichloromethane	24.4	---	0.500	"	"	"	ND	122	"	---	---	
Bromoform	21.9	---	1.00	"	"	"	ND	110	"	---	---	
Bromomethane	21.7	---	5.00	"	"	"	ND	108	"	---	---	
2-Butanone (MEK)	46.1	---	10.0	"	"	40.0	ND	115	"	---	---	
n-Butylbenzene	18.6	---	1.00	"	"	20.0	0.210	92	"	---	---	
sec-Butylbenzene	18.2	---	1.00	"	"	"	ND	91	"	---	---	
tert-Butylbenzene	18.2	---	0.500	"	"	"	ND	91	"	---	---	
Carbon tetrachloride	22.8	---	0.500	"	"	"	ND	114	"	---	---	
Chlorobenzene	19.7	---	0.500	"	"	"	ND	99	"	---	---	
Chloroethane	18.1	---	2.00	"	"	"	ND	90	"	---	---	
Chloroform	23.5	---	2.00	"	"	"	ND	118	"	---	---	
Chloromethane	25.0	---	5.00	"	"	"	0.270	124	"	---	---	
2-Chlorotoluene	18.6	---	0.500	"	"	"	ND	93	"	---	---	
4-Chlorotoluene	19.4	---	0.500	"	"	"	ND	97	"	---	---	
1,2-Dibromo-3-chloropropane	20.2	---	5.00	"	"	"	ND	101	"	---	---	
Dibromochloromethane	20.2	---	0.500	"	"	"	ND	101	"	---	---	
1,2-Dibromoethane (EDB)	20.8	---	0.500	"	"	"	ND	104	"	---	---	
Dibromomethane	23.5	---	0.500	"	"	"	ND	118	"	---	---	
1,2-Dichlorobenzene	19.6	---	0.500	"	"	"	ND	98	"	---	---	
1,3-Dichlorobenzene	17.8	---	0.500	"	"	"	ND	89	"	---	---	
1,4-Dichlorobenzene	17.6	---	0.500	"	"	"	ND	88	"	---	---	
Dichlorodifluoromethane	23.6	---	1.00	"	"	"	ND	118	"	---	---	
1,1-Dichloroethane	24.8	---	0.500	"	"	"	ND	124	"	---	---	
1,2-Dichloroethane (EDC)	25.1	---	0.500	"	"	"	ND	125	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

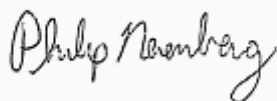
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9030323-MS1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30						
<b>QC Source Sample: MW110-032809 (A903220-06)</b>												
1,1-Dichloroethene	20.1	---	0.500	ug/L	"	"	ND	101	"	---	---	
cis-1,2-Dichloroethene	26.4	---	0.500	"	"	"	ND	132	"	---	---	Q-01
trans-1,2-Dichloroethene	24.6	---	0.500	"	"	"	ND	123	"	---	---	
1,2-Dichloropropane	24.9	---	0.500	"	"	"	ND	125	"	---	---	
1,3-Dichloropropane	22.1	---	0.500	"	"	"	ND	110	"	---	---	
2,2-Dichloropropane	23.0	---	0.500	"	"	"	ND	115	"	---	---	
1,1-Dichloropropene	24.6	---	0.500	"	"	"	ND	123	"	---	---	
cis-1,3-Dichloropropene	22.2	---	1.00	"	"	"	ND	111	"	---	---	
trans-1,3-Dichloropropene	21.0	---	0.500	"	"	"	ND	105	"	---	---	
Ethylbenzene	22.4	---	0.500	"	"	"	1.26	106	"	---	---	
Hexachlorobutadiene	17.2	---	5.00	"	"	"	ND	86	"	---	---	
2-Hexanone	45.3	---	10.0	"	"	40.0	ND	113	"	---	---	
Isopropylbenzene	20.9	---	0.500	"	"	20.0	ND	104	"	---	---	
4-Isopropyltoluene	18.2	---	1.00	"	"	"	ND	91	"	---	---	
4-Methyl-2-pentanone (MiBK)	51.8	---	10.0	"	"	40.0	ND	130	"	---	---	
Methyl tert-butyl ether (MTBE)	23.4	---	1.00	"	"	20.0	ND	117	"	---	---	
Methylene chloride	22.0	---	5.00	"	"	"	ND	110	"	---	---	
Naphthalene	19.4	---	5.00	"	"	"	ND	97	"	---	---	
n-Propylbenzene	18.7	---	0.500	"	"	"	0.160	93	"	---	---	
Styrene	17.1	---	0.500	"	"	"	ND	85	"	---	---	
1,1,1,2-Tetrachloroethane	20.5	---	0.500	"	"	"	ND	102	"	---	---	
1,1,2,2-Tetrachloroethane	21.2	---	0.500	"	"	"	ND	106	"	---	---	
Tetrachloroethene (PCE)	21.6	---	0.500	"	"	"	ND	108	"	---	---	
Toluene	19.8	---	1.00	"	"	"	ND	99	"	---	---	
1,2,3-Trichlorobenzene	19.8	---	5.00	"	"	"	ND	99	"	---	---	
1,2,4-Trichlorobenzene	20.3	---	5.00	"	"	"	ND	102	"	---	---	
1,1,1-Trichloroethane	22.3	---	0.500	"	"	"	ND	112	"	---	---	
1,1,2-Trichloroethane	21.6	---	0.500	"	"	"	ND	108	"	---	---	
Trichloroethene (TCE)	21.0	---	0.500	"	"	"	ND	105	"	---	---	
Trichlorofluoromethane	22.5	---	1.00	"	"	"	ND	113	"	---	---	
1,2,3-Trichloropropane	19.9	---	1.00	"	"	"	ND	100	"	---	---	
1,2,4-Trimethylbenzene	19.8	---	1.00	"	"	"	1.25	92	"	---	---	
1,3,5-Trimethylbenzene	19.6	---	1.00	"	"	"	1.21	92	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

Reported:  
 04/14/09 15:09

## QUALITY CONTROL (QC) SAMPLE RESULTS

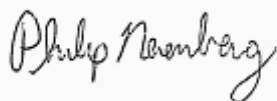
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9030323 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9030323-MS1)</b>						Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30						
<b>QC Source Sample: MW110-032809 (A903220-06)</b>												
Vinyl chloride	25.8	---	0.500	ug/L	"	"	ND	129	"	---	---	
m,p-Xylene	48.0	---	1.00	"	"	40.0	4.57	109	"	---	---	
o-Xylene	22.2	---	0.500	"	"	20.0	0.180	110	"	---	---	

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 94 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>94 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>92 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>108 %</i>	<i>80-120 %</i>	<i>"</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M-10282-0  
 Project Manager: Paul Stull

**Reported:**  
 04/14/09 15:09

## SAMPLE PREPARATION INFORMATION

### Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9030311</b>							
A903220-03	Water	NWTPH-Gx	03/28/09 09:00	03/30/09 15:47	5mL/5mL	5mL/5mL	1.00
A903220-04	Water	NWTPH-Gx	03/28/09 09:45	03/30/09 15:47	5mL/5mL	5mL/5mL	1.00
<b>Batch: 9030323</b>							
A903220-01	Water	NWTPH-Gx	03/28/09 07:30	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-02	Water	NWTPH-Gx	03/28/09 08:00	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-05	Water	NWTPH-Gx	03/28/09 10:35	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-06	Water	NWTPH-Gx	03/28/09 11:10	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-07	Water	NWTPH-Gx	03/28/09 11:40	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-08	Water	NWTPH-Gx	03/28/09 12:30	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00

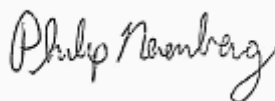
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9030311</b>							
A903220-03	Water	EPA 8260B	03/28/09 09:00	03/30/09 15:47	5mL/5mL	5mL/5mL	1.00
A903220-04	Water	EPA 8260B	03/28/09 09:45	03/30/09 15:47	5mL/5mL	5mL/5mL	1.00
<b>Batch: 9030323</b>							
A903220-05	Water	EPA 8260B	03/28/09 10:35	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-06	Water	EPA 8260B	03/28/09 11:10	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-07	Water	EPA 8260B	03/28/09 11:40	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00
A903220-08	Water	EPA 8260B	03/28/09 12:30	03/31/09 08:49	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M-10282-0  
Project Manager: Paul Stull

**Reported:**  
04/14/09 15:09

## Notes and Definitions

### Qualifiers:

Q-01 The percent recovery and/or RPD was outside acceptance limits for this spiked sample. The batch was accepted based on LCS recovery.

### Notes and Conventions:

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.

RPD Relative Percent Difference

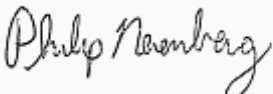
MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.

WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.

Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M-10282-0  
Project Manager: Paul Stull

Reported:  
04/14/09 15:09

4903200  
DATE: 3/30/09  
COC #: \_\_\_\_\_  
PAGE: 1 OF 1

## CHAIN OF CUSTODY



SHP TO:  
AMEC  
7376 SW Durham Road  
Portland, OR 97224  
(503) 833-3400

Project Name: Fred Meyer Port Orchard	Project Contact: Paul Stull	BA To: AMEC	Dispatch Instructions: LAB
Project Number: 961M-10282-0	Phone Number: (503) 833-3400	7376 SW Durham Road Portland, OR 97224	Specimen Method: COURIER
Project Manager: Kurt Herington	Project Phase:	Mayfield Number: N/A	

Sample Information				Methods for Analysis				RUSH						
No.	Sample ID	Date Sampled	Time Sampled	Matrix	1	2	3	4	5	6	7	8	9	10
1	Trip Blank	03/28/09	7:30 AM	H2O										
2	EB-032809	03/28/09	8:00 AM	H2O										
3	1M/103-032809	03/28/09	9:00 AM	H2O										
4	1M/104A-032809	03/28/09	9:45 AM	H2O										
5	1M/105-032809	03/28/09	10:35 AM	H2O										
6	1M/106A-032809	03/28/09	11:10 AM	H2O										
7	1M/107A-032809	03/28/09	11:40 AM	H2O										
8	1M/108A-032809	03/28/09	12:30 PM	H2O										
9														
10														
11														
12														

Does CCC method comply:	Y or N	For Lab Use
Broken Container:	Y or N	
CCC test intact:	Y or N	
Other problems:	Y or N	
AMEC contacted:	Y or N	
Date contacted:		
Cooler temperature at receipt:	_____ C	
NUMBER OF COOLERS SENT:		

Comments: H-Hold Analysis Request X-Analyza  
Below to include BTEX, MTBE, EDG, EDB,  
Naphthalene, 3 Methylbenzene suite

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Wednesday, July 1, 2009

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 901M10282-0

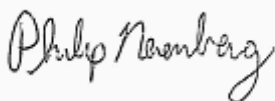
Enclosed are the results of analyses for work order A906134, which was received by the laboratory on 6/15/2009 at 6:00:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 901M10282-0  
Project Manager: Paul Stull

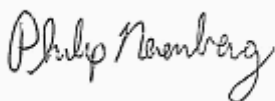
Reported:  
07/01/09 02:44

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-061109	A906134-01	Water	06/11/09 13:15	06/15/09 18:00
MW109-061109	A906134-02	Water	06/11/09 12:10	06/15/09 18:00
MW105-061109	A906134-03	Water	06/11/09 11:20	06/15/09 18:00
MW110-061109	A906134-04	Water	06/11/09 14:05	06/15/09 18:00
MW111-061109	A906134-05	Water	06/11/09 15:30	06/15/09 18:00
MW108-061109	A906134-06	Water	06/11/09 14:50	06/15/09 18:00

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

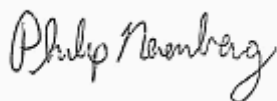
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-061109 (A906134-01RE1) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 03:24	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 104 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>110 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW109-061109 (A906134-02) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 03:55	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 102 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>111 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW105-061109 (A906134-03) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 04:57	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 101 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>109 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW110-061109 (A906134-04RE1) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 05:27	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 104 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>111 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW111-061109 (A906134-05) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 05:58	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 103 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>110 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<b>MW108-061109 (A906134-06) Matrix: Water</b>								
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 06:29	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 103 %</i>	<i>Limits: 50-150 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>110 %</i>	<i>Limits: 50-150 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

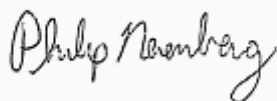
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-061109 (A906134-01)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	06/23/09 03:03	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:

07/01/09 02:44

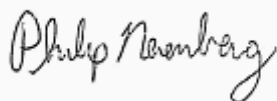
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW109-061109 (A906134-02)</b>			<b>Matrix: Water</b>					
Benzene	27.4	---	0.250	ug/L	1	06/24/09 03:55	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

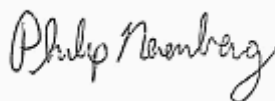
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-061109 (A906134-03)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	06/24/09 04:57	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

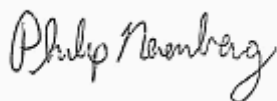
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW110-061109 (A906134-04)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	06/23/09 03:34	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

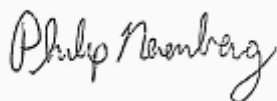
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW111-061109 (A906134-05)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	06/24/09 05:58	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

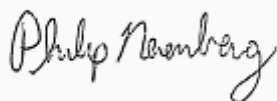
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW108-061109 (A906134-06)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	06/24/09 06:29	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	2.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 111 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

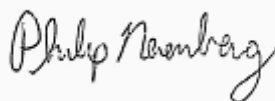
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9060327-BLK1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 00:18						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 106 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			110 %	50-150 %		"						
<b>LCS (9060327-BS2)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/23/09 23:47						
NWTPH-Gx												
Gasoline Range Organics	0.504	---	0.100	mg/L	1	0.500	---	101	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 101 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			112 %	50-150 %		"						
<b>Duplicate (9060327-DUP1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 04:26						
QC Source Sample: MW109-061109 (A906134-02)												
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.100	mg/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 104 %	Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)			112 %	50-150 %		"						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

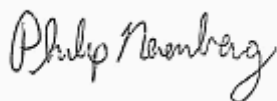
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9060300-BLK1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/22/09 15:11						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

