DEPARTMENT OF
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State of Washington

REMEDIAL INVESTIGATION REPORT

Bethel Texaco
1900 SE Sedgwick Road
Port Orchard, Washington
FSID 2614

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Publication and Contact Information

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1.0 INTRODUCTION

This Remedial Investigation (RI) Report summarizes work performed by Fred Meyer Stores, Inc. (Fred Meyer) and others at the Fred Meyer Property Port Orchard service station located at 1900 SE Sedgwick Road in Port Orchard, Washington (Site), shown in Figure 1.

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 attributed to a leaking underground storage tank (UST) operated by Texaco, who previously owned the property (AMEC, 2009b). Benzene, toluene, ethylbenzene, and xylene (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 (AMEC, 2005a).

An onsite 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. Active remediation efforts were ceased 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, 1998; GN, 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 Sedgwick Road ROWs adjacent to the property. During June 2006, further damage to the SVE system's 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. Quarterly groundwater monitoring has been conducted at site wells since 2001 (AMEC, 2009b).

Fourth Quarter 2009 groundwater monitoring results indicated GRO detections of 1,320 micrograms per liter (µg/L) in monitoring well MW-103, exceeding the MTCA Method A cleanup level of 800 µg/L. Constituents including ethylbenzene, total xylenes, isopropylbenzene, n-propylbenzene, 1,2,4-trimethylbenzene, 1,35-trimethylbenzene, 4-isopropyltoluene, and n-butylbenzene were detected in groundwater samples collected from site wells (AMEC, 2010b).

1.2 Remedial Investigation Objectives

Previous 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 Sedgwick 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

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Facility location: The property is located at 1900 SE Sedgwick Road at the southeast corner of the intersection of Sedgwick 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 by the Bethel Road SE ROW, to the north by the SE Sedgwick 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 portions of the Warrington, Peterson, Tripp, Beatty, and Beckwell properties. Figure 4 depicts the extent of the Site.

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

Facility dimensions: The current property consists of an area approximately ½ acre in extent. The 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 . 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 Quaternary Vashon age glacial deposits. Observed thickness ranges from a few feet to over 100 feet in upland regions. 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 percent of domestic water supply in Kitsap County is provided by groundwater resources according to the Kitsap Public Utility District (GeoEngineers, 2006). . Recharge to shallow groundwater is primarily from precipitation and shallow groundwater levels typically rise and fall with seasonal changes in rainfall. Rainfall is generally greatest between October and March. Groundwater levels in the Western Washington area tend to rise from October through March and to fall from April through September. 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; Kahle (1998) provides the following descriptions and ranges of unit thickness typically found in areas of Kitsap County:

• 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 to the north of the site. No surface water features or stream sediment appear to be present onsite. 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 since all of the impacted soil is now paved.

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 identified potential human health risks associated with exposure to site groundwater and soil media containing elevated levels of benzene, xylene, and total volatile petroleum hydrocarbons. These risks included:

- Ingestion of groundwater from the site in nearby drinking water wells; and Ground water at this Site is classified as potable and 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 (Ecology, 1991). The property and adjacent properties 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. In addition, a TEE is needed to determine if soil cleanup levels protective of terrestrial species are needed.

Since Ecology's initial investigation and subsequent site cleanup efforts, the occurrence of these constituents has been reduced to on property locations in the vicinity of monitoring well MW-103. Although no longer a risk to downgradient domestic well users, remediation of these on-property areas of residual petroleum impact is necessary to achieve MTCA Method A cleanup standards.

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 a 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 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 an 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) between June 1990 and March 1991 (Ecology, 1991).
- Operation of on-site remediation systems involving free product recovery and air sparging/soil vapor extraction (AS/SVE) by Ecology between July 1995 and 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 between June 1999 and 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

Between June 1990 and 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 site) 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 consisted of four sparging wells (SP-1, SP-2, SP-3 and SP-4) 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. Still need compliance sampling to support this supposition. Also need a graph of the recovery rate and concentrations over time. 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 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 between June 1999 and 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 As noted elsewhere the MRL for

EDB is insufficient to demonstrate compliance with the cleanup level. 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.

Additional Monitoring Well Installation - MW-105, MW-106, MW-107, and MW-108

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 between November 1999 and 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 between August 2008 and 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 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 concentrations of 140 µg/L, 100 µg/L, 64 µg/L and 710 µg/L, respectively. 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 Sedgwick 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 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 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, near where the UST system was buried 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 form 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 3 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 that 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 soil/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. 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 diesel range. The gasoline additives EDB, EDC, and MTBE were not detected in groundwater collected from the source area or at locations down gradient and cross gradient from the source area, however the laboratory detection limits were not sufficient to determine if EDB is present or not at the Site. EDB will have to be monitored during compliance monitoring to make a final determination. 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. All existing contamination appears to be derived 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 Contaminated Media

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, DRO and BTEX in groundwater are generally less than MTCA Method A cleanup levels. The periodic detections of GRO, DRO 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 soil/groundwater interface. See cleanup standards below, especially the point of compliance for soils via the leaching pathway.

4.1.4 Actual and Potential Exposure Pathways and Receptors

The Conceptual Site Model (CSM) consists of potentially complete exposure routes for current receptors including the incidental ingestion of, dermal contact with, and/or inhalation of volatiles in affected soil or groundwater by construction/excavation workers identified as current or future potential receptors.

Soil

Cleanup Levels:

Groundwater at this Site has been impacted by the identified releases; therefore soil cleanup levels based on leaching (protection of groundwater) are appropriate. To establish soil concentrations protective of groundwater MTCA Method A cleanup levels were selected.

The Site does not meet the MTCA definition of an industrial property; therefore soil cleanup levels suitable for unrestricted land use will also need to be considered. For unrestricted land use, the soil cleanup level is based on the direct contact pathway and residential use. Again MTCA Method A levels were selected for this Site.

Points of Compliance:

The point of compliance based on the protection of groundwater is Site wide throughout the soil profile and may extend below the water table. For soil cleanup levels based on direct contact, the point of compliance is defined as throughout the Site from the ground surface to fifteen feet below the ground surface.

Groundwater

Cleanup Levels:

The groundwater at the Site is classified as potable to protect drinking water beneficial uses. Method A cleanup levels for potable groundwater were selected for this Site. Note: Method A groundwater cleanup levels will be protective of any other exposure pathway.

Point of Compliance:

The standard point of compliance for groundwater is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected.

Additional consideration to off-Site receptors was evaluated in November 1999 when utility cutoff collars were installed down gradient of the subject property, as described in the Environmental Activities during Sewer Line Construction report (AGRA 1999). Stormwater is collected through catch basins and piped into the municipal storm sewer located beneath SE Sedgwick and Bethel Road. Stormwater drainage on the roadway and sidewalk portions of the subject property is conveyed through pipes and/or ditch before entering a storm detention pond located south of the Site.

No known areas of particular environmental value, such as wetlands or critical habitat, are present at the Site. The simplified terrestrial ecological evaluation concluded for the Site indicated that no adverse affects are realized to the off-Site habitat quality or other urban wildlife species.

4.2 Natural Resources and Ecological Receptors

The property is currently occupied by a Fred Meyer-branded service station, portions of Bethel Road and SE Sedgwick Road, and associated sidewalks and landscaping. The service station primarily consists of several lanes for fueling automobiles, an overhead canopy, and a relatively small building used by the fueling attendants. With the exception of narrow strips of landscaping along the roadways, the entire site is paved. Land surrounding the property is developed and utilized for a combination of commercial/industrial and residential purposes.

Stormwater is collected through catch basins and piped into the municipal storm sewer located beneath SE Sedgwick and Bethel Road. Stormwater drainage on the roadway and sidewalk portions of the site is likely to municipal collection points. Not true visit during a storm.

No know areas of particular environmental value, such as wetlands or critical habitat, are present at the site. A formal terrestrial ecological evaluation has not been conducted at the site; however, based on the existing site conditions, the habitat quality at the site is assumed to be low, and the site is unlikely to attract wildlife other than birds flying overhead or other urban wildlife species.

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 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, DRO 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, DRO 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 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. Off-site receptors are not likely to be affected since the extent of contaminated soil and groundwater is limited to on-property. Potentially complete exposure routes for current receptors include incidental ingestion of, dermal contact with, and/or inhalation of volatiles in affected soil or groundwater by construction/excavation workers. For future receptors, potentially complete exposure routes includes these routes, as well as inhalation of volatiles in indoor air by future residential and occupational receptors should the site undergo redevelopment. There are no known significant natural resources present at the site. Based on the existing site conditions, the habitat quality at the site is characterized as being low and unlikely to attract and sustain wildlife other than typical urban wildlife species.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 unrestricted site use in the future and no further actions necessary to ensure protection of human health and the environment.

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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)
Groundwater Monitoring Wells					
MW-1S[d]	10/15/90	312.56	38.5	2	18.5-38.5
MW-1D[d]	10/15/90	313.00	79.5	2	34.5-80
MW-2S[d]	10/23/90	304.53	38	2	18-38
MW-2D[d]	10/23/90	301.13	78	2	43-78
MW-101[d]	5/13/91	NR	79	2	60-79
MW-102[d]	5/13/91	NR	81	2	61-81
MW-103	5/6/91	311.70	32	4	12-32
MW-104[d]	5/6/91	not reported	not reported	2	not reported
MW-105	11/10/99	310.46	30	2	10-30
MW-106[d]	11/10/99	311.73	30	2	10-30
MW-107[d]	11/9/99	310.59	30	2	10-30
MW-108[d]	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
Vapor Extraction Wells					
VES-1^	11/4/99	NA	15	0.75	7.5-15
VES-2^	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
Air-Sparging Wells					
AS-1^	11/4/99	NA	30-35	0.75	~30-35
AS-2^	11/4/99	NA	30-35	0.75	~30-35
AS-3^	11/4/99	NA	30-35	0.75	~30-35
AS-4^	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^	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
[d]: destroyed
^: 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			
SOIL (mg/kg)										
Model Toxics Control Act (MTCA) Method A Soil Cleanup Levels										
Constituent			Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	EDB	EDC
Concentration (mg/kg)			100[a], 30[b]	0.03	7.0	6.0	9	0.1	0.005	NG
WASHINGTON DEPARTMENT OF ECOLOGY										
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	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			
GN NORTHERN, INC.										
01/22/99	BH-15A-21'	NA	17,000	12	39	69	280	NT	NT	NT
AMEC EARTH & ENVIRONMENTAL										
07/27/99	BH20-6 @ 20'-24'	NA	6,500	0.5 U	65	65	390	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	24	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/29/99	BH23-9 @ 32'-36'	NA	5.9	0.05 U	0.05 U	0.05 U	0.05 U	NT	NT	NT
07/29/99	BH24-4 @ 12'-16'	NA	6.5	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	2,100	1.25 U	1.25 U	3.9	8.8	NT	NT	NT
07/28/99	VP2-4 @ 16'-20'	NA	2,200	1.25 U	1.25 U	4.4	9.7	NT	NT	NT
07/27/99	VP3-2 @ 4'-8'	NA	46	0.05 U	0.05 U	0.09	0.17	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	300	0.2U	0.85	2.0	5.3	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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	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				
Wells																						
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 (µg/L)							Alkylbenzenes & Naphthalene (µg/L)									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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	Water Elev.
MTCA Method A		800	5	1,000	700	1,000	20	5	0.01	None	None	None	None	None	None	None	None	160				
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	22,000	860	3,900	11	6,800	-	-	-	-	-	-	-	-	-	-	-	-	NM	NM	NM	NM
MW-103	3/25/93	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	^	311.70	28.04	0.00	283.66
MW-103	5/28/97	42,000	12	1,100	56	9,500	-	-	-	-	-	-	-	-	-	-	-	-	311.70	17.20	0.00	294.50
MW-103	2/18/98	48,000	22	630	350	7,800	-	-	-	-	-	-	-	-	-	-	-	-	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	47,000	20 U	450	1,200	7,900	20 U	20 U	20 U	-	-	-	-	-	-	-	-	-	311.70	16.99	0.00	294.71
MW-103	5/24/00	3,900	1 U	18.3	33.2	594	1 U	1 U	1 U	-	-	-	-	-	-	-	-	-	311.70	18.13	0.00	293.57
MW-103	7/10/00	1,850	1 U	15	16	277	1 U	1 U	1 U	1 U	1 U	27.4	49	1 U	1 U	1 U	5.0 U	25 U	311.70	20.00	0.00	291.70
MW-103	10/19/00	1,000	1 U	17	34	322	1 U	1 U	1 U	1	3.5	98.9	27.8	1 U	1 U	1 U	5.0 U	38	311.70	16.15	0.00	295.55
MW-103	12/13/00	3,810	0.5 U	29	74	597	2	-	-	-	-	-	-	-	-	-	-	-	311.70	19.29	0.00	292.41
MW-103	3/19/01	16,600	10 U	218	528	3,750	10 U	10 U	10 U	21	58.5	1290	389	10 U	10 U	10 U	5 U	309	311.70	19.83	0.00	291.87
MW-103	6/28/01	9,660	10 U	26	126	953	40 U	-	-	-	-	-	-	-	-	-	-	-	311.70	21.03	0.00	290.67
MW-103	9/23/01	23,200	10 U	109	628	3,560	40 U	-	-	-	-	-	-	-	-	-	-	-	311.70	21.24	0.00	290.46
MW-103	12/11/01	21,100	10 U	18	264	1,950	40 U	10 U	10 U	40 U	35.0	1130	441	20 U	20 U	40 U	100 U	137	311.70	18.79	0.00	292.91
MW-103	3/20/02	10,700	2.5 U	10	97	1,130	10 U	2.5 U	2.5 U	10 U	19.1	948	389	5 U	5 U	10.1	25 U	83	311.70	16.32	0.00	295.38
MW-103	6/11/02	2,020	2.5 U	3	32	250	10 U	2.5 U	2.5 U	10 U	6.1	141	51.8	5 U	5 U	10 U	25 U	25	311.70	18.05	0.00	293.65
MW-103	9/25/02	5,190	1 U	2	51	65	2 U	1 U	1 U	5	12	53.8	7.43	1 U	1.7	-	6.2	152	311.70	20.43	0.00	291.27
MW-103	12/12/02	15,200	1 U	7	473	2,021	2 U	1 U	1 U	34	115.0	1710	495	1 U	1 U	-	54.2	163	311.70	22.55	0.00	289.15
MW-103	4/1/03	2,270	2.5 U	2.5 U	13	244	10 U	-	-	-	-	-	-	-	-	-	-	-	311.70	18.75	0.00	292.95
MW-103	6/22/03	15,400	5 U	5 U	252	1,060	20 U	-	-	20 U	78.4	1300	440	10 U	10 U	-	50 U	155	311.70	20.70	0.00	291.00
MW-103	9/23/03	12,500	10 U	10 U	354	1,068	10 U	10 U	10 U	27	70.9	1060	323	10 U	10 U	1 U	14.8	80	311.70	22.17	0.00	289.53
MW-103	12/17/03	4,180	10 U	10 U	152	455	20 U	10 U	10 U	10 U	20.40	288	87	10 U	10 U	10 U	10 U	28	311.70	19.56	0.00	292.14
MW-103	3/31/04	623	0.2 U	0.5 U	16	53	2 U	0.5 U	0.5 U	3	7.6	58.2	10.4	1 U	1 U	1 U	5 U	24	311.70	18.42	0.00	293.28
MW-103	6/29/04	17,300	3	2.5 U	243	1,133	2.5 U	2.5 U	2.5 U	25	69.4	1010	281	2.5 U	2.5 U	5.98	14.4	138	311.70	20.58	0.00	291.12
MW-103	9/29/04	9,680	2 U	5 U	276	1,010	20 U	5 U	5 U	31	88.6	1260	391	10.0 U	10.0 U	10.0 U	50.0 U	95	311.70	21.08	0.00	290.62
MW-103	11/9/04	-	2 U	5 U	310	1,020	20 U	5 U	5 U	45	123.0	1420	440	10.0 U	10.0 U	10.0 U	50.0 U	92	311.70	21.97	0.00	289.73
MW-103	3/10/05	1,570	2 U	5 U	140	612	20 U	5 U	5 U	20	U	918	266	10.0 U	10.0 U	20.0 U	50.0 U	89	311.70	21.27	0.00	290.43
MW-103*	6/21/05	6,660	1 U	2.5 U	114	484	10 U	2.5 U	2.5 U	12	31.8	474	128	5.00 U	5.00 U	10.0 U	25.0 U	58	311.70	20.74	0.00	290.96
MW-103	9/23/05	13,700	0.2 U	0.5 U	26	99	2 U	0.5 U	0.5 U	4.08	12.6	173	57.8	1.00 U	1.00 U	2.00 U	8.00 U	9	311.70	22.12	0.00	289.58
MW-103	12/1/05	3,310	1 U	2.5 U	105	694	10 U	2.5 U	2.5 U	13	23.5	780	289	10.0 U	10.0 U	10.0 U	10.0 U	25	311.70	21.72	0.00	289.98
MW-103	3/9/06	80 U	0.2 U	0.5 U	0.75	1 U	2 U	0.5 U	0.5 U	2 U	1.31	1 U	0.78	1 U	1 U	2 U	50 U	2 U	311.70	16.44	0.00	295.26
MW-103	6/8/06	584	0.2 U	0.5 U	8.32	22	2 U	0.5 U	0.5 U	3.64	12.5	81.3	29.0	2 U	2 U	2 U	5.78	13	311.70	17.62	0.00	294.08
MW-103	9/22/06	3,850	2 U	5 U	152	710	20 U	5 U	5 U	28.30	93.1	1150	446.0	10 U	10 U	10 U	50 U	75.3	311.70	21.54	0.00	290.16
MW-103	12/12/06	1,750	0.5 U	0.5 U	23.2	84.7	2 U	0.5 U	0.5 U	5.83	20.6	176	59.8	1 U	1 U	2.15	11 U	18.5	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	2,500	0.400 U	1.00 U	17.5	53.3	4.00 U	1.0 U	1.0 U	6.88	25	137	46.5	2.00 U	2.00 U	4.0 U	10.0 U	16.0	311.70	18.90	0.00	292.80
MW-103	8/28/07	264	84.1	0.500 U	0.500 U	6.6	2.00 U	0.50 U	0.50 U	2.00 U	0.50 U	1.47	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

			Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
Well No.	Date	Gasoline-Range Organics (µg/L)	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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	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

			Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
Well No.	Date	Gasoline-Range Organics (µg/L)	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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	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-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	9/10/090	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

			Volatile Organic Compounds							Alkylbenzenes & Naphthalene									Groundwater Levels			
Well No.	Date	Gasoline-Range Organics (µg/L)	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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	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-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	10,900	2.50 U	10.0 U	251	938	10.0 U	5.00 U	5.00 U	22.4	84.1	246.0	193.0	-	1.00 U	17.7	26.1	50.0 U	312.77	19.53	0.00	293.24
MW-110	3/28/09	162	0.250 U	1.00 U	1.26	4.57	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	1.25	1.21	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	687	0.250 U	0.500 U	1.04	2.34	1.00 U	0.500 U	0.500 U	0.500 U	0.950	4.79	6.59	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
Air Sparging Wells																						
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
Grab Samples																						
BH20-31W	7/27/99	256	15.0	10.8	4.49	13.5	^	^	^	^	^	^	^	^	^	^	^	^				
BH20A-24W	7/27/99	78,000	200	8,700	2,400	14,000	^	^	^	^	^	^	^	^	^	^	^	^				
BH21-25W	7/27/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^				
BH22-28W	7/27/99	1,410	0.50 U	1.44	6.14	22.3	^	^	^	^	^	^	^	^	^	^	^	^				
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	47,000	0.50 U	16.2	2,100	9,400	^	^	^	^	^	^	^	^	^	^	^	^				
VP2-22W	7/28/99	8,200	0.50 U	5.35	110	630	^	^	^	^	^	^	^	^	^	^	^	^				
VP3-23W	7/28/99	50 U	0.50 U	0.50 U	0.50 U	1.50 U	^	^	^	^	^	^	^	^	^	^	^	^				
VP4-21W	7/28/99	60	0.50 U	0.50 U	0.56	2.18	^	^	^	^	^	^	^	^	^	^	^	^				
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	41,000	130	120	530	5,000	^	^	^	^	^	^	^	^	^	^	^	^				

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

Well No.	Date	Gasoline-Range Organics	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	Naph-thalene	Casing Elev.	Depth to Water	NAPL Thick-ness	Water Elev.
		(µg/L)	(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-3	8/13/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-4	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-5	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-6	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
Duplicate (B-6)	8/15/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-7	8/13/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-10	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-11	8/14/08	100U	1U	1U	1U	1U	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-12	8/15/08	**2,000**	**980**	1U	1U	**9.0**	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-14	8/15/08	**1,100**	1U	1U	**4.2**	**2.2**	1U	1U	1U	^	^	^	^	^	^	^	^	1U				
B-15	8/15/08	100U	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
Current Land Use - Commercial/Industrial				
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.
Future Land Use - Commercial/Industrial or Residential				
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.

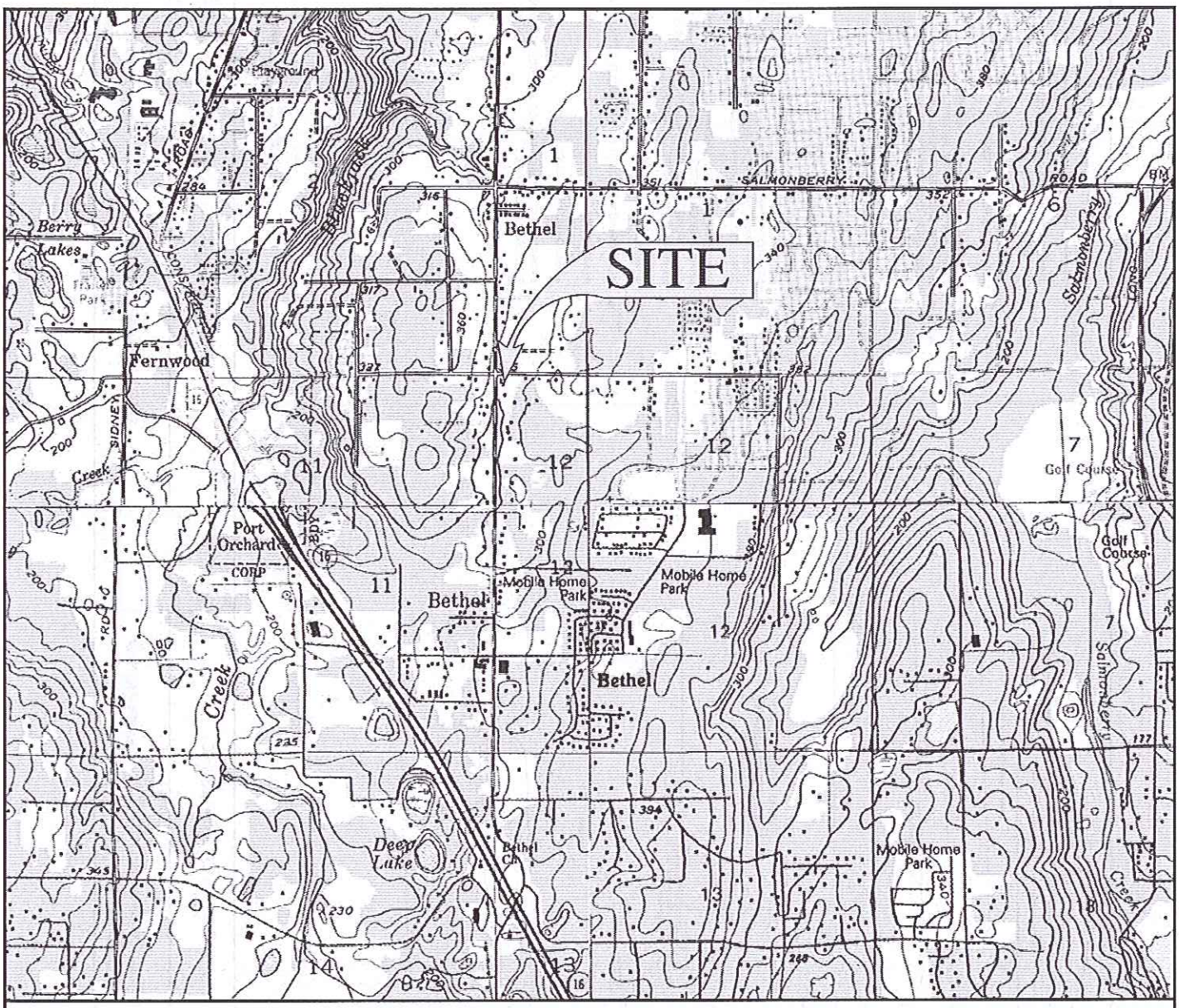
TABLE 4
Conceptual Site Model Summary
Fred Meyer Stores - Port Orchard Site