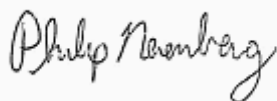
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9060300-BLK1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/22/09 15:11						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	B-02
Toluene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 104 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	100 %	80-120 %	"
Toluene-d8 (Surr)	99 %	80-120 %	"
4-Bromofluorobenzene (Surr)	98 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

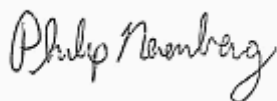
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9060300-BS1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/22/09 14:09						
<b>EPA 8260B</b>												
Acetone	31.8	---	20.0	ug/L	1	40.0	---	79	70-130%	---	---	
Benzene	19.0	---	0.250	"	"	20.0	---	95	"	---	---	
Bromobenzene	19.6	---	0.500	"	"	"	---	98	"	---	---	
Bromochloromethane	20.6	---	0.500	"	"	"	---	103	"	---	---	
Bromodichloromethane	20.6	---	0.500	"	"	"	---	103	"	---	---	
Bromoform	17.4	---	1.00	"	"	"	---	87	"	---	---	
Bromomethane	18.0	---	5.00	"	"	"	---	90	"	---	---	
2-Butanone (MEK)	29.8	---	10.0	"	"	40.0	---	74	"	---	---	
n-Butylbenzene	20.6	---	1.00	"	"	20.0	---	103	"	---	---	
sec-Butylbenzene	19.4	---	1.00	"	"	"	---	97	"	---	---	
tert-Butylbenzene	19.9	---	0.500	"	"	"	---	100	"	---	---	
Carbon tetrachloride	21.2	---	0.500	"	"	"	---	106	"	---	---	
Chlorobenzene	19.7	---	0.500	"	"	"	---	98	"	---	---	
Chloroethane	27.6	---	2.00	"	"	"	---	138	"	---	---	Q-29
Chloroform	20.5	---	1.00	"	"	"	---	103	"	---	---	
Chloromethane	17.1	---	5.00	"	"	"	---	85	"	---	---	
2-Chlorotoluene	20.1	---	1.00	"	"	"	---	101	"	---	---	
4-Chlorotoluene	20.2	---	0.500	"	"	"	---	101	"	---	---	
1,2-Dibromo-3-chloropropane	14.3	---	5.00	"	"	"	---	71	"	---	---	
Dibromochloromethane	19.0	---	0.500	"	"	"	---	95	"	---	---	
1,2-Dibromoethane (EDB)	16.9	---	0.500	"	"	"	---	84	"	---	---	
Dibromomethane	17.4	---	1.00	"	"	"	---	87	"	---	---	
1,2-Dichlorobenzene	20.6	---	0.500	"	"	"	---	103	"	---	---	
1,3-Dichlorobenzene	20.6	---	0.500	"	"	"	---	103	"	---	---	
1,4-Dichlorobenzene	20.4	---	0.500	"	"	"	---	102	"	---	---	
Dichlorodifluoromethane	14.2	---	1.00	"	"	"	---	71	"	---	---	
1,1-Dichloroethane	21.6	---	0.500	"	"	"	---	108	"	---	---	
1,2-Dichloroethane (EDC)	20.8	---	0.500	"	"	"	---	104	"	---	---	
1,1-Dichloroethene	20.9	---	0.500	"	"	"	---	104	"	---	---	
cis-1,2-Dichloroethene	22.2	---	0.500	"	"	"	---	111	"	---	---	
trans-1,2-Dichloroethene	20.4	---	0.500	"	"	"	---	102	"	---	---	
1,2-Dichloropropane	20.4	---	2.00	"	"	"	---	102	"	---	---	
1,3-Dichloropropane	18.9	---	0.500	"	"	"	---	94	"	---	---	
2,2-Dichloropropane	23.8	---	2.00	"	"	"	---	119	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

Project: Fred Meyer (FMPO) Port Orchard

7376 SW Durham Road  
Portland, OR 97224

Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

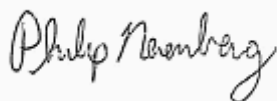
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (9060300-BS1)</b>												
						Prepared: 06/22/09 13:01 Analyzed: 06/22/09 14:09						
1,1-Dichloropropene	22.0	---	0.500	ug/L	"	"	---	110	"	---	---	
cis-1,3-Dichloropropene	19.7	---	0.500	"	"	"	---	99	"	---	---	
trans-1,3-Dichloropropene	19.4	---	0.500	"	"	"	---	97	"	---	---	
Ethylbenzene	19.8	---	0.500	"	"	"	---	99	"	---	---	
Hexachlorobutadiene	20.3	---	2.00	"	"	"	---	102	"	---	---	
2-Hexanone	35.4	---	10.0	"	"	40.0	---	88	"	---	---	
Isopropylbenzene	20.3	---	0.500	"	"	20.0	---	101	"	---	---	
4-Isopropyltoluene	20.6	---	1.00	"	"	"	---	103	"	---	---	
4-Methyl-2-pentanone (MiBK)	32.4	---	10.0	"	"	40.0	---	81	"	---	---	
Methyl tert-butyl ether (MTBE)	18.0	---	1.00	"	"	20.0	---	90	"	---	---	
Methylene chloride	20.7	---	5.00	"	"	"	---	104	"	---	---	
Naphthalene	16.5	---	2.00	"	"	"	---	82	"	---	---	
n-Propylbenzene	20.1	---	0.500	"	"	"	---	100	"	---	---	
Styrene	19.5	---	0.500	"	"	"	---	98	"	---	---	
1,1,1,2-Tetrachloroethane	20.5	---	0.500	"	"	"	---	102	"	---	---	
1,1,2,2-Tetrachloroethane	17.4	---	0.500	"	"	"	---	87	"	---	---	
Tetrachloroethene (PCE)	21.2	---	0.500	"	"	"	---	106	"	---	---	
Toluene	19.6	---	0.500	"	"	"	---	98	"	---	---	
1,2,3-Trichlorobenzene	17.5	---	2.00	"	"	"	---	88	"	---	---	
1,2,4-Trichlorobenzene	19.5	---	2.00	"	"	"	---	97	"	---	---	
1,1,1-Trichloroethane	20.8	---	0.500	"	"	"	---	104	"	---	---	
1,1,2-Trichloroethane	16.8	---	0.500	"	"	"	---	84	"	---	---	
Trichloroethene (TCE)	19.2	---	0.500	"	"	"	---	96	"	---	---	
Trichlorofluoromethane	21.2	---	1.00	"	"	"	---	106	"	---	---	
1,2,3-Trichloropropane	15.3	---	1.00	"	"	"	---	76	"	---	---	
1,2,4-Trimethylbenzene	20.6	---	1.00	"	"	"	---	103	"	---	---	
1,3,5-Trimethylbenzene	20.2	---	1.00	"	"	"	---	101	"	---	---	
Vinyl chloride	20.0	---	0.500	"	"	"	---	100	"	---	---	
m,p-Xylene	41.4	---	1.00	"	"	40.0	---	104	"	---	---	
o-Xylene	20.4	---	0.500	"	"	20.0	---	102	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 106 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	101 %	80-120 %	"
Toluene-d8 (Surr)	103 %	80-120 %	"
4-Bromofluorobenzene (Surr)	97 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

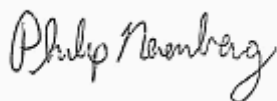
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9060300-MS1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/23/09 04:05						
<b>QC Source Sample: MW110-061109 (A906134-04)</b>												
<b>EPA 8260B</b>												
Acetone	27.3	---	20.0	ug/L	1	40.0	ND	68	70-130%	---	---	Q-01
Benzene	20.8	---	0.250	"	"	20.0	ND	104	"	---	---	
Bromobenzene	20.9	---	0.500	"	"	"	ND	105	"	---	---	
Bromochloromethane	22.5	---	0.500	"	"	"	ND	113	"	---	---	
Bromodichloromethane	22.2	---	0.500	"	"	"	ND	111	"	---	---	
Bromoform	16.7	---	1.00	"	"	"	ND	83	"	---	---	
Bromomethane	21.4	---	5.00	"	"	"	ND	107	"	---	---	
2-Butanone (MEK)	28.8	---	10.0	"	"	40.0	ND	72	"	---	---	
n-Butylbenzene	20.8	---	1.00	"	"	20.0	ND	104	"	---	---	
sec-Butylbenzene	21.2	---	1.00	"	"	"	ND	106	"	---	---	
tert-Butylbenzene	21.8	---	0.500	"	"	"	ND	109	"	---	---	
Carbon tetrachloride	23.6	---	0.500	"	"	"	ND	118	"	---	---	
Chlorobenzene	22.0	---	0.500	"	"	"	ND	110	"	---	---	
Chloroethane	29.3	---	2.00	"	"	"	ND	146	"	---	---	Q-29
Chloroform	23.5	---	1.00	"	"	"	ND	118	"	---	---	
Chloromethane	19.4	---	5.00	"	"	"	ND	97	"	---	---	
2-Chlorotoluene	21.7	---	1.00	"	"	"	ND	109	"	---	---	
4-Chlorotoluene	21.1	---	0.500	"	"	"	ND	106	"	---	---	
1,2-Dibromo-3-chloropropane	15.9	---	5.00	"	"	"	ND	79	"	---	---	
Dibromochloromethane	19.6	---	0.500	"	"	"	ND	98	"	---	---	
1,2-Dibromoethane (EDB)	19.0	---	0.500	"	"	"	ND	95	"	---	---	
Dibromomethane	19.2	---	1.00	"	"	"	ND	96	"	---	---	
1,2-Dichlorobenzene	21.5	---	0.500	"	"	"	ND	107	"	---	---	
1,3-Dichlorobenzene	21.7	---	0.500	"	"	"	ND	108	"	---	---	
1,4-Dichlorobenzene	21.2	---	0.500	"	"	"	ND	106	"	---	---	
Dichlorodifluoromethane	16.9	---	1.00	"	"	"	ND	84	"	---	---	
1,1-Dichloroethane	23.8	---	0.500	"	"	"	ND	119	"	---	---	
1,2-Dichloroethane (EDC)	24.7	---	0.500	"	"	"	ND	124	"	---	---	
1,1-Dichloroethene	25.3	---	0.500	"	"	"	ND	127	"	---	---	
cis-1,2-Dichloroethene	24.4	---	0.500	"	"	"	ND	122	"	---	---	
trans-1,2-Dichloroethene	22.0	---	0.500	"	"	"	ND	110	"	---	---	
1,2-Dichloropropane	22.6	---	2.00	"	"	"	ND	113	"	---	---	
1,3-Dichloropropane	19.6	---	0.500	"	"	"	ND	98	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

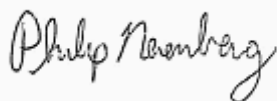
Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9060300-MS1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/23/09 04:05						
<b>QC Source Sample: MW110-061109 (A906134-04)</b>												
2,2-Dichloropropane	21.8	---	2.00	ug/L	"	"	ND	109	"	---	---	
1,1-Dichloropropene	24.2	---	0.500	"	"	"	ND	121	"	---	---	
cis-1,3-Dichloropropene	19.6	---	0.500	"	"	"	ND	98	"	---	---	
trans-1,3-Dichloropropene	19.0	---	0.500	"	"	"	ND	95	"	---	---	
Ethylbenzene	21.5	---	0.500	"	"	"	ND	108	"	---	---	
Hexachlorobutadiene	22.2	---	2.00	"	"	"	ND	111	"	---	---	
2-Hexanone	37.0	---	10.0	"	"	40.0	ND	92	"	---	---	
Isopropylbenzene	22.3	---	0.500	"	"	20.0	ND	112	"	---	---	
4-Isopropyltoluene	21.4	---	1.00	"	"	"	ND	107	"	---	---	
4-Methyl-2-pentanone (MiBK)	35.5	---	10.0	"	"	40.0	ND	89	"	---	---	
Methyl tert-butyl ether (MTBE)	19.8	---	1.00	"	"	20.0	ND	99	"	---	---	
Methylene chloride	21.2	---	5.00	"	"	"	ND	106	"	---	---	
Naphthalene	17.7	---	2.00	"	"	"	ND	89	"	---	---	
n-Propylbenzene	21.5	---	0.500	"	"	"	ND	108	"	---	---	
Styrene	19.0	---	0.500	"	"	"	ND	95	"	---	---	
1,1,1,2-Tetrachloroethane	22.8	---	0.500	"	"	"	ND	114	"	---	---	
1,1,2,2-Tetrachloroethane	18.6	---	0.500	"	"	"	ND	93	"	---	---	
Tetrachloroethene (PCE)	21.7	---	0.500	"	"	"	ND	109	"	---	---	
Toluene	20.9	---	0.500	"	"	"	ND	104	"	---	---	
1,2,3-Trichlorobenzene	19.2	---	2.00	"	"	"	ND	96	"	---	---	
1,2,4-Trichlorobenzene	20.6	---	2.00	"	"	"	ND	103	"	---	---	
1,1,1-Trichloroethane	25.5	---	0.500	"	"	"	ND	128	"	---	---	
1,1,2-Trichloroethane	17.4	---	0.500	"	"	"	ND	87	"	---	---	
Trichloroethene (TCE)	21.3	---	0.500	"	"	"	ND	106	"	---	---	
Trichlorofluoromethane	26.6	---	1.00	"	"	"	ND	133	"	---	---	Q-01
1,2,3-Trichloropropane	17.9	---	1.00	"	"	"	ND	89	"	---	---	
1,2,4-Trimethylbenzene	21.5	---	1.00	"	"	"	0.350	106	"	---	---	
1,3,5-Trimethylbenzene	20.9	---	1.00	"	"	"	0.130	104	"	---	---	
Vinyl chloride	22.4	---	0.500	"	"	"	ND	112	"	---	---	
m,p-Xylene	44.9	---	1.00	"	"	40.0	0.230	112	"	---	---	
o-Xylene	22.0	---	0.500	"	"	20.0	ND	110	"	---	---	

Surr: Dibromofluoromethane (Surr)  
1,4-Difluorobenzene (Surr)

Recovery: 107 % Limits: 80-120 % Dilution: 1x  
101 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 901M10282-0  
 Project Manager: Paul Stull

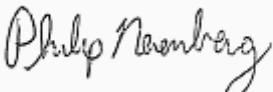
Reported:  
 07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060300 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (9060300-MS1)</b>						Prepared: 06/22/09 13:01 Analyzed: 06/23/09 04:05						
<b>QC Source Sample: MW110-061109 (A906134-04)</b>												
<i>Surr: Toluene-d8 (Surr)</i>			<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>80-120 %</i>		<i>"</i>					