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



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

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Portland OR. U.S.A. 97224

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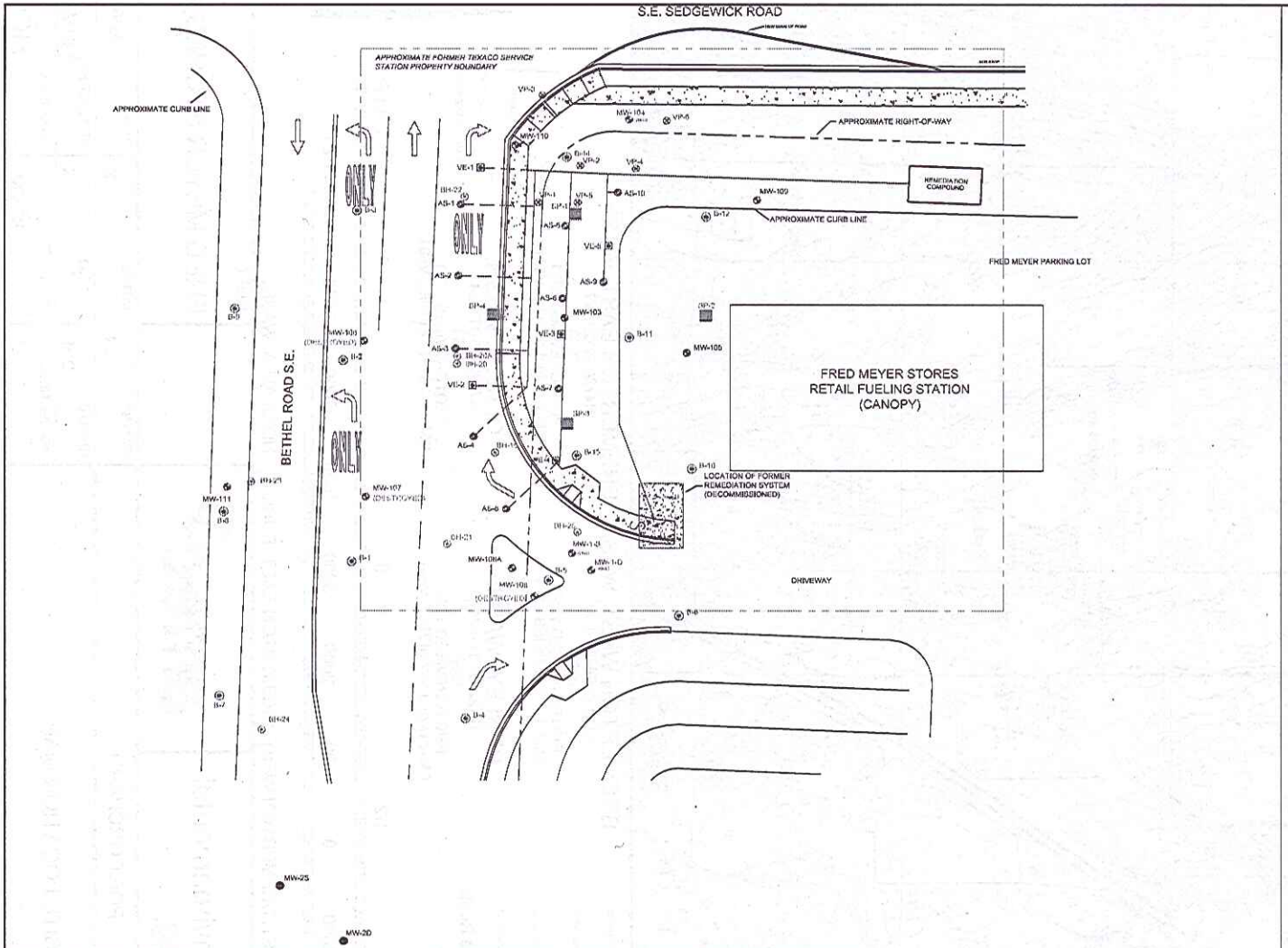
CLIENT: FRED MEYER STORES, INC.

PROJECT: PORT ORCHARD	DWN BY: LR	DATUM: X	DATE: APRIL 2010
TITLE: SITE LOCATION MAP	CHK'D BY: DMF	REV. NO.: X	PROJECT NO: 9-61M-10282-0
	PROJECTION: X	SCALE: 1:24,000	FIGURE No. FIGURE 1

K:\10000\10200\10282\dwg_RI\Fig 1 - Site Location.dwg - - - Apr. 28, 2010 3:21pm - brian.johnson



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 1999/200. 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

N

0' 12.5' 25' 37.5'

1" = 25'

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

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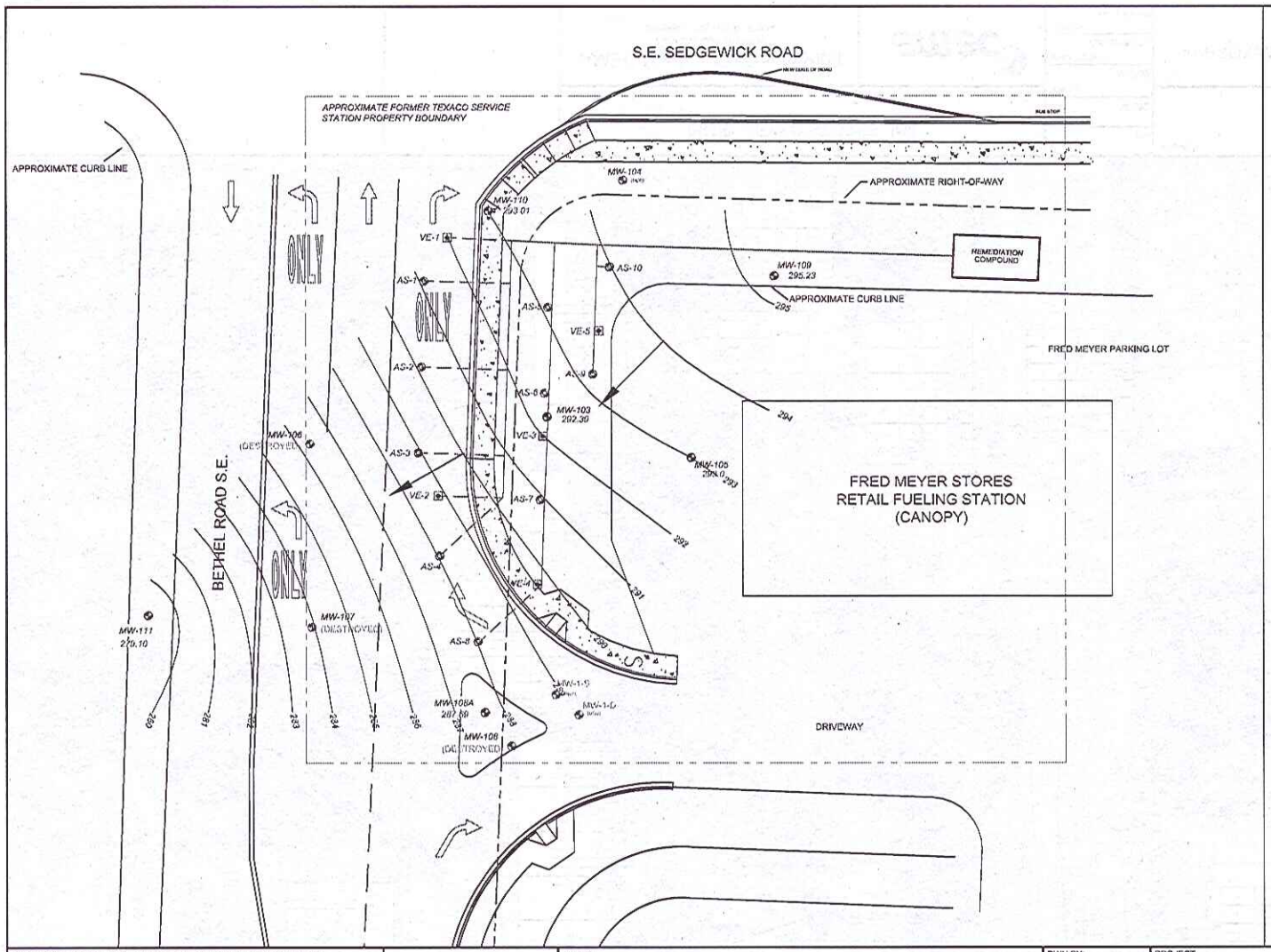
DWN BY:	DD/LR
CHK'D BY:	DS/DMF
DATUM:	-
PROJECTION:	-
SCALE:	1"=25'

PROJECT: PORT ORCHARD

TITLE: SITE PLAN AND SITE FEATURES

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

K:\10000\10200\10282\dwg_RI\Fig 2 - Site_Plan_and_Site_Features.dwg - - - Apr. 28, 2010 3:25pm - brian.johnson



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-106A — REPLACEMENT MONITORING WELL
- (DMC) — 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

N

0' 12.5' 25' 37.5'

1" = 25'

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

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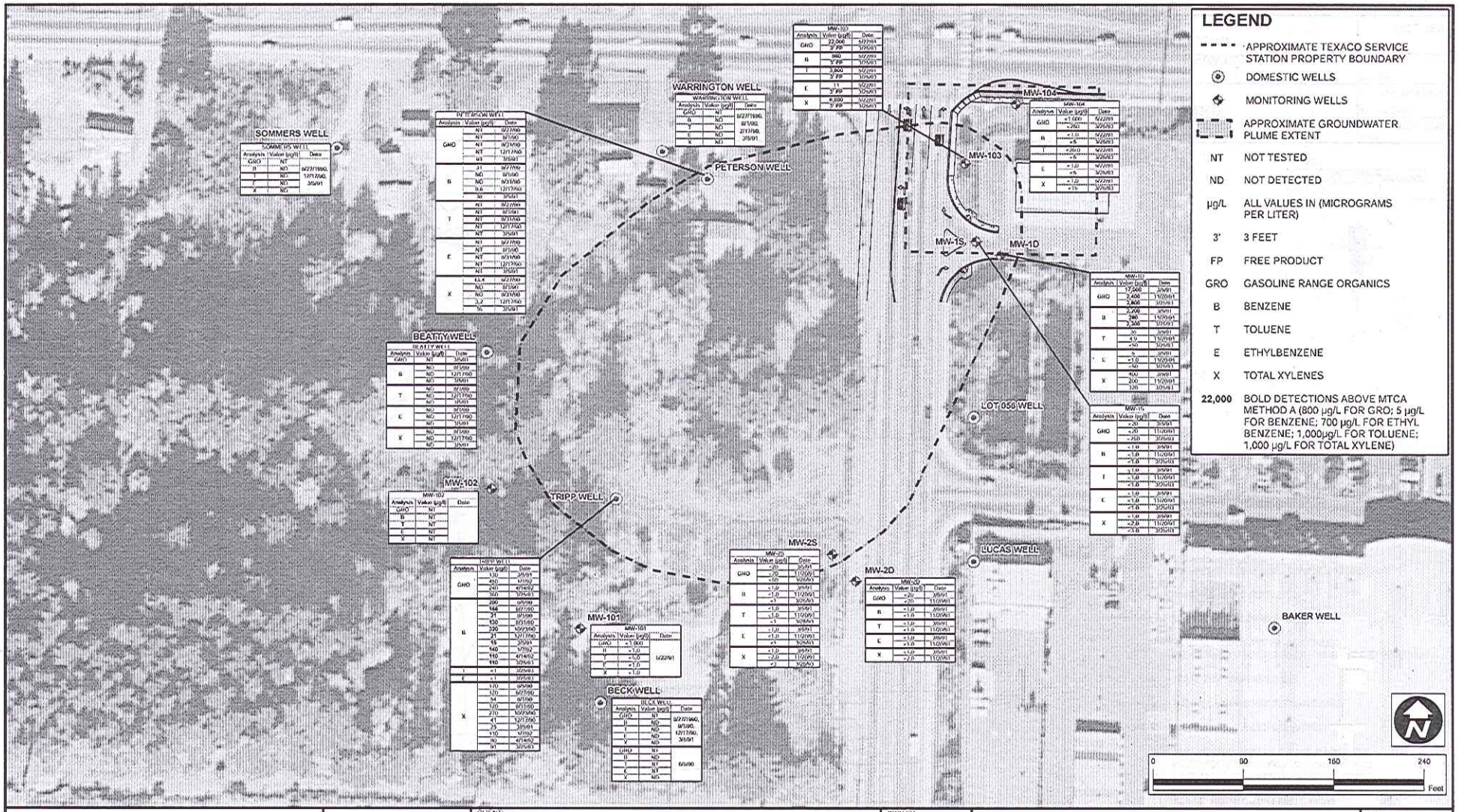
DWN BY:	LR
CHK'D BY:	DMF/WHC
DATUM:	-
PROJECTION:	-
SCALE:	1"=25'

PROJECT: PORT ORCHARD

TITLE: GROUNDWATER ELEVATIONS - JANUARY 22, 2010

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

K:\10000\10200\10282\dwg_R\Fig 3 - Groundwater Elevations - Jan 22 2010.dwg - - - Apr. 28, 2010 3:23pm - brian.johnson



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)

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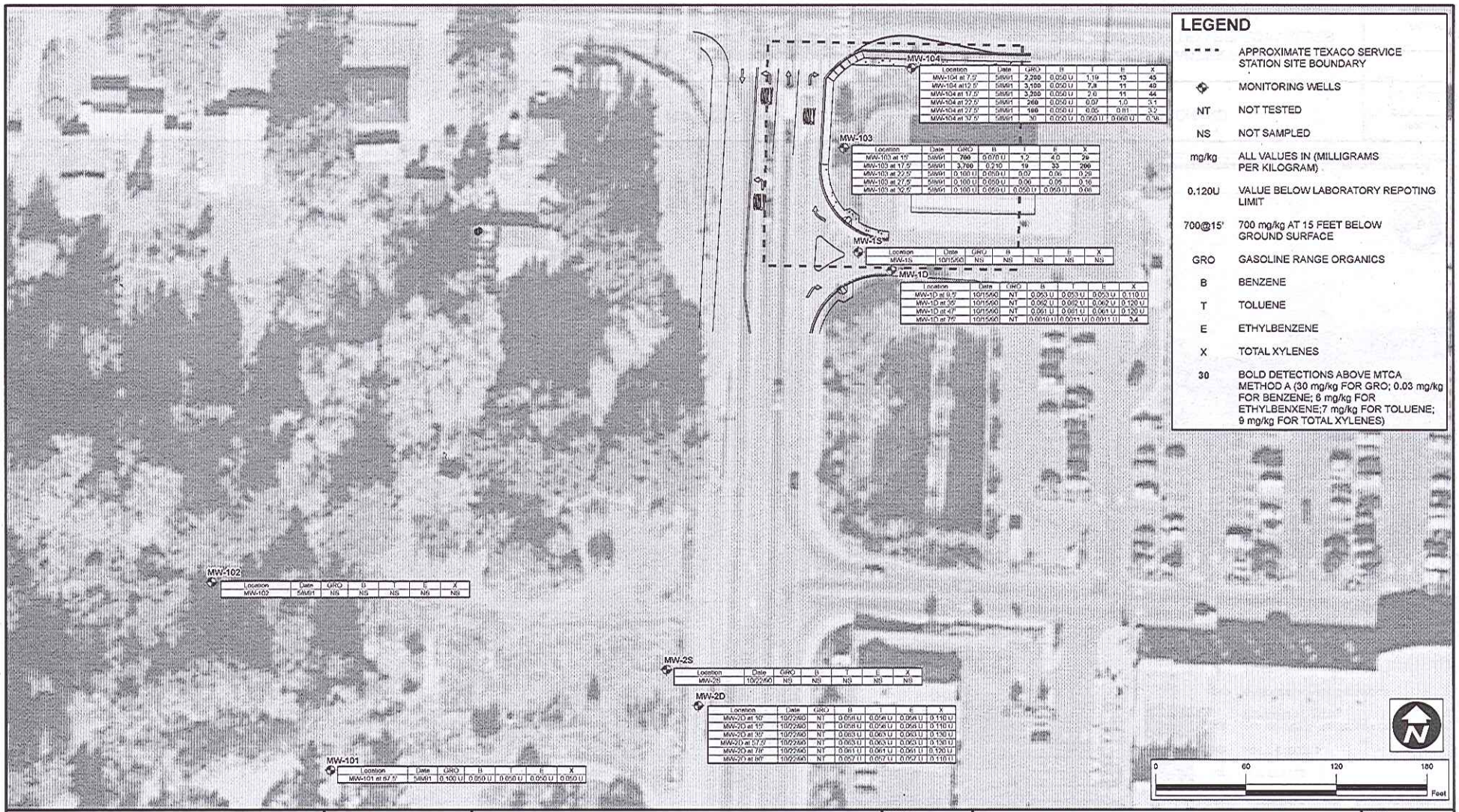
DWN BY: PM
CHK'D BY: AC/BC
DATUM: NAD83
PROJECTION: WA SP N. Ft.
SCALE: 1 inch = 80 feet

PROJECT: PORT ORCHARD

TITLE: APPROXIMATE GROUNDWATER PLUME EXTENT 1990 - 1993 GRO AND BTEX

DATE: APRIL 2010
PROJECT NO.: 9-61M-10282-0
REV. NO.: 1
FIGURE NO.: FIGURE 4

K:\10000\10200\10282\dwg\L_RhFig 4 - Approx GW Plume GRO and BTEX 1991-1993.mxd



CLIENT LOGO

CLIENT: FRED MEYER STORES, INC.