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

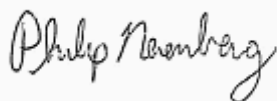
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9060327-BLK1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 00:18						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

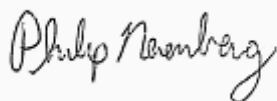
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9060327-BLK1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 00:18						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 112 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	102 %	80-120 %	"
Toluene-d8 (Surr)	98 %	80-120 %	"
4-Bromofluorobenzene (Surr)	100 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

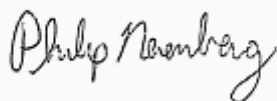
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9060327-BS1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/23/09 23:16						
<b>EPA 8260B</b>												
Acetone	36.6	---	20.0	ug/L	1	40.0	---	91	70-130%	---	---	
Benzene	18.6	---	0.250	"	"	20.0	---	93	"	---	---	
Bromobenzene	19.2	---	0.500	"	"	"	---	96	"	---	---	
Bromochloromethane	20.9	---	0.500	"	"	"	---	104	"	---	---	
Bromodichloromethane	20.9	---	0.500	"	"	"	---	105	"	---	---	
Bromoform	17.2	---	1.00	"	"	"	---	86	"	---	---	
Bromomethane	21.3	---	5.00	"	"	"	---	106	"	---	---	
2-Butanone (MEK)	32.1	---	10.0	"	"	40.0	---	80	"	---	---	
n-Butylbenzene	19.0	---	1.00	"	"	20.0	---	95	"	---	---	
sec-Butylbenzene	18.5	---	1.00	"	"	"	---	93	"	---	---	
tert-Butylbenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
Carbon tetrachloride	23.0	---	0.500	"	"	"	---	115	"	---	---	
Chlorobenzene	19.3	---	0.500	"	"	"	---	96	"	---	---	
Chloroethane	29.0	---	2.00	"	"	"	---	145	"	---	---	Q-29
Chloroform	21.5	---	1.00	"	"	"	---	108	"	---	---	
Chloromethane	20.5	---	5.00	"	"	"	---	102	"	---	---	
2-Chlorotoluene	19.5	---	1.00	"	"	"	---	98	"	---	---	
4-Chlorotoluene	19.8	---	0.500	"	"	"	---	99	"	---	---	
1,2-Dibromo-3-chloropropane	14.8	---	5.00	"	"	"	---	74	"	---	---	
Dibromochloromethane	19.4	---	0.500	"	"	"	---	97	"	---	---	
1,2-Dibromoethane (EDB)	17.1	---	0.500	"	"	"	---	85	"	---	---	
Dibromomethane	17.8	---	1.00	"	"	"	---	89	"	---	---	
1,2-Dichlorobenzene	20.1	---	0.500	"	"	"	---	101	"	---	---	
1,3-Dichlorobenzene	20.4	---	0.500	"	"	"	---	102	"	---	---	
1,4-Dichlorobenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
Dichlorodifluoromethane	26.5	---	1.00	"	"	"	---	132	"	---	---	Q-29
1,1-Dichloroethane	21.0	---	0.500	"	"	"	---	105	"	---	---	
1,2-Dichloroethane (EDC)	23.3	---	0.500	"	"	"	---	116	"	---	---	
1,1-Dichloroethene	23.0	---	0.500	"	"	"	---	115	"	---	---	
cis-1,2-Dichloroethene	23.6	---	0.500	"	"	"	---	118	"	---	---	
trans-1,2-Dichloroethene	23.1	---	0.500	"	"	"	---	115	"	---	---	
1,2-Dichloropropane	20.9	---	2.00	"	"	"	---	104	"	---	---	
1,3-Dichloropropane	18.4	---	0.500	"	"	"	---	92	"	---	---	
2,2-Dichloropropane	24.0	---	2.00	"	"	"	---	120	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

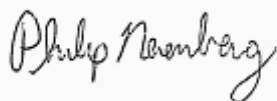
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>												
<b>Water</b>												
<b>LCS (9060327-BS1)</b>												
						Prepared: 06/23/09 15:23			Analyzed: 06/23/09 23:16			
1,1-Dichloropropene	21.6	---	0.500	ug/L	"	"	---	108	"	---	---	
cis-1,3-Dichloropropene	19.1	---	0.500	"	"	"	---	96	"	---	---	
trans-1,3-Dichloropropene	18.8	---	0.500	"	"	"	---	94	"	---	---	
Ethylbenzene	19.1	---	0.500	"	"	"	---	96	"	---	---	
Hexachlorobutadiene	20.3	---	2.00	"	"	"	---	102	"	---	---	
2-Hexanone	34.5	---	10.0	"	"	40.0	---	86	"	---	---	
Isopropylbenzene	19.5	---	0.500	"	"	20.0	---	97	"	---	---	
4-Isopropyltoluene	19.9	---	1.00	"	"	"	---	99	"	---	---	
4-Methyl-2-pentanone (MiBK)	29.0	---	10.0	"	"	40.0	---	72	"	---	---	
Methyl tert-butyl ether (MTBE)	18.9	---	1.00	"	"	20.0	---	95	"	---	---	
Methylene chloride	20.3	---	5.00	"	"	"	---	102	"	---	---	
Naphthalene	15.3	---	2.00	"	"	"	---	77	"	---	---	
n-Propylbenzene	19.5	---	0.500	"	"	"	---	98	"	---	---	
Styrene	18.4	---	0.500	"	"	"	---	92	"	---	---	
1,1,1,2-Tetrachloroethane	20.7	---	0.500	"	"	"	---	103	"	---	---	
1,1,2,2-Tetrachloroethane	15.4	---	0.500	"	"	"	---	77	"	---	---	
Tetrachloroethene (PCE)	20.4	---	0.500	"	"	"	---	102	"	---	---	
Toluene	18.2	---	0.500	"	"	"	---	91	"	---	---	
1,2,3-Trichlorobenzene	16.8	---	2.00	"	"	"	---	84	"	---	---	
1,2,4-Trichlorobenzene	19.3	---	2.00	"	"	"	---	96	"	---	---	
1,1,1-Trichloroethane	22.2	---	0.500	"	"	"	---	111	"	---	---	
1,1,2-Trichloroethane	16.9	---	0.500	"	"	"	---	84	"	---	---	
Trichloroethene (TCE)	20.4	---	0.500	"	"	"	---	102	"	---	---	
Trichlorofluoromethane	26.0	---	1.00	"	"	"	---	130	"	---	---	
1,2,3-Trichloropropane	15.6	---	1.00	"	"	"	---	78	"	---	---	
1,2,4-Trimethylbenzene	19.5	---	1.00	"	"	"	---	98	"	---	---	
1,3,5-Trimethylbenzene	19.5	---	1.00	"	"	"	---	98	"	---	---	
Vinyl chloride	22.0	---	0.500	"	"	"	---	110	"	---	---	
m,p-Xylene	39.6	---	1.00	"	"	40.0	---	99	"	---	---	
o-Xylene	20.0	---	0.500	"	"	20.0	---	100	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 110 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	102 %	80-120 %	"
Toluene-d8 (Surr)	96 %	80-120 %	"
4-Bromofluorobenzene (Surr)	94 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

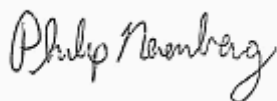
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9060327-DUP1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 04:26						
<b>QC Source Sample: MW109-061109 (A906134-02)</b>												
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Benzene	23.3	---	0.250	"	"	---	27.4	---	---	16	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9060327 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9060327-DUP1)</b>						Prepared: 06/23/09 15:23 Analyzed: 06/24/09 04:26						
<b>QC Source Sample: MW109-061109 (A906134-02)</b>												
2,2-Dichloropropane	ND	---	2.00	ug/L	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Styrene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)  
1,4-Difluorobenzene (Surr)

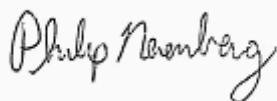
Recovery: 113 %  
102 %

Limits: 80-120 %  
80-120 %

Dilution: 1x  
"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	------	--------------	---------------	------	-------------	-----	-----------	-------

**Batch 9060327 - EPA 5030B**

**Water**

**Duplicate (9060327-DUP1)**

Prepared: 06/23/09 15:23 Analyzed: 06/24/09 04:26

**QC Source Sample: MW109-061109 (A906134-02)**

Surr: *Toluene-d8 (Surr)*

Recovery: 98 %

Limits: 80-120 %

Dilution: 1x

4-Bromofluorobenzene (Surr)

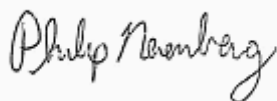
96 %

80-120 %

"

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 901M10282-0  
 Project Manager: Paul Stull

Reported:  
 07/01/09 02:44

## SAMPLE PREPARATION INFORMATION

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9060327</b>							
A906134-01RE1	Water	NWTPH-Gx	06/11/09 13:15	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-02	Water	NWTPH-Gx	06/11/09 12:10	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-03	Water	NWTPH-Gx	06/11/09 11:20	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-04RE1	Water	NWTPH-Gx	06/11/09 14:05	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-05	Water	NWTPH-Gx	06/11/09 15:30	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-06	Water	NWTPH-Gx	06/11/09 14:50	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00

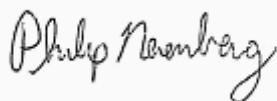
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9060300</b>							
A906134-01	Water	EPA 8260B	06/11/09 13:15	06/22/09 13:01	5mL/5mL	5mL/5mL	1.00
A906134-04	Water	EPA 8260B	06/11/09 14:05	06/22/09 13:01	5mL/5mL	5mL/5mL	1.00
<b>Batch: 9060327</b>							
A906134-02	Water	EPA 8260B	06/11/09 12:10	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-03	Water	EPA 8260B	06/11/09 11:20	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-05	Water	EPA 8260B	06/11/09 15:30	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00
A906134-06	Water	EPA 8260B	06/11/09 14:50	06/23/09 15:23	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

## Notes and Definitions


### Qualifiers:

- B-02 Analyte detected in the extraction blank at a level below the MRL, but greater than one-half the MRL.
- Q-01 The percent recovery and/or RPD was outside acceptance limits for this spiked sample. The batch was accepted based on LCS recovery.
- Q-29 Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 901M10282-0  
Project Manager: Paul Stull

Reported:  
07/01/09 02:44

Lab # A900134-004

### CHAIN OF CUSTODY

**APEX LABS**

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Project Name: <u>Project A</u>		Project #																	
Company: <u>AMEC</u>		Project Name: <u>503 699 3410</u>																	
Address: <u>7376 SW Durham Rd, Porttunda, OR</u>		Phone: <u>503 699 3410</u>																	
Sampled by: <u>JOSEPH GARDNER</u>		Fax: <u>503 718 2323</u>																	
Site Location: <u>OR</u>		Email: <u>Paul.Stull@Amec.com</u>																	
Other: <u>WIN</u>		ANALYSIS REQUEST																	
SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTR-CHD	NWTR-DS	NWTR-GR	BTEX	3560 HBDM VOCs	3250 HAPs VOCs	3250 VOCs <u>swr</u>	3270 SEM PAHs	3182 PCBs	3181 Chlor. Pest	RCHA Metals (B)	Priority Metals (13)	AL, SH, AS, BA, BE, BI, BR, CA, CB, CC, CD, CE, CF, CG, CH, CI, CL, CM, CN, CO, CP, CR, CS, CU, CV, CZ, DE, DG, DI, DL, DM, DN, DO, DP, DR, DS, DT, DV, DW, DX, DY, DZ, EG, EH, EI, EL, EM, EN, EO, EP, ER, ES, ET, EV, EX, EY, EZ, FG, FH, FI, FL, FM, FN, FO, FP, FR, FS, FT, FV, FW, FX, FY, FZ, GG, GH, GI, GL, GM, GN, GO, GP, GR, GS, GT, GV, GW, GX, GY, GZ, HH, HI, HJ, HL, HM, HN, HO, HP, HR, HS, HT, HV, HW, HX, HY, HZ, II, JJ, JK, JL, JM, JN, JO, JP, JR, JS, JT, JV, JW, JX, JY, JZ, KK, LL, MM, NN, OO, PP, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SS, TT, UU, VV, WW, XX, YY, ZZ	
MW103 - <u>Clot109</u>		6/19	1315					X				X							
MW105 -			1210					X				X							
MW105 -			1120					X				X							
MW110 -			1405					X				X							
MW111 -			1530					X				X							
MW100 -			1450					X				X							
SPECIAL INSTRUCTIONS:																			
Normal Turn Around Time (TAT) = 5-10 Business Days																			
TAT Requested (circle): 24 HR 48 HR 72 HR																			
4 DAY 5 DAY Other: _____																			
SAMPLES ARE HELD FOR 30 DAYS																			
RELEASED BY: <u>[Signature]</u>		RECEIVED BY: <u>[Signature]</u>		DATE: <u>6/19/09</u>		DATE: <u>6/19/09</u>		SIGNATURE: <u>[Signature]</u>		SIGNATURE: <u>[Signature]</u>		DATE: _____		DATE: _____		SIGNATURE: _____		SIGNATURE: _____	
Printed Name: <u>JOSEPH GARDNER</u>		Printed Name: <u>WILLIAM KASTAL</u>		Printed Name: <u>6/19/09</u>		Printed Name: <u>6/19/09</u>		Printed Name: _____		Printed Name: _____		Printed Name: _____		Printed Name: _____		Printed Name: _____		Printed Name: _____	
Company: <u>AMEC</u>		Company: <u>Apex</u>		Company: <u>Apex</u>		Company: <u>Apex</u>		Company: _____		Company: _____		Company: _____		Company: _____		Company: _____		Company: _____	

*Philip Nerenberg*

# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Monday, October 5, 2009

Kurt Harrington  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M10282-0

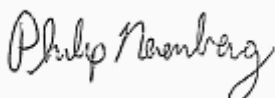
Enclosed are the results of analyses for work order A909090, which was received by the laboratory on 9/11/2009 at 8:07:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