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DWN BY: PM
CHK'D BY: AC/BC
DATUM: NAD83
PROJECTION: WA SP N. Ft.
SCALE: 1 inch = 60 feet

PROJECT: PORT ORCHARD

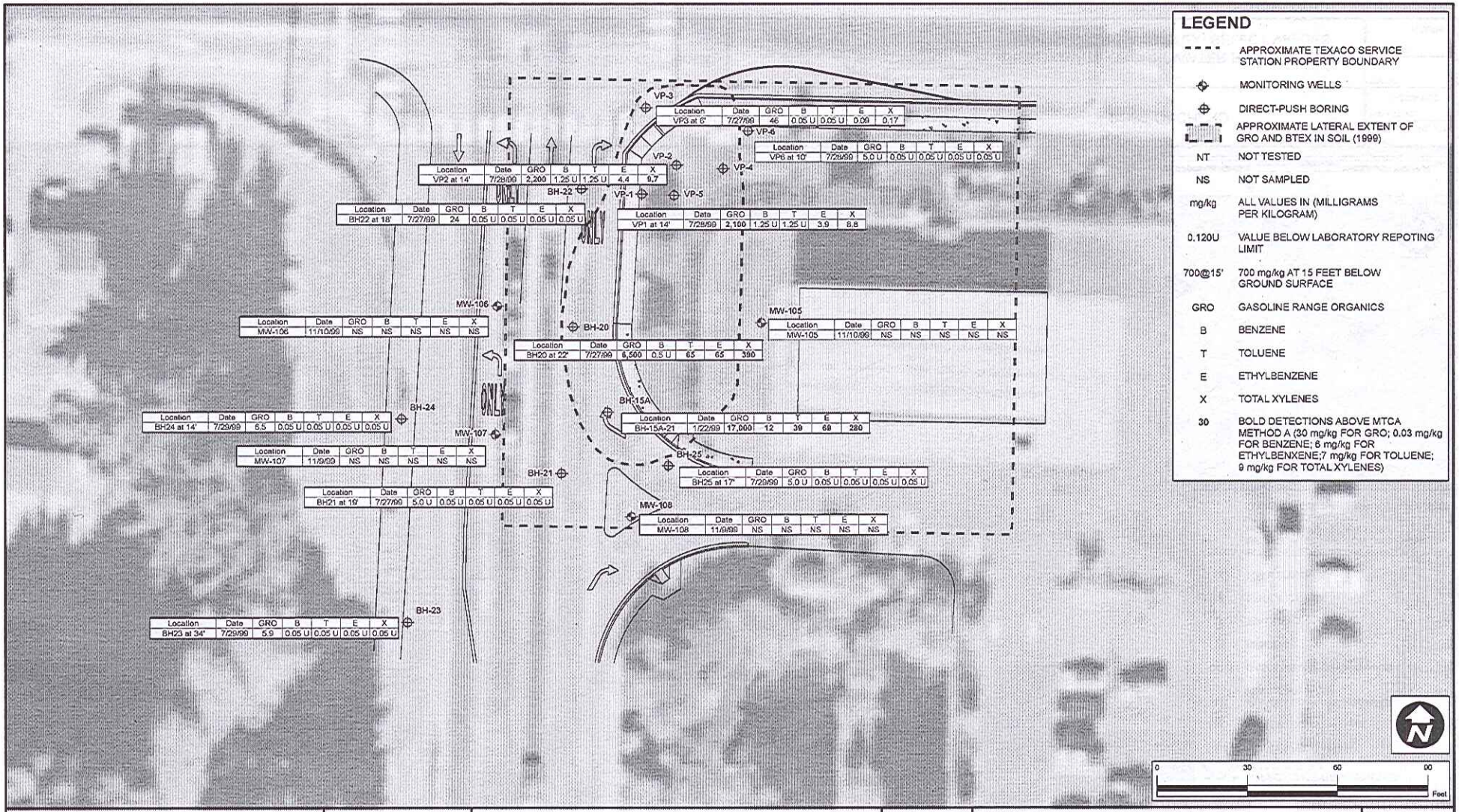
TITLE: GRO AND BTEX CONCENTRATIONS IN SOIL 1990/1991

DATE: APRIL 2010
PROJECT NO.: 9-61M-10282-0
REV. NO.: 1
FIGURE NO.: FIGURE 5

K:\10000\10200\10282\dwg_RR\Fig 5 - Approx Soil Plume GRO and BTEX 1990-1991.mxd

	CLIENT LOGO	CLIENT: FRED MEYER STORES, INC.	DRAWN BY: PM	PROJECT: PORT ORCHARD	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: 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		

K:\10000\10200\10282\dwg_R\Fig 6 - Approx GW Plume GRO and BTEX 1998-2001.mxd



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 REPOTING 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 ETHYLBENXENE;7 mg/kg FOR TOLUENE; 9 mg/kg FOR TOTAL XYLENES)

CLIENT LOGO

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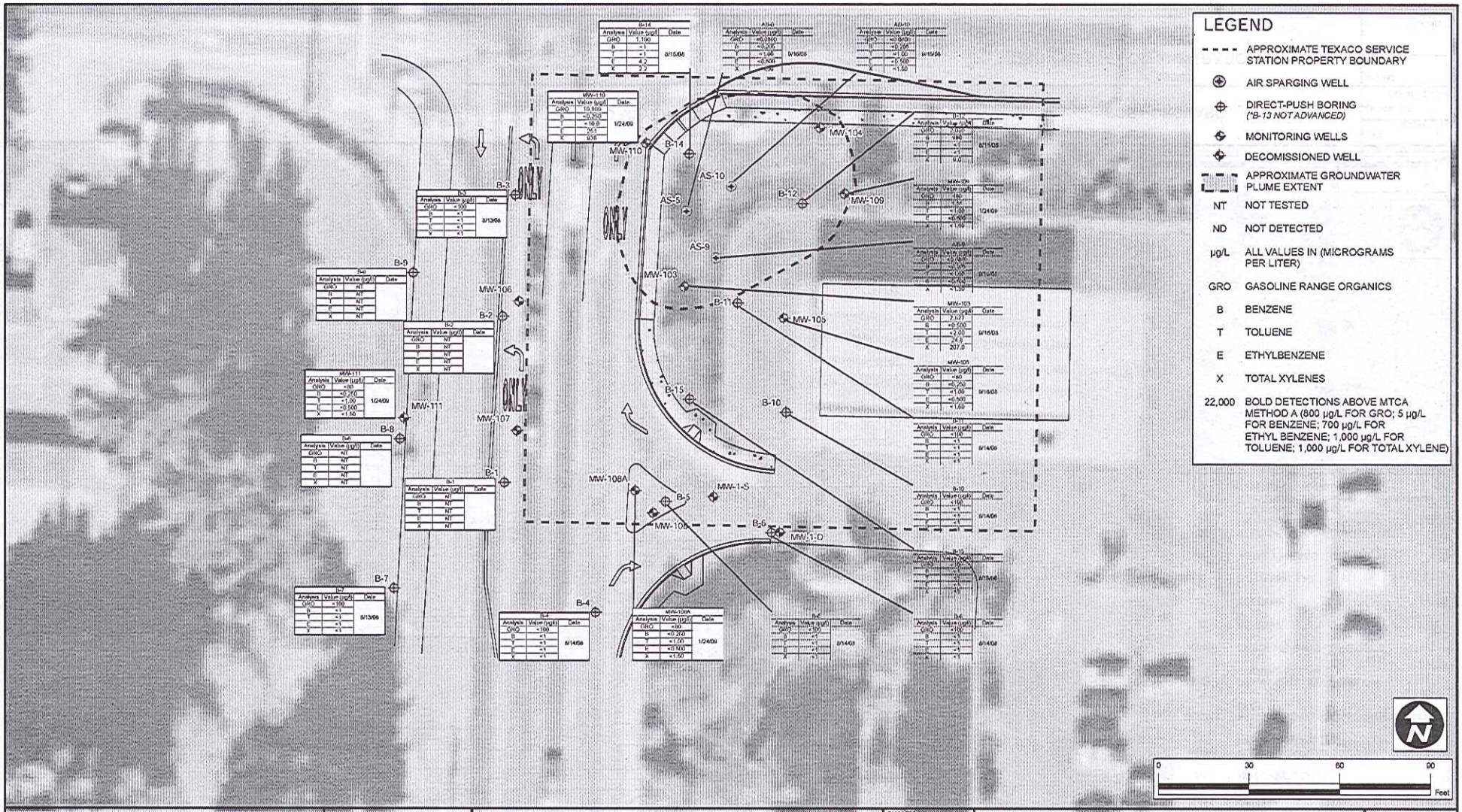
DWN BY: PM
CHK'D BY: AC/BC
DATUM: NAD83
PROJECTION: WA SP N. Ft
SCALE: 1 inch = 30 feet