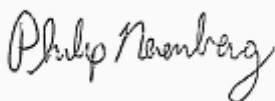
Reported:  
10/05/09 16:01

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-091009	A909090-01	Water	09/10/09 10:30	09/11/09 08:07
MW109-091009	A909090-02	Water	09/10/09 12:55	09/11/09 08:07
MW105-091009	A909090-03	Water	09/10/09 11:30	09/11/09 08:07
MW110-091009	A909090-04	Water	09/10/09 13:45	09/11/09 08:07
MW111-091009	A909090-05	Water	09/10/09 14:40	09/11/09 08:07
MW108A-091009	A909090-06	Water	09/10/09 12:15	09/11/09 08:07
TB	A909090-07	Water	09/10/09 00:00	09/11/09 08:07

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

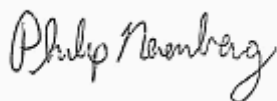
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
<b>MW103-091009 (A909090-01)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	0.179	---	0.0800	mg/L	1	09/15/09 13:01	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			105 %	Limits: 50-150 %	"	"	"	
<b>MW109-091009 (A909090-02)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 14:03	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 86 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			105 %	Limits: 50-150 %	"	"	"	
<b>MW105-091009 (A909090-03)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 14:34	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 85 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			107 %	Limits: 50-150 %	"	"	"	
<b>MW110-091009 (A909090-04)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 15:04	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			105 %	Limits: 50-150 %	"	"	"	
<b>MW111-091009 (A909090-05)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 15:35	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 88 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			107 %	Limits: 50-150 %	"	"	"	
<b>MW108A-091009 (A909090-06)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 16:06	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 107 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			107 %	Limits: 50-150 %	"	"	"	
<b>TB (A909090-07)</b>			<b>Matrix: Water</b>					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	09/15/09 11:59	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %	"	"	"	
1,4-Difluorobenzene (Sur)			107 %	Limits: 50-150 %	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

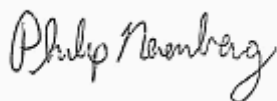
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-091009 (A909090-01)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 13:01	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<b>Ethylbenzene</b>	<b>0.700</b>	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>0.940</b>	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>3.12</b>	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>2.36</b>	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

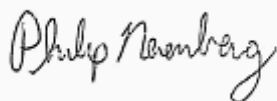
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW109-091009 (A909090-02)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 14:03	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 90 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

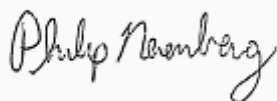
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-091009 (A909090-03)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 14:34	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

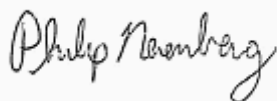
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW110-091009 (A909090-04)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 15:04	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

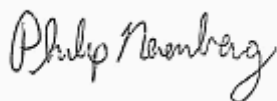
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW111-091009 (A909090-05)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 15:35	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

**Amec Earth and Environmental, Inc**  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

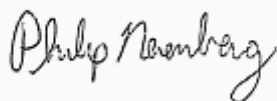
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW108A-091009 (A909090-06)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 16:06	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>98 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

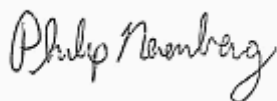
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>TB (A909090-07)</b>			<b>Matrix: Water</b>					
Benzene	ND	---	0.250	ug/L	1	09/15/09 11:59	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

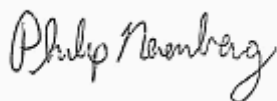
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9090179-BLK1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 11:28						
<b>NWTPH-Gx</b>												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 86 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			104 %	50-150 %			"					
<b>LCS (9090179-BS2)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 10:57						
<b>NWTPH-Gx</b>												
Gasoline Range Organics	0.541	---	0.0800	mg/L	1	0.500	---	108	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 88 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			103 %	50-150 %			"					
<b>Duplicate (9090179-DUP1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32						
<b>QC Source Sample: MW103-091009 (A909090-01)</b>												
<b>NWTPH-Gx</b>												
Gasoline Range Organics	0.175	---	0.0800	mg/L	1	---	0.179	---	---	2	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 87 %	Limits: 50-150 %			Dilution: 1x					
1,4-Difluorobenzene (Sur)			100 %	50-150 %			"					

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

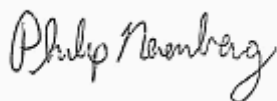
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (9090179-BLK1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 11:28						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	2.00	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

Project: Fred Meyer (FMPO) Port Orchard

7376 SW Durham Road  
Portland, OR 97224

Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

## QUALITY CONTROL (QC) SAMPLE RESULTS

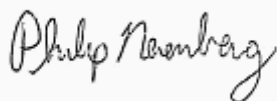
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>			<b>Water</b>									
<b>Blank (9090179-BLK1)</b>			Prepared: 09/15/09 08:10 Analyzed: 09/15/09 11:28									
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Toluene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 103 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	102 %	80-120 %	"
Toluene-d8 (Surr)	98 %	80-120 %	"
4-Bromofluorobenzene (Surr)	99 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

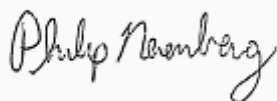
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9090179-BS1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 10:27						
<b>EPA 8260B</b>												
Acetone	42.7	---	20.0	ug/L	1	40.0	---	107	70-130%	---	---	
Benzene	21.5	---	0.250	"	"	20.0	---	108	"	---	---	
Bromobenzene	21.4	---	0.500	"	"	"	---	107	"	---	---	
Bromochloromethane	23.0	---	0.500	"	"	"	---	115	"	---	---	
Bromodichloromethane	23.2	---	0.500	"	"	"	---	116	"	---	---	
Bromoform	23.8	---	1.00	"	"	"	---	119	"	---	---	
Bromomethane	20.1	---	5.00	"	"	"	---	101	"	---	---	
2-Butanone (MEK)	46.9	---	10.0	"	"	40.0	---	117	"	---	---	
n-Butylbenzene	21.7	---	1.00	"	"	20.0	---	109	"	---	---	
sec-Butylbenzene	20.8	---	1.00	"	"	"	---	104	"	---	---	
tert-Butylbenzene	20.5	---	0.500	"	"	"	---	103	"	---	---	
Carbon tetrachloride	21.8	---	0.500	"	"	"	---	109	"	---	---	
Chlorobenzene	21.4	---	0.500	"	"	"	---	107	"	---	---	
Chloroethane	20.1	---	2.00	"	"	"	---	100	"	---	---	
Chloroform	21.2	---	1.00	"	"	"	---	106	"	---	---	
Chloromethane	22.4	---	5.00	"	"	"	---	112	"	---	---	
2-Chlorotoluene	20.4	---	1.00	"	"	"	---	102	"	---	---	
4-Chlorotoluene	21.0	---	0.500	"	"	"	---	105	"	---	---	
1,2-Dibromo-3-chloropropane	26.0	---	5.00	"	"	"	---	130	"	---	---	
Dibromochloromethane	22.4	---	0.500	"	"	"	---	112	"	---	---	
1,2-Dibromoethane (EDB)	23.1	---	0.500	"	"	"	---	115	"	---	---	
Dibromomethane	23.2	---	1.00	"	"	"	---	116	"	---	---	
1,2-Dichlorobenzene	21.5	---	0.500	"	"	"	---	107	"	---	---	
1,3-Dichlorobenzene	21.5	---	0.500	"	"	"	---	107	"	---	---	
1,4-Dichlorobenzene	21.0	---	0.500	"	"	"	---	105	"	---	---	
Dichlorodifluoromethane	25.9	---	1.00	"	"	"	---	129	"	---	---	
1,1-Dichloroethane	22.4	---	0.500	"	"	"	---	112	"	---	---	
1,2-Dichloroethane (EDC)	22.6	---	0.500	"	"	"	---	113	"	---	---	
1,1-Dichloroethene	21.7	---	0.500	"	"	"	---	109	"	---	---	
cis-1,2-Dichloroethene	21.8	---	0.500	"	"	"	---	109	"	---	---	
trans-1,2-Dichloroethene	22.1	---	0.500	"	"	"	---	111	"	---	---	
1,2-Dichloropropane	22.1	---	2.00	"	"	"	---	110	"	---	---	
1,3-Dichloropropane	22.4	---	0.500	"	"	"	---	112	"	---	---	
2,2-Dichloropropane	21.1	---	2.00	"	"	"	---	106	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

## QUALITY CONTROL (QC) SAMPLE RESULTS

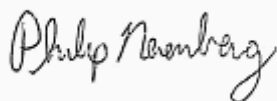
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (9090179-BS1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 10:27						
1,1-Dichloropropene	21.7	---	0.500	ug/L	"	"	---	108	"	---	---	
cis-1,3-Dichloropropene	23.3	---	0.500	"	"	"	---	117	"	---	---	
trans-1,3-Dichloropropene	22.1	---	1.00	"	"	"	---	110	"	---	---	
Ethylbenzene	21.6	---	0.500	"	"	"	---	108	"	---	---	
Hexachlorobutadiene	18.9	---	2.00	"	"	"	---	94	"	---	---	
2-Hexanone	44.3	---	10.0	"	"	40.0	---	111	"	---	---	
Isopropylbenzene	22.4	---	0.500	"	"	20.0	---	112	"	---	---	
4-Isopropyltoluene	21.6	---	1.00	"	"	"	---	108	"	---	---	
4-Methyl-2-pentanone (MiBK)	48.8	---	10.0	"	"	40.0	---	122	"	---	---	
Methyl tert-butyl ether (MTBE)	23.5	---	1.00	"	"	20.0	---	118	"	---	---	
Methylene chloride	21.2	---	5.00	"	"	"	---	106	"	---	---	
Naphthalene	23.3	---	5.00	"	"	"	---	117	"	---	---	
n-Propylbenzene	20.8	---	0.500	"	"	"	---	104	"	---	---	
Styrene	22.8	---	0.500	"	"	"	---	114	"	---	---	
1,1,1,2-Tetrachloroethane	21.5	---	0.500	"	"	"	---	108	"	---	---	
1,1,2,2-Tetrachloroethane	22.3	---	0.500	"	"	"	---	112	"	---	---	
Tetrachloroethene (PCE)	20.1	---	0.500	"	"	"	---	100	"	---	---	
Toluene	21.2	---	0.500	"	"	"	---	106	"	---	---	
1,2,3-Trichlorobenzene	23.8	---	2.00	"	"	"	---	119	"	---	---	
1,2,4-Trichlorobenzene	23.6	---	2.00	"	"	"	---	118	"	---	---	
1,1,1-Trichloroethane	21.5	---	0.500	"	"	"	---	107	"	---	---	
1,1,2-Trichloroethane	22.4	---	0.500	"	"	"	---	112	"	---	---	
Trichloroethene (TCE)	21.2	---	0.500	"	"	"	---	106	"	---	---	
Trichlorofluoromethane	21.6	---	1.00	"	"	"	---	108	"	---	---	
1,2,3-Trichloropropane	22.5	---	1.00	"	"	"	---	112	"	---	---	
1,2,4-Trimethylbenzene	20.7	---	1.00	"	"	"	---	103	"	---	---	
1,3,5-Trimethylbenzene	21.2	---	1.00	"	"	"	---	106	"	---	---	
Vinyl chloride	22.2	---	0.500	"	"	"	---	111	"	---	---	
m,p-Xylene	45.0	---	1.00	"	"	40.0	---	113	"	---	---	
o-Xylene	22.0	---	0.500	"	"	20.0	---	110	"	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 102 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	102 %	80-120 %	"
Toluene-d8 (Surr)	100 %	80-120 %	"
4-Bromofluorobenzene (Surr)	96 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

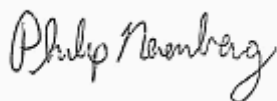
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9090179-DUP1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32						
<b>QC Source Sample: MW103-091009 (A909090-01)</b>												
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.250	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9090179-DUP1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32						
<b>QC Source Sample: MW103-091009 (A909090-01)</b>												
2,2-Dichloropropane	ND	---	2.00	ug/L	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	<b>0.670</b>	---	0.500	"	"	---	0.700	---	---	4	30%	
Hexachlorobutadiene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	<b>1.12</b>	---	0.500	"	"	---	0.940	---	---	17	30%	
Styrene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	<b>2.98</b>	---	1.00	"	"	---	3.12	---	---	5	30%	
1,3,5-Trimethylbenzene	<b>2.57</b>	---	1.00	"	"	---	2.36	---	---	9	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)  
1,4-Difluorobenzene (Surr)

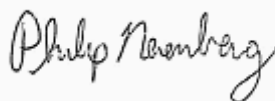
Recovery: 100 %  
97 %

Limits: 80-120 %  
80-120 %

Dilution: 1x  
"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

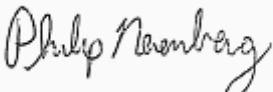
Reported:  
 10/05/09 16:01

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 9090179 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (9090179-DUP1)</b>						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32						
<b>QC Source Sample: MW103-091009 (A909090-01)</b>												
<i>Surr: Toluene-d8 (Surr)</i>			<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>					
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>		<i>80-120 %</i>		<i>"</i>					

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M10282-0  
 Project Manager: Kurt Harrington

Reported:  
 10/05/09 16:01

## SAMPLE PREPARATION INFORMATION

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9090179</b>							
A909090-01	Water	NWTPH-Gx	09/10/09 10:30	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-02	Water	NWTPH-Gx	09/10/09 12:55	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-03	Water	NWTPH-Gx	09/10/09 11:30	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-04	Water	NWTPH-Gx	09/10/09 13:45	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-05	Water	NWTPH-Gx	09/10/09 14:40	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-06	Water	NWTPH-Gx	09/10/09 12:15	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-07	Water	NWTPH-Gx	09/10/09 00:00	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00

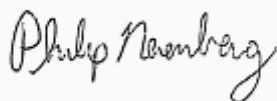
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 9090179</b>							
A909090-01	Water	EPA 8260B	09/10/09 10:30	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-02	Water	EPA 8260B	09/10/09 12:55	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-03	Water	EPA 8260B	09/10/09 11:30	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-04	Water	EPA 8260B	09/10/09 13:45	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-05	Water	EPA 8260B	09/10/09 14:40	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-06	Water	EPA 8260B	09/10/09 12:15	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00
A909090-07	Water	EPA 8260B	09/10/09 00:00	09/15/09 08:10	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

## Notes and Definitions

### Qualifiers:

### Notes and Conventions:

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.

RPD Relative Percent Difference


MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.

WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.

Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M10282-0  
Project Manager: Kurt Harrington

Reported:  
10/05/09 16:01

Lab #                       
A9109090 coc L of L

## CHAIN OF CUSTODY

## APEX LABS

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: <b>AMEC</b>		Project Mgr: <b>Kurt Harrington</b>		Project Name: <b>961M10282-0</b>	
Address: <b>7376 SW Durham Rd, Portland, OR</b>		Phone: <b>503 5725111</b>		Email: <b>Kurt.Harrington@amec.com</b>	
Sampled by: <b>Jason Gausman</b>		ANALYSIS REQUEST			
Site Location: <b>WA</b>	Other: <b>OK</b>	Priority Matrix (13)	RCRA Matrix (8)	PCB Matrix (8)	1209-Z
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST
M01103-051009	9/10/09	1330	W	3	AL, SA, AS, BA, BS, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ
M01105-051009	9/10/09	1255	W	3	3270 SIM PAHs
M01105-091009	9/10/09	1130	W	3	3250 VOCs
M01110-051009	9/10/09	1345	W	3	3250 HAPs
M01111-051009	9/10/09	1440	W	3	3250 HBM VOCs
M01119A-051009	9/10/09	1215	W	3	3250 HBM VOCs
T10	9/10/09	1440	W	3	3250 HBM VOCs
SPECIAL INSTRUCTIONS: <b>* suite: BTEX, MTHL, EDC, UDB, NAPM, Alkybenz, Sulfo</b>					
TAT Requested (circle): <b>24 HR</b>		48 HR		72 HR	
4 DAY		5 DAY		Other: <b>STD</b>	
SAMPLES ARE HELD FOR 30 DAYS					
RELINQUISHED BY: <b>[Signature]</b>	Date: <b>9/10/09</b>	Signature: <b>[Signature]</b>	Date: <b>9/10/09</b>	Signature: <b>[Signature]</b>	Signature: <b>[Signature]</b>
Printed Name: <b>[Name]</b>	Time: <b>1440</b>	Printed Name: <b>[Name]</b>	Time: <b>1440</b>	Printed Name: <b>[Name]</b>	Time: <b>1440</b>
Company: <b>[Company]</b>	Company: <b>[Company]</b>	Company: <b>[Company]</b>	Company: <b>[Company]</b>	Company: <b>[Company]</b>	Company: <b>[Company]</b>

*Philip Nerenberg*



# Apex Labs

12232 S.W. Garden Place  
Tigard, OR 97223  
503-718-2323 Phone  
503-718-0333 Fax

Friday, February 12, 2010

Paul Stull  
Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

RE: Fred Meyer (FMPO) Port Orchard / 961M-10282

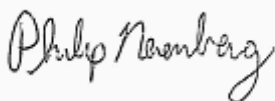
Enclosed are the results of analyses for work order A10A198, which was received by the laboratory on 1/25/2010 at 10:15:00AM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: [pnerenberg@apex-labs.com](mailto:pnerenberg@apex-labs.com), or by phone at 503-718-2323.

---

Apex Laboratories



*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
Project Number: 961M-10282  
Project Manager: Paul Stull

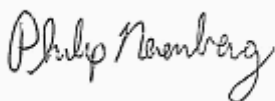
Reported:  
02/12/10 12:50

## ANALYTICAL REPORT FOR SAMPLES

### SAMPLE INFORMATION

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW103-012210	A10A198-02	Water	01/22/10 10:15	01/25/10 10:15
MW105-012210	A10A198-03	Water	01/22/10 13:20	01/25/10 10:15
MW108A-012210	A10A198-04	Water	01/22/10 11:00	01/25/10 10:15
MW109-012210	A10A198-05	Water	01/22/10 11:50	01/25/10 10:15
MW110-012210	A10A198-06	Water	01/22/10 12:35	01/25/10 10:15
MW111-012210	A10A198-07	Water	01/22/10 09:10	01/25/10 10:15

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

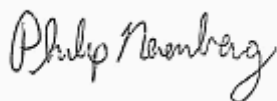
## ANALYTICAL SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-012210 (A10A198-02)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
<b>Gasoline Range Organics</b>	<b>1.32</b>	---	0.0800	mg/L	1	01/31/10 17:30	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>		<i>Limits: 50-150 %</i>		"	
<b>MW105-012210 (A10A198-03)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 17:58	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>104 %</i>		<i>Limits: 50-150 %</i>		"	
<b>MW108A-012210 (A10A198-04)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 18:26	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 112 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>		<i>Limits: 50-150 %</i>		"	
<b>MW109-012210 (A10A198-05)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 18:53	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>		<i>Limits: 50-150 %</i>		"	
<b>MW110-012210 (A10A198-06)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
<b>Gasoline Range Organics</b>	<b>0.687</b>	---	0.0800	mg/L	1	01/31/10 19:21	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 114 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>		<i>Limits: 50-150 %</i>		"	
<b>MW111-012210 (A10A198-07)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 20:16	NWTPH-Gx	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>			<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>		"	
<i>1,4-Difluorobenzene (Sur)</i>			<i>100 %</i>		<i>Limits: 50-150 %</i>		"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

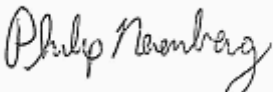
Reported:  
 02/12/10 12:50

## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW103-012210 (A10A198-02)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 17:30	EPA 8260B	
<b>n-Butylbenzene</b>	<b>4.51</b>	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<b>Ethylbenzene</b>	<b>7.35</b>	---	0.500	"	"	"	"	
<b>Isopropylbenzene</b>	<b>1.73</b>	---	0.500	"	"	"	"	
<b>4-Isopropyltoluene</b>	<b>2.72</b>	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>4.27</b>	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>75.6</b>	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>10.6</b>	---	1.00	"	"	"	"	
<b>m,p-Xylene</b>	<b>17.9</b>	---	1.00	"	"	"	"	
<b>o-Xylene</b>	<b>2.96</b>	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories



Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

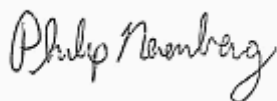
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW105-012210 (A10A198-03)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 17:58	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>108 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

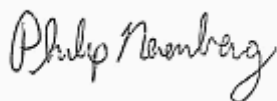
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW108A-012210 (A10A198-04)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 18:26	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>104 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>105 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

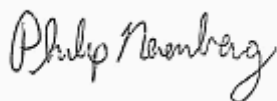
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW109-012210 (A10A198-05)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 18:53	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>110 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

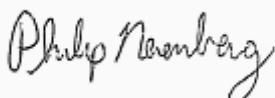
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW110-012210 (A10A198-06)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 19:21	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
<b>Ethylbenzene</b>	<b>1.04</b>	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
<b>n-Propylbenzene</b>	<b>0.950</b>	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>4.79</b>	---	1.00	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>6.59</b>	---	1.00	"	"	"	"	
<b>m,p-Xylene</b>	<b>2.34</b>	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>102 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

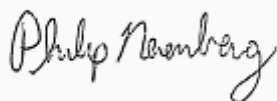
## ANALYTICAL SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting		Dilution	Date Analyzed	Method	Notes
			Limit	Units				
<b>MW111-012210 (A10A198-07)</b>			<b>Matrix: Water</b>		<b>Batch: 1001363</b>			
Benzene	ND	---	0.250	ug/L	1	01/31/10 20:16	EPA 8260B	
n-Butylbenzene	ND	---	1.00	"	"	"	"	
sec-Butylbenzene	ND	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Isopropylbenzene	ND	---	0.500	"	"	"	"	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	ND	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
<i>Surrogate: Dibromofluoromethane (Surr)</i>			<i>Recovery: 99 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>1,4-Difluorobenzene (Surr)</i>			<i>103 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>Toluene-d8 (Surr)</i>			<i>97 %</i>	<i>Limits: 80-120 %</i>	"	"	"	
<i>4-Bromofluorobenzene (Surr)</i>			<i>107 %</i>	<i>Limits: 80-120 %</i>	"	"	"	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

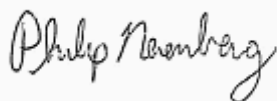
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (1001363-BLK1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 14:15						
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	---
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 105 %			Limits: 50-150 %			Dilution: 1x			
1,4-Difluorobenzene (Sur)			99 %			50-150 %			"			
<b>LCS (1001363-BS2)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 13:47						
NWTPH-Gx												
Gasoline Range Organics	0.550	---	0.0800	mg/L	1	0.500	---	110	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 108 %			Limits: 50-150 %			Dilution: 1x			
1,4-Difluorobenzene (Sur)			102 %			50-150 %			"			
<b>Duplicate (1001363-DUP1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49						
QC Source Sample: MW110-012210 (A10A198-06)												
NWTPH-Gx												
Gasoline Range Organics	0.783	---	0.0800	mg/L	1	---	0.687	---	---	13	30%	
Surr: 4-Bromofluorobenzene (Sur)			Recovery: 114 %			Limits: 50-150 %			Dilution: 1x			
1,4-Difluorobenzene (Sur)			102 %			50-150 %			"			

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

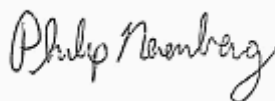
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (1001363-BLK1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 14:15						
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	---
Benzene	ND	---	0.250	"	"	---	---	---	---	---	---	---
Bromobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromodichloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
Bromoform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Bromomethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	---	10.0	"	"	---	---	---	---	---	---	---
n-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
sec-Butylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	---
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Carbon tetrachloride	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Chloroethane	ND	---	2.00	"	"	---	---	---	---	---	---	---
Chloroform	ND	---	1.00	"	"	---	---	---	---	---	---	---
Chloromethane	ND	---	5.00	"	"	---	---	---	---	---	---	---
2-Chlorotoluene	ND	---	1.00	"	"	---	---	---	---	---	---	---
4-Chlorotoluene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	---	---	---	---	---	---
Dibromochloromethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dibromomethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	---	---	---	---	---	---
1,2-Dichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	---	0.500	"	"	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	---

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

## QUALITY CONTROL (QC) SAMPLE RESULTS

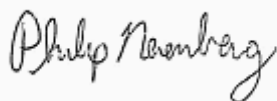
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Blank (1001363-BLK1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 14:15						
1,1-Dichloropropene	ND	---	0.500	ug/L	"	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	2.00	"	"	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	"	"	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	---	---	---	---	---	
Methylene chloride	ND	---	5.00	"	"	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	"	"	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Styrene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Tetrachloroethene (PCE)	<b>0.540</b>	---	0.500	"	"	---	---	---	---	---	---	B
Toluene	ND	---	0.500	"	"	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	"	"	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.500	"	"	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	"	"	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	"	"	---	---	---	---	---	---	

Surr: Dibromofluoromethane (Surr)	Recovery: 97 %	Limits: 80-120 %	Dilution: 1x
1,4-Difluorobenzene (Surr)	100 %	80-120 %	"
Toluene-d8 (Surr)	103 %	80-120 %	"
4-Bromofluorobenzene (Surr)	102 %	80-120 %	"

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

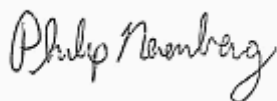
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (1001363-BS1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 13:19						
<b>EPA 8260B</b>												
Acetone	32.6	---	20.0	ug/L	1	40.0	---	81	70-130%	---	---	
Benzene	19.4	---	0.250	"	"	20.0	---	97	"	---	---	
Bromobenzene	20.5	---	0.500	"	"	"	---	102	"	---	---	
Bromochloromethane	21.6	---	0.500	"	"	"	---	108	"	---	---	
Bromodichloromethane	21.2	---	0.500	"	"	"	---	106	"	---	---	
Bromoform	22.5	---	1.00	"	"	"	---	112	"	---	---	
Bromomethane	15.7	---	5.00	"	"	"	---	79	"	---	---	
2-Butanone (MEK)	39.3	---	10.0	"	"	40.0	---	98	"	---	---	
n-Butylbenzene	21.3	---	1.00	"	"	20.0	---	106	"	---	---	
sec-Butylbenzene	20.6	---	1.00	"	"	"	---	103	"	---	---	
tert-Butylbenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
Carbon tetrachloride	21.4	---	0.500	"	"	"	---	107	"	---	---	
Chlorobenzene	18.7	---	0.500	"	"	"	---	93	"	---	---	
Chloroethane	30.6	---	2.00	"	"	"	---	153	"	---	---	Q-29
Chloroform	19.4	---	1.00	"	"	"	---	97	"	---	---	
Chloromethane	18.9	---	5.00	"	"	"	---	94	"	---	---	
2-Chlorotoluene	19.6	---	1.00	"	"	"	---	98	"	---	---	
4-Chlorotoluene	19.3	---	0.500	"	"	"	---	97	"	---	---	
1,2-Dibromo-3-chloropropane	24.8	---	5.00	"	"	"	---	124	"	---	---	
Dibromochloromethane	18.9	---	0.500	"	"	"	---	94	"	---	---	
1,2-Dibromoethane (EDB)	23.7	---	0.500	"	"	"	---	118	"	---	---	
Dibromomethane	20.6	---	1.00	"	"	"	---	103	"	---	---	
1,2-Dichlorobenzene	19.4	---	0.500	"	"	"	---	97	"	---	---	
1,3-Dichlorobenzene	20.3	---	0.500	"	"	"	---	102	"	---	---	
1,4-Dichlorobenzene	20.5	---	0.500	"	"	"	---	103	"	---	---	
Dichlorodifluoromethane	18.7	---	1.00	"	"	"	---	93	"	---	---	
1,1-Dichloroethane	19.8	---	0.500	"	"	"	---	99	"	---	---	
1,2-Dichloroethane (EDC)	20.1	---	0.500	"	"	"	---	100	"	---	---	
1,1-Dichloroethene	18.5	---	0.500	"	"	"	---	93	"	---	---	
cis-1,2-Dichloroethene	21.4	---	0.500	"	"	"	---	107	"	---	---	
trans-1,2-Dichloroethene	20.1	---	0.500	"	"	"	---	100	"	---	---	
1,2-Dichloropropane	20.3	---	1.00	"	"	"	---	102	"	---	---	
1,3-Dichloropropane	20.3	---	0.500	"	"	"	---	101	"	---	---	
2,2-Dichloropropane	21.7	---	1.00	"	"	"	---	109	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