PROJECT: PORT ORCHARD

TITLE: GRO AND BTEX CONCENTRATIONS IN SOIL 1999

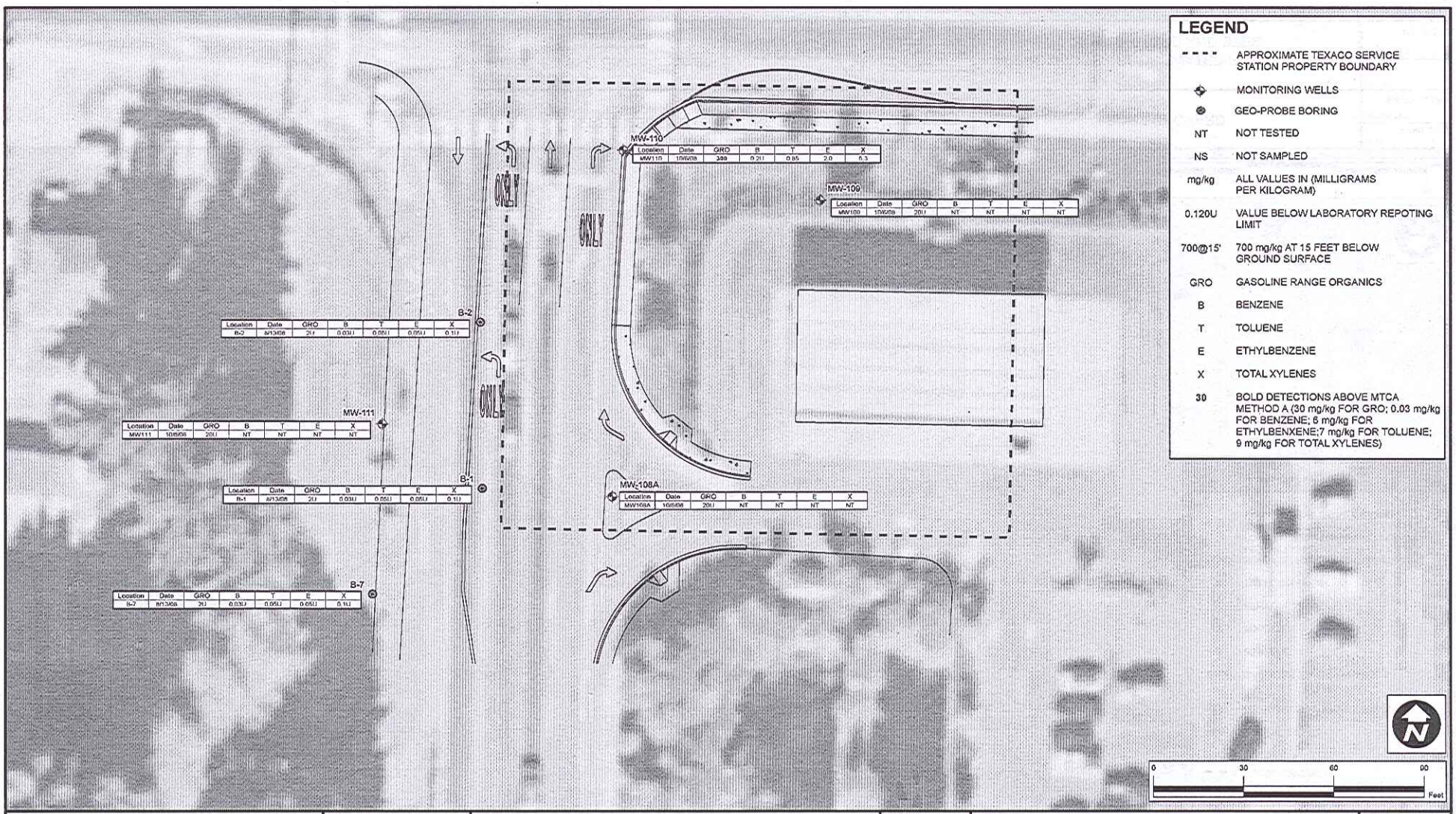
DATE: APRIL 2010
PROJECT NO.: 9-61M-10282-0
REV. NO.: 1
FIGURE NO.: FIGURE 7

K:\10000\10200\10282\dwg_RI\Fig 7 - Approx Soil Plume GRO and BTEX 1999.mxd



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

K:\10000\10200\10282\dwg_R\Fig 8 - Approx GW Plume GRO and BTEX 2008-2009.mxd



LEGEND

- - - -	APPROXIMATE TEXACO SERVICE STATION PROPERTY BOUNDARY
◈	MONITORING WELLS
⊙	GEO-PROBE BORING
NT	NOT TESTED
NS	NOT SAMPLED
mg/kg	ALL VALUES IN (MILLIGRAMS PER KILOGRAM)
0.120U	VALUE BELOW LABORATORY REPOTING 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 ETHYLBENXENE;7 mg/kg FOR TOLUENE; 9 mg/kg FOR TOTAL XYLENES)

CLIENT LOGO

CLIENT: FRED MEYER STORES, INC.

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Portland, OR, U.S.A. 97224

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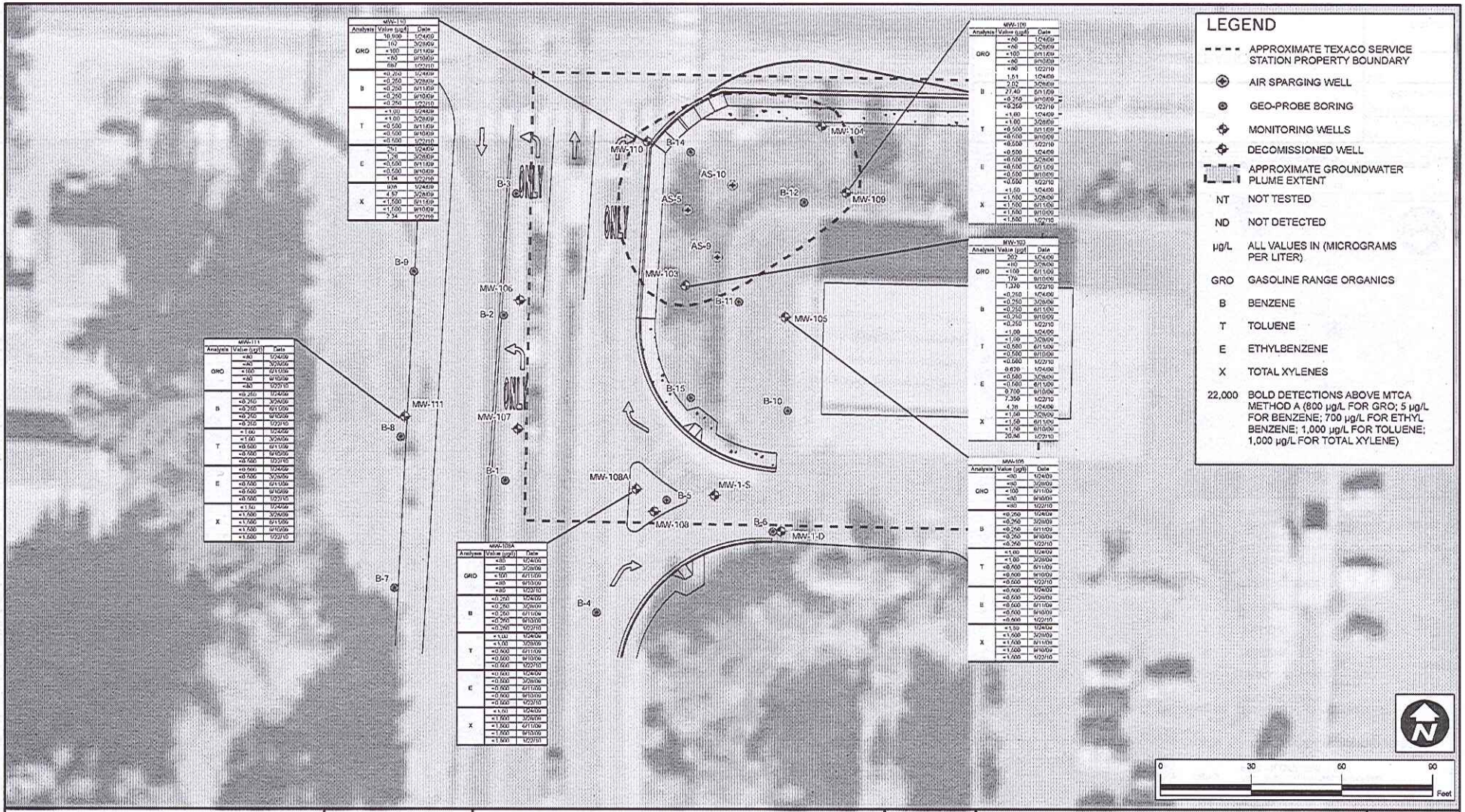
DWN BY: PM
CHK'D BY: AC/BC
DATUM: NAD83
PROJECTION: WA SP N. Ft.
SCALE: 1 inch = 30 feet