## QUALITY CONTROL (QC) SAMPLE RESULTS

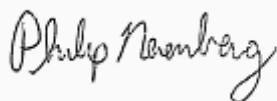
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>LCS (1001363-BS1)</b>						Prepared: 01/31/10 12:00		Analyzed: 01/31/10 13:19				
1,1-Dichloropropene	18.8	---	0.500	ug/L	"	"	---	94	"	---	---	
cis-1,3-Dichloropropene	19.9	---	0.500	"	"	"	---	99	"	---	---	
trans-1,3-Dichloropropene	19.4	---	1.00	"	"	"	---	97	"	---	---	
Ethylbenzene	19.5	---	0.500	"	"	"	---	97	"	---	---	
Hexachlorobutadiene	20.6	---	2.00	"	"	"	---	103	"	---	---	
2-Hexanone	37.4	---	10.0	"	"	40.0	---	94	"	---	---	
Isopropylbenzene	19.1	---	0.500	"	"	20.0	---	95	"	---	---	
4-Isopropyltoluene	21.1	---	1.00	"	"	"	---	105	"	---	---	
4-Methyl-2-pentanone (MiBK)	42.8	---	10.0	"	"	40.0	---	107	"	---	---	
Methyl tert-butyl ether (MTBE)	17.6	---	1.00	"	"	20.0	---	88	"	---	---	
Methylene chloride	21.7	---	5.00	"	"	"	---	109	"	---	---	
Naphthalene	21.8	---	5.00	"	"	"	---	109	"	---	---	
n-Propylbenzene	20.0	---	0.500	"	"	"	---	100	"	---	---	
Styrene	18.2	---	0.500	"	"	"	---	91	"	---	---	
1,1,1,2-Tetrachloroethane	19.8	---	0.500	"	"	"	---	99	"	---	---	
1,1,2,2-Tetrachloroethane	22.6	---	0.500	"	"	"	---	113	"	---	---	
Tetrachloroethene (PCE)	19.0	---	0.500	"	"	"	---	95	"	---	---	B
Toluene	19.2	---	0.500	"	"	"	---	96	"	---	---	
1,2,3-Trichlorobenzene	20.5	---	2.00	"	"	"	---	102	"	---	---	
1,2,4-Trichlorobenzene	19.3	---	2.00	"	"	"	---	96	"	---	---	
1,1,1-Trichloroethane	20.1	---	0.500	"	"	"	---	100	"	---	---	
1,1,2-Trichloroethane	21.3	---	0.500	"	"	"	---	106	"	---	---	
Trichloroethene (TCE)	20.5	---	0.500	"	"	"	---	102	"	---	---	
Trichlorofluoromethane	35.5	---	1.00	"	"	"	---	177	"	---	---	Q-29
1,2,3-Trichloropropane	25.4	---	1.00	"	"	"	---	127	"	---	---	
1,2,4-Trimethylbenzene	20.3	---	1.00	"	"	"	---	101	"	---	---	
1,3,5-Trimethylbenzene	20.1	---	1.00	"	"	"	---	101	"	---	---	
Vinyl chloride	22.2	---	0.500	"	"	"	---	111	"	---	---	
m,p-Xylene	38.3	---	1.00	"	"	40.0	---	96	"	---	---	
o-Xylene	19.3	---	0.500	"	"	20.0	---	96	"	---	---	

Surr: Dibromofluoromethane (Surr) Recovery: 103 % Limits: 80-120 % Dilution: 1x  
 1,4-Difluorobenzene (Surr) 104 % 80-120 % "  
 Toluene-d8 (Surr) 100 % 80-120 % "  
 4-Bromofluorobenzene (Surr) 102 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

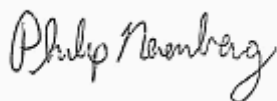
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (1001363-DUP1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49						
<b>QC Source Sample: MW110-012210 (A10A198-06)</b>												
<b>EPA 8260B</b>												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.250	"	"	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Chloroethane	ND	---	2.00	"	"	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

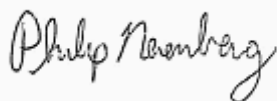
Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (1001363-DUP1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49						
<b>QC Source Sample: MW110-012210 (A10A198-06)</b>												
2,2-Dichloropropane	ND	---	1.00	ug/L	"	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	1.30	---	0.500	"	"	---	1.04	---	---	22	30%	
Hexachlorobutadiene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
2-Hexanone	10.3	---	10.0	"	"	---	11.1	---	---	7	30%	
Isopropylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Methylene chloride	ND	---	5.00	"	"	---	ND	---	---	---	30%	
Naphthalene	ND	---	5.00	"	"	---	ND	---	---	---	30%	
n-Propylbenzene	1.09	---	0.500	"	"	---	0.950	---	---	14	30%	
Styrene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Toluene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	"	"	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	"	"	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	5.21	---	1.00	"	"	---	4.79	---	---	8	30%	
1,3,5-Trimethylbenzene	7.04	---	1.00	"	"	---	6.59	---	---	7	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	2.67	---	1.00	"	"	---	2.34	---	---	13	30%	
o-Xylene	ND	---	0.500	"	"	---	ND	---	---	---	30%	

Surr: Dibromofluoromethane (Surr)  
 1,4-Difluorobenzene (Surr)

Recovery: 102 % Limits: 80-120 % Dilution: 1x  
 102 % 80-120 % "

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director



Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

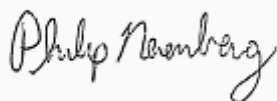
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Duplicate (1001363-DUP1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49						
<b>QC Source Sample: MW110-012210 (A10A198-06)</b>												
Surr: Toluene-d8 (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x												
4-Bromofluorobenzene (Surr) 101 % 80-120 % "												
<b>Matrix Spike (1001363-MS1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44						
<b>QC Source Sample: MW111-012210 (A10A198-07)</b>												
<b>EPA 8260B</b>												
Acetone	21.4	---	20.0	ug/L	1	40.0	ND	54	70-130%	---	---	Q-01
Benzene	21.5	---	0.250	"	"	20.0	ND	107	"	---	---	
Bromobenzene	20.8	---	0.500	"	"	"	ND	104	"	---	---	
Bromochloromethane	22.0	---	0.500	"	"	"	ND	110	"	---	---	
Bromodichloromethane	22.8	---	0.500	"	"	"	ND	114	"	---	---	
Bromoform	23.5	---	1.00	"	"	"	ND	118	"	---	---	
Bromomethane	20.3	---	5.00	"	"	"	ND	102	"	---	---	
2-Butanone (MEK)	31.6	---	10.0	"	"	40.0	ND	79	"	---	---	
n-Butylbenzene	23.1	---	1.00	"	"	20.0	ND	116	"	---	---	
sec-Butylbenzene	22.4	---	1.00	"	"	"	ND	112	"	---	---	
tert-Butylbenzene	20.8	---	0.500	"	"	"	ND	104	"	---	---	
Carbon tetrachloride	22.3	---	0.500	"	"	"	ND	111	"	---	---	
Chlorobenzene	20.7	---	0.500	"	"	"	ND	104	"	---	---	
Chloroethane	33.3	---	2.00	"	"	"	ND	167	"	---	---	Q-29
Chloroform	20.8	---	1.00	"	"	"	ND	104	"	---	---	
Chloromethane	20.8	---	5.00	"	"	"	ND	104	"	---	---	
2-Chlorotoluene	21.7	---	1.00	"	"	"	ND	108	"	---	---	
4-Chlorotoluene	19.8	---	0.500	"	"	"	ND	99	"	---	---	
1,2-Dibromo-3-chloropropane	22.8	---	5.00	"	"	"	ND	114	"	---	---	
Dibromochloromethane	19.3	---	0.500	"	"	"	ND	97	"	---	---	
1,2-Dibromoethane (EDB)	22.7	---	0.500	"	"	"	ND	113	"	---	---	
Dibromomethane	22.4	---	1.00	"	"	"	ND	112	"	---	---	
1,2-Dichlorobenzene	19.7	---	0.500	"	"	"	ND	98	"	---	---	
1,3-Dichlorobenzene	19.9	---	0.500	"	"	"	ND	99	"	---	---	
1,4-Dichlorobenzene	21.0	---	0.500	"	"	"	ND	105	"	---	---	
Dichlorodifluoromethane	22.1	---	1.00	"	"	"	ND	111	"	---	---	
1,1-Dichloroethane	21.9	---	0.500	"	"	"	ND	109	"	---	---	
1,2-Dichloroethane (EDC)	21.6	---	0.500	"	"	"	ND	108	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

Project: Fred Meyer (FMPO) Port Orchard

7376 SW Durham Road  
Portland, OR 97224

Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

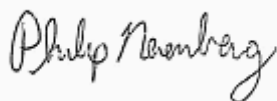
## QUALITY CONTROL (QC) SAMPLE RESULTS

### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (1001363-MS1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44						
<b>QC Source Sample: MW111-012210 (A10A198-07)</b>												
1,1-Dichloroethene	21.0	---	0.500	ug/L	"	"	ND	105	"	---	---	
cis-1,2-Dichloroethene	22.4	---	0.500	"	"	"	ND	112	"	---	---	
trans-1,2-Dichloroethene	22.8	---	0.500	"	"	"	ND	114	"	---	---	
1,2-Dichloropropane	21.3	---	1.00	"	"	"	ND	107	"	---	---	
1,3-Dichloropropane	20.6	---	0.500	"	"	"	ND	103	"	---	---	
2,2-Dichloropropane	21.5	---	1.00	"	"	"	ND	107	"	---	---	
1,1-Dichloropropene	20.8	---	0.500	"	"	"	ND	104	"	---	---	
cis-1,3-Dichloropropene	20.4	---	0.500	"	"	"	ND	102	"	---	---	
trans-1,3-Dichloropropene	19.6	---	1.00	"	"	"	ND	98	"	---	---	
Ethylbenzene	21.3	---	0.500	"	"	"	ND	107	"	---	---	
Hexachlorobutadiene	21.3	---	2.00	"	"	"	ND	107	"	---	---	
2-Hexanone	33.6	---	10.0	"	"	40.0	ND	84	"	---	---	
Isopropylbenzene	20.5	---	0.500	"	"	20.0	ND	103	"	---	---	
4-Isopropyltoluene	22.2	---	1.00	"	"	"	ND	111	"	---	---	
4-Methyl-2-pentanone (MiBK)	39.4	---	10.0	"	"	40.0	ND	99	"	---	---	
Methyl tert-butyl ether (MTBE)	18.4	---	1.00	"	"	20.0	ND	92	"	---	---	
Methylene chloride	22.4	---	5.00	"	"	"	ND	112	"	---	---	
Naphthalene	21.2	---	5.00	"	"	"	ND	106	"	---	---	
n-Propylbenzene	21.8	---	0.500	"	"	"	ND	109	"	---	---	
Styrene	19.7	---	0.500	"	"	"	ND	99	"	---	---	
1,1,1,2-Tetrachloroethane	20.5	---	0.500	"	"	"	ND	102	"	---	---	
1,1,2,2-Tetrachloroethane	21.7	---	0.500	"	"	"	ND	109	"	---	---	
Tetrachloroethene (PCE)	20.0	---	0.500	"	"	"	0.280	99	"	---	---	B
Toluene	20.5	---	0.500	"	"	"	ND	102	"	---	---	
1,2,3-Trichlorobenzene	20.5	---	2.00	"	"	"	ND	103	"	---	---	
1,2,4-Trichlorobenzene	19.1	---	2.00	"	"	"	ND	95	"	---	---	
1,1,1-Trichloroethane	23.1	---	0.500	"	"	"	ND	115	"	---	---	
1,1,2-Trichloroethane	21.6	---	0.500	"	"	"	ND	108	"	---	---	
Trichloroethene (TCE)	22.2	---	0.500	"	"	"	ND	111	"	---	---	
Trichlorofluoromethane	39.0	---	1.00	"	"	"	ND	195	"	---	---	Q-29
1,2,3-Trichloropropane	24.4	---	1.00	"	"	"	ND	122	"	---	---	
1,2,4-Trimethylbenzene	21.3	---	1.00	"	"	"	ND	106	"	---	---	
1,3,5-Trimethylbenzene	21.0	---	1.00	"	"	"	ND	105	"	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**  
 Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

## QUALITY CONTROL (QC) SAMPLE RESULTS

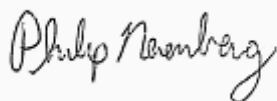
### Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 1001363 - EPA 5030B</b>						<b>Water</b>						
<b>Matrix Spike (1001363-MS1)</b>						Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44						
<b>QC Source Sample: MW111-012210 (A10A198-07)</b>												
Vinyl chloride	24.6	---	0.500	ug/L	"	"	ND	123	"	---	---	
m,p-Xylene	40.4	---	1.00	"	"	40.0	ND	101	"	---	---	
o-Xylene	20.7	---	0.500	"	"	20.0	ND	104	"	---	---	

<i>Surr: Dibromofluoromethane (Surr)</i>	<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	<i>Dilution: 1x</i>
<i>1,4-Difluorobenzene (Surr)</i>	<i>104 %</i>	<i>80-120 %</i>	<i>"</i>
<i>Toluene-d8 (Surr)</i>	<i>99 %</i>	<i>80-120 %</i>	<i>"</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>102 %</i>	<i>80-120 %</i>	<i>"</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc  
 7376 SW Durham Road  
 Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M-10282  
 Project Manager: Paul Stull

Reported:  
 02/12/10 12:50

## SAMPLE PREPARATION INFORMATION

### Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1001363</b>							
A10A198-02	Water	NWTPH-Gx	01/22/10 10:15	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-03	Water	NWTPH-Gx	01/22/10 13:20	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-04	Water	NWTPH-Gx	01/22/10 11:00	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-05	Water	NWTPH-Gx	01/22/10 11:50	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-06	Water	NWTPH-Gx	01/22/10 12:35	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-07	Water	NWTPH-Gx	01/22/10 09:10	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00

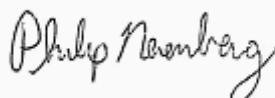
### Volatile Organic Compounds by EPA 8260B

**Prep: EPA 5030B**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<b>Batch: 1001363</b>							
A10A198-02	Water	EPA 8260B	01/22/10 10:15	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-03	Water	EPA 8260B	01/22/10 13:20	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-04	Water	EPA 8260B	01/22/10 11:00	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-05	Water	EPA 8260B	01/22/10 11:50	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-06	Water	EPA 8260B	01/22/10 12:35	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00
A10A198-07	Water	EPA 8260B	01/22/10 09:10	01/31/10 12:00	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Philip Nerenberg, Lab Director

Amec Earth and Environmental, Inc

7376 SW Durham Road  
Portland, OR 97224

Project: **Fred Meyer (FMPO) Port Orchard**

Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

## Notes and Definitions


### Qualifiers:

- B Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
- Q-01 Percent recovery and/or RPD is outside acceptance limits.
- Q-29 Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.

### Notes and Conventions:

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry' designation are not dry weight corrected.
- RPD Relative Percent Difference
- MDL If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
- WMSC Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
- Batch QC Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
- Blank Policy Apex assesses blank data for potential high bias down to a level equal to 1/2 the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses.
- For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor.
- Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.

Apex Laboratories



Philip Nerenberg, Lab Director

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Amec Earth and Environmental, Inc  
7376 SW Durham Road  
Portland, OR 97224

Project: Fred Meyer (FMPO) Port Orchard

Project Number: 961M-10282  
Project Manager: Paul Stull

Reported:  
02/12/10 12:50

**CHAIN OF CUSTODY**

Lab #                      **AL0A198** coc 1 of 1

12232 S.W. Garden Place, Tigard, OR 97223 Ph: 503-718-2323 Fax: 503-718-0333

Company: **AMEC** Project Mgr: **Paul Stull** Project Name: **Fred Meyer Port Orchard** Email: **961M-10282**

Address: **7376 SW Durham Road** Phone: **503 594 3400** Fax:

Sampled by:

LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTRH-CID	NWTRH-DA	NWTRH-GA	BTEX	R269 RBDM VOCs	R269 HAP VOCs	R269 VOCs	R270 SIM PAHs	8082 PCBs	8081 Chlor. Pest	RCRA Metals (8)	Priority Metals (13)	AL, SH, AS, BA, BR, CA, CR, CO, CU, NI, PB, SE, AG, NA, TL, V, ZN	TCLP Metals (8)	1200-COLS	1200-Z
1	1/22/10	4:50	1222	1																
2	1/25/10	10:15		4		X					X									
3	1/26/10	13:00		1		X					X									
4	1/26/10	11:00		1		X					X									
5	1/26/10	11:50		1		X					X									
6	1/26/10	12:30		1		X					X									
7	1/26/10	2:10		1		X					X									

ANALYSIS REQUEST:  
 RCRA Metals (8)  
 Priority Metals (13)  
 AL, SH, AS, BA, BR, CA, CR, CO, CU, NI, PB, SE, AG, NA, TL, V, ZN  
 TCLP Metals (8)  
 1200-COLS  
 1200-Z

SPECIAL INSTRUCTIONS:  
 \* 8260 to include BTEX, MTBE, EDB, EOB  
 naphthalene, 1 Anthracene suite

RECEIVED BY:  RECEIVED BY:   
 Signature:  Signature:   
 Date:  Date:

RELINQUISHED BY:  RELINQUISHED BY:   
 Signature:  Signature:   
 Date:  Date:

Printed Name:  Printed Name:   
 Title:  Title:   
 Company:  Company:

Normal Turn Around Time (TAT) = 3-10 Business Days  
 TAT Requested (circle): **4 DAY** 24 HR 48 HR 72 HR  
 5 DAY Other: **Standard**

SAMPLES ARE HELD FOR 30 DAYS  
 RECEIVED BY:  RECEIVED BY:   
 Signature:  Signature:   
 Date: **1/25/10** Date:

Printed Name: **W J McFarland** Printed Name: **Laura McMich**  
 Title:  Title:   
 Company: **AMEC** Company: **Apex**

Apex Laboratories

*Philip Nerenberg*

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

## **APPENDIX D**

### Terrestrial Ecological Evaluation

**Table of Contents**

	<b><u>Page</u></b>
1.0 INTRODUCTION.....	2
2.0 ENVIRONMENTAL SETTING.....	2
2.1 Existing Land Use.....	2
2.2 Hydrogeographic Setting.....	2
2.3 Habitat.....	3
2.4 Wildlife.....	4
2.5 Special Status Species and Habitat.....	4
3.0 SIMPLIFIED TERRESTRIAL ECOLOGICAL EVALUATION.....	5
3.1 Exposure Analysis.....	7
4.0 CONCLUSIONS.....	8
REFERENCES.....	9

**List of Figures**

- Figure D1 Site Vicinity Map
- Figure D2 Zoning Map
- Figure D3 Wetland Map
- Figure D4 Ecological Habitat Map



## **1.0 INTRODUCTION**

This report presents a simplified Terrestrial Ecological Evaluation (TEE) performed by AMEC Earth & Environmental, Inc. (AMEC) on behalf of Fred Meyer Stores, Inc. at the Port Orchard service station property located at 1900 SE Sedgewick Road in Port Orchard, Washington (Figure D1). The goal of the TEE process is the protection of terrestrial ecological receptors from exposure to contaminated soil with the potential to cause significant adverse effects.

The Port Orchard Site is defined as the service station property and the areas associated with one or more releases of hazardous substances. The Port Orchard Site is a designated Model Toxics Control Act (MTCA), Washington Administrative Code (WAC) 173-340 listed site. Site assessment work has identified gasoline-impacted soil and groundwater present beneath the Site. A Remedial Investigation/Feasibility Study (RI/FS) is being prepared to evaluate the nature and extent of hazardous substances at the Site to support the FS and identify a recommended cleanup action alternative under the MTCA cleanup regulation, Chapter 173-340. As part of the RI, the MTCA requires that a terrestrial ecological evaluation be included (WAC 173-340-7490 through 173-340-7494). This TEE has been prepared using the Washington Department of Ecology TEE Process guidelines to satisfy the MTCA requirement (Ecology 2010a).

## **2.0 ENVIRONMENTAL SETTING**

### **2.1 Existing Land Use**

According to the City of Port Orchard Zoning Map, the Site (including the historic plume area) is zoned commercial (CPO, 2010) (Figure D2). In addition, according to the definition of terms applicable to the terrestrial ecological process (WAC 173-340-7490 (3)(C)), a "commercial property" means properties currently zoned for commercial or industrial property use and that are characterized by or are committed to traditional commercial or industrial property uses such as offices, retail and wholesale sales, professional services, consumer services, and warehousing. The Site, for the purposes of the TEE, is therefore considered a "commercial property".

### **2.2 Hydrogeographic Setting**

The Port Orchard Site slopes to the southwest with approximate ground surface elevations above mean sea level ranging between 320 and 300 feet. The average annual precipitation for Port Orchard is approximately 54 inches (AMEC, 2010).

Locally, shallow groundwater near the Site appears to flow toward the west or southwest based upon review of available groundwater elevation data. This flow direction is consistent with topographic conditions near the Site and the observed historical plume direction from the Site. Groundwater has been observed within the between 15 and 25 feet below ground surface (bgs), and varies with seasonal precipitation events (AMEC, 2010).

The closest mapped surface water feature is the stormwater detention pond, located south of the historic plume. Based on a review of topographical information, and observed groundwater depth, the storm water detention pond does not intersect groundwater. One potential wetland is located approximately 200 feet to the northeast (upgradient) of the Port Orchard Site (Figure D3; Kitsap County 2010a; USFW 2010b). It is unknown if this wetland drains to the underground stormwater detention vault, located adjacent to the stormwater detention pond. The closest creek to the Port Orchard Site is Blackjack Creek, located approximately one-half mile downgradient from the Site. The majority of streams within the vicinity, including Blackjack Creek, ultimately drain into Sinclair Inlet. No surface water features or stream sediment appear to be present on-Site. AMEC's literature search performed in March 2010 did not reveal any documented impacts to nearby surface water features or sediment as a result of contaminated groundwater migration or transport from the Site.

## **2.3 Habitat**

The Port Orchard Site is rated as low quality habitat according the Washington Department of Fish and Wildlife Local Habitat Assessment (Figure D4; Kitsap County, 2010b). The Port Orchard Site is developed land containing structures, paved and gravel parking areas, paved and dirt roads and driveways, landscaped strips, a portion of the storm water detention pond and yards associated with nearby residential/commercial structures.

Areas planted with native species for ornamental or landscaping purposes shall not be considered to be native vegetation (WAC 173-340-7491(2)(c)(i)) (Ecology, 2010b). The following shall not be considered semi-native vegetation: Areas planted for ornamental or landscaping purposes, cultivated crops, and areas significantly disturbed and predominantly covered by noxious, introduced plant species or weeds (e.g., Scotch broom, Himalayan blackberry or knap-weed) (WAC 173-340-7491(2)(c)(ii)) (Ecology, 2010b). Yards associated with residences and/or commercial structures have typically been altered or disturbed and often contain both native and ornamental plantings. The landscaped strips and yards associated with residences and/or commercial structures are not considered native or semi-native vegetation.

## 2.4 Wildlife

Developed areas occupy 75 % of the Port Orchard Site. These developed areas are not wholly capable of supporting wildlife during any season. Bird and small mammal species are expected to use residential yard areas for foraging and resting. Expected species may include birds such as, crows, blackbirds, house finches, starlings, wrens, and chickadees, sparrows, warblers, flickers, and red-tailed hawks; small mammal species such as, raccoons, opossum, striped and spotted skunks, flying squirrels, Douglas squirrels, moles and shrews, black rats, and Norway rats. In addition, several species of butterflies and insects, such as, swallowtails, skippers, sulphurs, mosquitoes, bees and flies and small amphibians and reptiles, such as, garter snakes and pacific tree frogs may also use habitat features present at the Port Orchard Site.

## 2.5 Special Status Species and Habitat

A records search was conducted for special status species and habitat including federal and state listed wildlife and plant threatened or endangered species, state listed wildlife priority species, state listed wildlife species of concern, and state listed plant sensitive species in the project vicinity. Database searches were conducted through the Washington Department of Natural Resources (DNR), the Washington Department of Fish and Wildlife (WDFW), and the U.S. Department of Fish and Wildlife (USFWS). A summary of these results is provided below.

The following wildlife and plant species are federally listed as threatened or endangered species with the potential to occur in Kitsap County (USFW 2010): marbled murrelet (*Brachyramphus marmoratus*). Habitat to support the marbled murrelet is not present at the Port Orchard Site and therefore does not have the potential to occur at the Port Orchard Site.

The following wildlife and plant species are state listed as threatened or endangered with the potential to occur in Kitsap County (WDFW 2010): Pacific pond turtle (*Actinemys marmorata*), marbled murrelet. Habitat to support either the marbled murrelet or Pacific pond turtle is not present at the Port Orchard Site and therefore does not have the potential to occur at the Port Orchard Site.

The following state listed wildlife priority habitat species have the potential to occur in Kitsap County:

Priority Habitat Species Criteria #1: western toad (*Bufo boreas*), Pacific pond turtle, tufted Puffin (*Fratercula cirrhata*), western grebe (*Aechmophorus occidentalis*), Townsend's big-eared bat (*Plecotus townsendii*), Keen's myotis (*Myotis keenii*), purple martin (*Progne subis*), pileated woodpecker (*Dryocopus pileatus*), Vaux's Swift

(*Chaetura vauxi*), yellow-billed cuckoo (*Coccyzus americanus*), bald eagle (*Haliaeetus leucocephalus*), merlin (*Falco columbarius*), and Peregrine falcon (*Falco peregrinus*).

Priority Habitat Species Criteria #2: common murre (*Uria aalge*) marbled murrelet, breeding concentrations of: cormorants (*Phalacrocoracidae*), storm-petrels (*Hydrobatidae*), terns (*Laridae*) and alcids (*Alcidae*), nonbreeding concentrations of: cormorants, shorebirds (*Scolopacidae*), plovers (*Charadriidae*), barrow's goldeneye (*Bucephala islandica*), common goldeneye (*Bucephala clangula*), bufflehead (*Bucephala albeola*), loons (*Gaviidae*), grebes (*Podicipedidae*), cormorants, fulmar (*Procellariidae*), storm-petrels (*Hydrobatidae*) and alcids, great blue heron (*Ardea Herodias*), brant (*Branta bernicla*), roosting concentrations of: big-brown bat (*Eptesicus fuscus*), myotis bats (*Myotis spp.*), and pallid bat (*Antrozous pallidus*), waterfowl (excluding Canada Geese) (*Anatidae*), trumpeter swan (*Cygnus buccinator*), and Harlequin duck (*Histroinicus histroinoicus*),

Priority Habitat Species Criteria #3: band-tailed pigeon (*Columba fasciata*), sooty grouse (*Dendragapus fuliginosus*), mountain quail (*Oreortyx pictus*), Columbian black-tailed deer (*Odocoileus hemionus columbianus*), cavity nesting ducks including: wood duck (*Aix sponsa*), barrow's goldeneye, common goldeneye, bufflehead and hooded merganser (*Lophodytes cucullatus*).

Habitat features to support priority wildlife species such as the western toad, Pacific pond turtle, pileated woodpecker, Vaux's swift, yellow-billed cuckoo, peregrine falcon, merlin, bald eagle, Keen's myotis and Townsends big-eared bat exists in the vicinity of the Site; However, only low-quality habitat is present and due to development, fragmentation, and disturbances (e.g. traffic, proximity to humans and domestic animals), the Site would not be considered suitable habitat for breeding, nesting, or foraging for these sensitive species. Habitat to support the remaining species does not occur on or in the general vicinity of the Port Orchard Site.

The WDFW database search indicates that there are no wildlife species listed as a "species of concern" occurring in Kitsap County (WDFW, 2010).

DNR database search indicates that rare plants including those listed as state threatened, endangered or sensitive are not known to occur at the Port Orchard Site (DNR 2010).

### 3.0 SIMPLIFIED TERRESTRIAL ECOLOGICAL EVALUATION

Using WAC 173-340-7491 AMEC has determined the Port Orchard Site qualifies for a simplified TEE. Qualifications for conducting a simplified TEE (WAC 173-340-7491(2)) include:

**The Site is not on or directly adjacent to, an area where management of land use plans will maintain or restore native or semi-native vegetation.**

The Site is on developed property, zoned commercial (CPO, 2010). The closest area where management of land use plans may apply is the potential wetland located to the northeast of the Site. The wetland is not on or directly adjacent to the Site and is located approximately 200 feet to the northeast of the Site. In addition, the wetland is located upgradient from the area of known contamination.

No other areas have been identified where management of land use plans will maintain or restore native or semi-native vegetation. This qualification has therefore been met for the Port Orchard Site.

**The Site is not used by threatened or endangered wildlife or plant species; a wildlife “priority species”, a wildlife “species of concern”; or a plant “sensitive species”.**

The Site is not likely to be used by threatened or endangered wildlife or plant species; a wildlife “priority species”, a wildlife “species of concern”; or a plant “sensitive species”. See Section 2.5 for additional information.

**The Site is not located on a property that contains at least ten acres of native vegetation within 500 feet of the Site.**

Native vegetation is likely to occur within the potential wetland located to the Northeast of the Site; however, the total area of contiguous undeveloped land, within 500 feet of the Site is less than 10 acres (approximately 1.6 acres). Additional undeveloped land (not contiguous) associated with the residential/commercial yards occupies an area of approximately three acres. Native vegetation within 500 feet of the Site is therefore less than 10 acres in size.

**The department determines that the Site may present a risk to significant wildlife populations.**

The department has not made a risk determination for this Site.

Based on the above qualifications, the Site qualifies for a simplified TEE. The simplified TEE is broken down into three steps: exposure analysis, pathway analysis and contaminant analysis. According to WAC 173-340-7492(1)(c) The steps need not be followed in order, and any one step may be used to determine that no further evaluation is necessary to conclude that a Site does not pose a substantial threat of significant adverse effects to terrestrial ecological receptors.

### 3.1 Exposure Analysis

According to WAC 173-340-7492(2)(a), the simplified TEE evaluation may be ended at a Site where:

- The total area of soil contamination at the Site is not more than 350 square feet; or
- Land use at the Site and surrounding area makes substantial wildlife exposure unlikely. Table 749-1 shall make this evaluation.

Although current soil data indicate that the total area is less than 350 square feet, historic soil data indicated an area up to 6,000 square feet may have been affected at one time. To be conservative, AMEC has completed the exposure analysis using Table 749-1. The results from Table 749-1 indicate that substantial wildlife exposure is unlikely. Table 749-1 is included below:

**Table 749-1: Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure**

Estimate the area of contiguous (connected) <a href="#">undeveloped land</a> on the site or within 500 feet of any area of the site to the nearest 1/2 acre (1/4 acre if the area is less than 0.5 acre).																						
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.		7																				
	<table border="1"> <thead> <tr> <th>Area (acres)</th> <th>Points</th> </tr> </thead> <tbody> <tr><td>0.25 or less</td><td>4</td></tr> <tr><td>0.5</td><td>5</td></tr> <tr><td>1.0</td><td>6</td></tr> <tr><td>1.5</td><td>7</td></tr> <tr><td>2.0</td><td>8</td></tr> <tr><td>2.5</td><td>9</td></tr> <tr><td>3.0</td><td>10</td></tr> <tr><td>3.5</td><td>11</td></tr> <tr><td>4.0 or more</td><td>12</td></tr> </tbody> </table>	Area (acres)	Points	0.25 or less	4	0.5	5	1.0	6	1.5	7	2.0	8	2.5	9	3.0	10	3.5	11	4.0 or more	12	
Area (acres)	Points																					
0.25 or less	4																					
0.5	5																					
1.0	6																					
1.5	7																					
2.0	8																					
2.5	9																					
3.0	10																					
3.5	11																					
4.0 or more	12																					
2) Is this an <a href="#">industrial</a> or <a href="#">commercial</a> property? If yes, enter a score of 3. If no, enter a score of 1.		3																				
3) Enter a score in the box to the right for the habitat quality of the site, using the following rating system. High=1, Intermediate=2, Low=3		3																				
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.		1																				
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.		4																				
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.		11																				

## **4.0 CONCLUSIONS**

Based on the results of this evaluation, including data review and an evaluation of exposure analysis there is no unacceptable risk to ecological receptors at the Site.



## REFERENCES

AMEC 2010, REMEDIAL INVESTIGATION REPORT, Fred Meyer Stores, Inc. - Port Orchard Site, 1900 SE Sedgewick Road, Port Orchard, Washington, Ecology Site ID #96424236 (formerly J5E03). April 2010.

City of Port Orchard (CPO), 2010, Zoning Map. Accessed through: <http://www.cityofportorchard.us/planning-maps>, on April 19, 2010.

Kitsap County, 2010a. Streams and Surface Waters Map. Accessed through: [http://www.kitsapgov.com/dcd/gis/maps/Standard\\_Maps/Environmental/Streams\\_and\\_Surface\\_Water\\_Nov2007.pdf](http://www.kitsapgov.com/dcd/gis/maps/Standard_Maps/Environmental/Streams_and_Surface_Water_Nov2007.pdf).

\_\_\_\_\_, 2010b. Washington Department of Fish and Wildlife Local Habitat Assessment Map, Accessed through: [http://www.kitsapgov.com/dcd/gis/maps/Standard\\_Maps/Environmental/WDFW\\_HABITAT\\_ASSESSMENT.pdf](http://www.kitsapgov.com/dcd/gis/maps/Standard_Maps/Environmental/WDFW_HABITAT_ASSESSMENT.pdf).

US Fish and Wildlife Service (USFW), 2010. Listed and Proposed Endangered and Threatened Species and Critical Habitat; Candidate Species; and Species of Concern in Kitsap County, as prepared by the U.S. Fish and Wildlife Service, Western Washington Fish and Wildlife Office, revised November 1, 2007. Accessed through: <http://www.fws.gov/wafwo/speciesmap.html>, on April 20, 2010.

\_\_\_\_\_, 2010b. National Wetlands Inventory. Accessed through: <http://www.fws.gov/wetlands/>, on April 19, 2010.

Washington Department of Ecology (Ecology), 2010a. Terrestrial Ecological Evaluation (TEE) Process An Interactive User's Guide. Accessed through: <http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm>. April 20, 2010

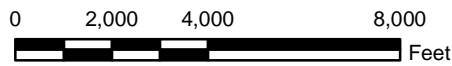
\_\_\_\_\_, 2010b. Terrestrial Ecological Evaluation Process, Definitions and Acronyms. Accessed through: <http://www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEDefinitions.htm#Commercial%20Property>, on April 20, 2010.

Washington Department of Fish and Wildlife, 2010. Kitsap County Threatened, Endangered and Priority Species List. Accessed through: [http://wdfw.wa.gov/hab/phs/2008/2010\\_distribution\\_by\\_county.xls](http://wdfw.wa.gov/hab/phs/2008/2010_distribution_by_county.xls), and <http://wdfw.wa.gov/hab/phslist.htm>, on April 20, 2010.

Washington Department of Natural Resources, Natural Heritage Program (DNR), 2010. Rare Plant occurrence by Section, Township and Range. Accessed on April 20, 2010 through: [http://www.dnr.wa.gov/ResearchScience/HowTo/ConservationRestoration/Pages/amp\\_nh\\_data\\_instructions.aspx](http://www.dnr.wa.gov/ResearchScience/HowTo/ConservationRestoration/Pages/amp_nh_data_instructions.aspx) and [http://www.dnr.wa.gov/Publications/amp\\_nh\\_trs.pdf](http://www.dnr.wa.gov/Publications/amp_nh_trs.pdf).



**APPENDIX D FIGURES**



AMEC Earth & Environmental  
7376 SW Durham Road  
Portland, OR, U.S.A. 97224



CLIENT:

FRED MEYER STORES, INC.

TITLE: SITE VICINITY MAP

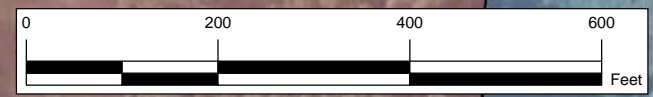
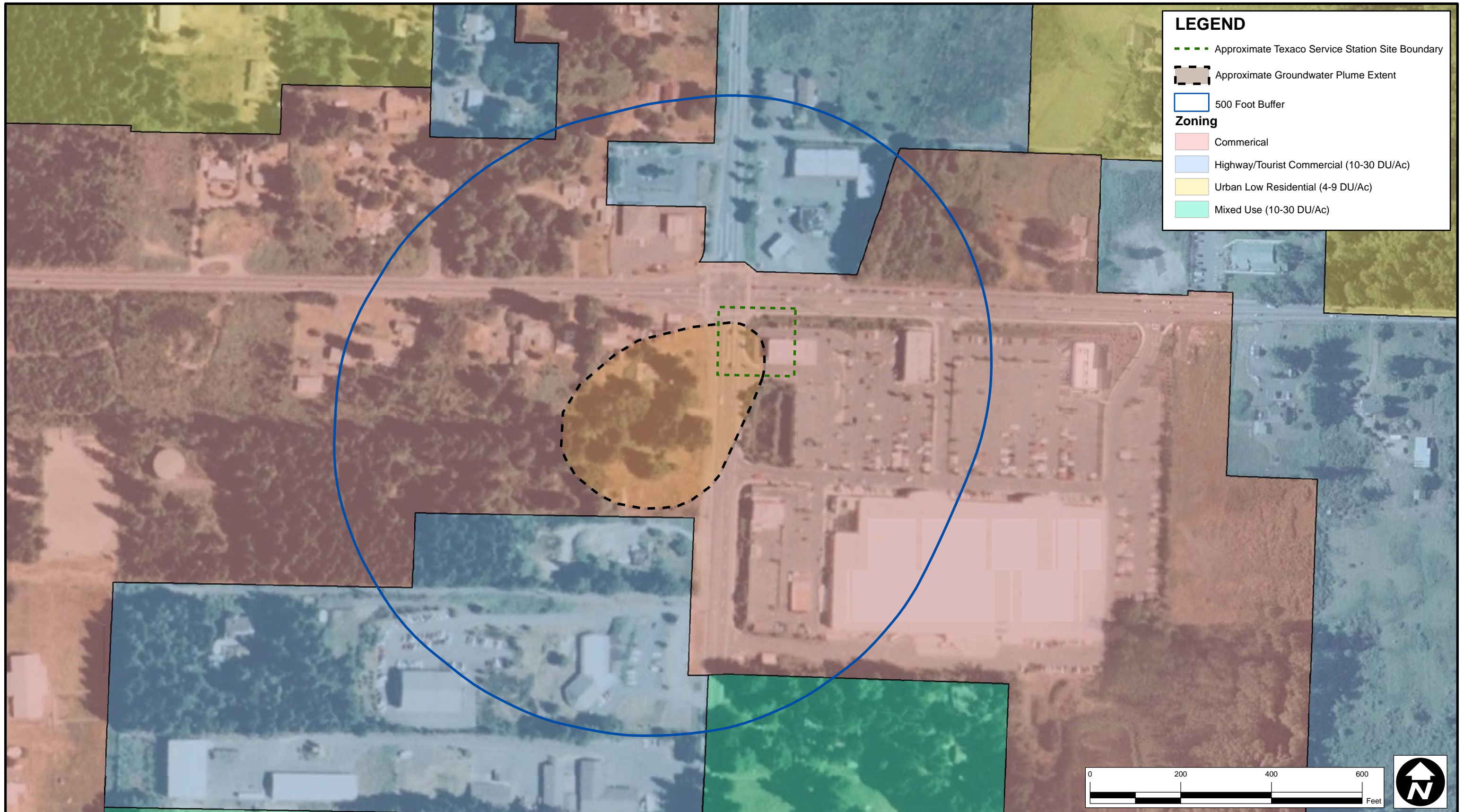
DWN BY: PM      DATUM: NAD83      DATE: APRIL 2010

PROJECT: PORT ORCHARD

CHKD BY: EH      REV. NO.: 1      PROJECT NO.: 9-61M-10282-0

PROJECTION: WA SP N. FT.      SCALE: 1 inch = 4,000 feet      FIGURE No.: FIGURE D1






Source: Zoning data downloaded from <http://www.kitsapgov.com/gis/metadata/> on April 20, 2010  
 Zoning designations from Kitsap County and the City of Port Orchard

CLIENT:

**FRED MEYER STORES, INC.**

AMEC Earth & Environmental  
 7376 SW Durham Road  
 Portland, OR, U.S.A. 97224



DWN BY: PM/MH  
 CHK'D BY: EH/KH  
 DATUM: NAD83  
 PROJECTION: WA SP N. Ft.  
 SCALE: 1 inch = 200 feet

PROJECT: **PORT ORCHARD**

TITLE: **ZONING MAP**

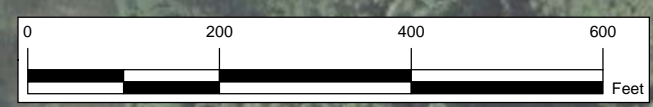
DATE: **APRIL 2010**  
 PROJECT NO.: **9-61M-10282-0**  
 REV. NO.: **1**  
 FIGURE NO.: **FIGURE D2**





**LEGEND**

- Approximate Texaco Service Station Site Boundary
- Approximate Groundwater Plume Extent
- 500 Foot Buffer
- Wetland



Source: Wetland data downloaded from <http://www.kitsapgov.com/gis/metadata/> on April 20, 2010

CLIENT:

**FRED MEYER STORES, INC.**

---

AMEC Earth & Environmental  
 7376 SW Durham Road  
 Portland, OR, U.S.A. 97224

DWN BY: PM/MH  
 CHK'D BY: EH/KH  
 DATUM: NAD83  
 PROJECTION: WA SP N. Ft.  
 SCALE: 1 inch = 200 feet

PROJECT: PORT ORCHARD

---

TITLE: WETLAND MAP

DATE: APRIL 2010  
 PROJECT NO.: 9-61M-10282-0  
 REV. NO.: 1  
 FIGURE NO.: FIGURE D3





Source: Habitat Assessment from Kitsap County Department of Community Development figure, Washington Department of Fish and Wildlife Local Habitat Assessment downloaded from [http://www.kitsapgov.com/dcd/gis/Maps\\_Data/standard\\_maps/environ.htm](http://www.kitsapgov.com/dcd/gis/Maps_Data/standard_maps/environ.htm) on April 20, 2010

CLIENT: FRED MEYER STORES, INC.

DWN BY: PM/MH

PROJECT: PORT ORCHARD

DATE: APRIL 2010

AMEC Earth & Environmental

CHK'D BY: EH/KH

PROJECT NO.: 9-61M-10282-0

REV. NO.: 1

7376 SW Durham Road  
Portland, OR, U.S.A. 97224

DATUM: NAD83  
PROJECTION: WA SP N. Ft.  
SCALE: 1 inch = 2,000 feet

TITLE: ECOLOGICAL HABITAT MAP

FIGURE NO.: FIGURE D4