PROJECT: PORT ORCHARD

TITLE: GRO AND BTEX CONCENTRATIONS IN SOIL 2008

DATE: APRIL 2010
PROJECT NO.: 9-61M-10282-0
REV. NO.: 1
FIGURE NO.: FIGURE 9

K:\10000\10200\10282\dwg_RR\Fig 9 - Approx Soil Plume GRO and BTEX 2008.mxd



LEGEND

- APPROXIMATE TEXACO SERVICE STATION PROPERTY BOUNDARY
- AIR SPARGING WELL
- GEO-PROBE BORING
- MONITORING WELLS
- DECOMMISSIONED WELL
- 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)

CLIENT LOGO

CLIENT: FRED MEYER STORES, INC.

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

amec

DWN BY:	PM
CHK'D BY:	AC/BC
DATUM:	NAD83
PROJECTION:	WA SP N, Ft
SCALE:	1 inch = 30 feet

PROJECT: PORT ORCHARD

TITLE: APPROXIMATE GROUNDWATER PLUME EXTENT 2009/2010 (GRO AND BTEX)

DATE:	APRIL 2010
PROJECT NO.:	9-61M-10282-0
REV. NO.:	1
FIGURE NO.:	FIGURE 10

K:\10000\10200\10282\dwg_R\Fig 10 - Approx GW Plume GRO and BTEX 2009-2010.mxd

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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: Sandy gravel, unpaved empty lot
				1–5	sm	Fill: Light brown silty SAND, some gravel. (contains abundant wood debris)
				6–9	sp	Gray SAND, fine to medium grained, with some silt and gravel.
	1	200 14"		10–15	sm	Gray SAND, very fine to fine grained, some silt and gravel.
		200 14"		15–19		no recovery

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NORTHWEST REGIONAL OFFICE

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

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: 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:
				21	sp	Brown SAND, fine to medium grained, with some gravel, moist.
				22		
				23		
				24		
				25	sm	Brown silty SAND, fine grained, moist.
				26		
				27		
				28		
				29		
				30		
				31		
				32		
				33		
				34		
				35		
	2	100+ 6"		36		
				37		
				38		
				39		

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Proj. No. 75F03 | Date 9/91 | 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 of other times and locations. We cannot accept responsibility for the use of information by others of information not contained in this report.

Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington				Sheet 3 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				41		
				42	sm	Silty SAND, fine grained.
				43		
				44		
				45		
				46		
				47		becomes medium grained.
				48		
				49		
				50		
	3	37/18"		51		becomes fine to medium grained, saturated.
				52		
				53		
				54		
				55		becomes medium grained.
				56		
				57		
				58		
				59		

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Proj. No. J5E03 | Date Aug 91 | Plate 6

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 4 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				61	SM	Brown silty SAND, fine grained
				62		
				63		
				64		
				65		
				66		
				67		
				68		
				69		
				70		
				71		
				72		
				73		gravels encountered at 73 ft.
				74		
				75		increasing gravels and decreasing silt.
	4	100/3		76		
		100/6				
		100/4		77		
				78		
				79		

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NORTHWEST REGIONAL OFFICE

Proj. No. J5E03 | Date Aug 91 | Plate 7

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 interpretation by others of information presented on this log.

Monitor Well Completion Form

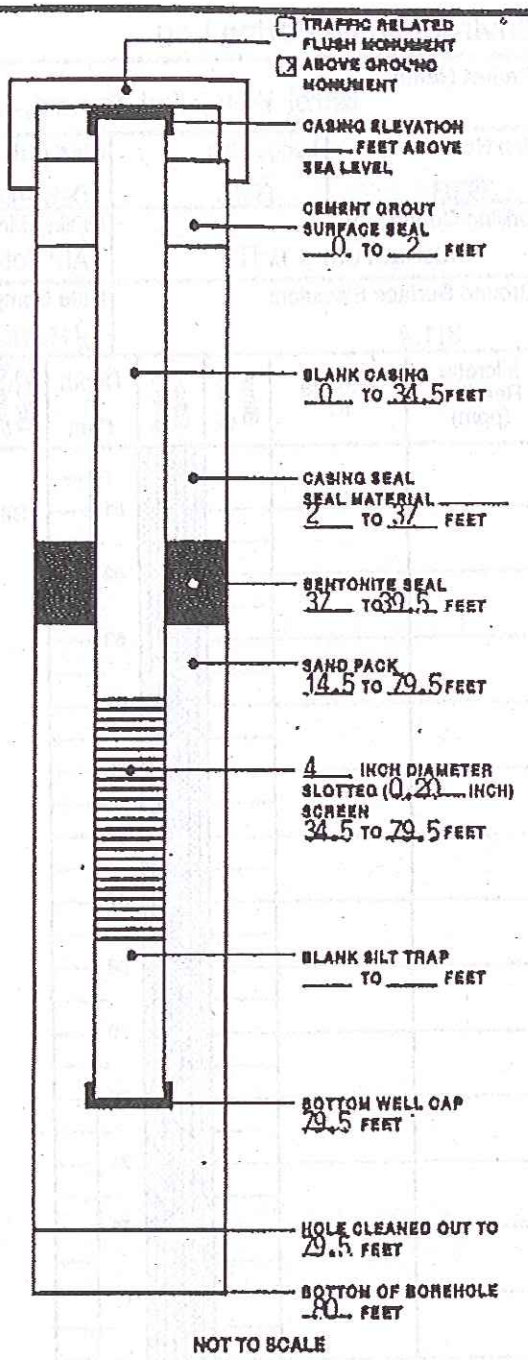
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	BSS
LOGGED BY:	BSS	REVIEWED BY:	BSS
WELL I.D.:	MW-1-D	DATE:	10-15-90
DRILLING COMPANY:	Tacoma Pump & Drill		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD^3 CEMENT-SAND (READI-MIX) ORDERED:	
_____ YARD^3 CEMENT-SAND (READI-MIX) USED:	
CONCRETE PUMPED USED?	☐ YES ☐ NO
NAME:	



NOT TO SCALE

ADDITIONAL INFORMATION

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Proj. No.	Drwn.	Date	Checked	Date	Plate
J5E03				Aug 91	8

Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington				Sheet 1 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: sandy gravel, unpaved empty lot
				1–5	sm	Fill: Light brown silty SAND, some gravel. (contains abundant wood debris)
				5–9	sp	Gray SAND, fine to medium grained, with some gravel.
				10–19	sm	Gray SAND, very fine to fine grained, some silt and gravel.

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Proj. No. J5E03 | Date Aug 91 | Plate 9

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.

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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				21		
				22	SP	Brown SAND, fine to medium grained, with some gravel, moist.
				23		
				24		
				25		
				26		
				27		
				28		
				29		
				30		
				31		Brown silty SAND, fine grained, moist.
				32	SM	
				33		
				34		
				35		
				36		
				37		
				38		
				39		

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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, 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

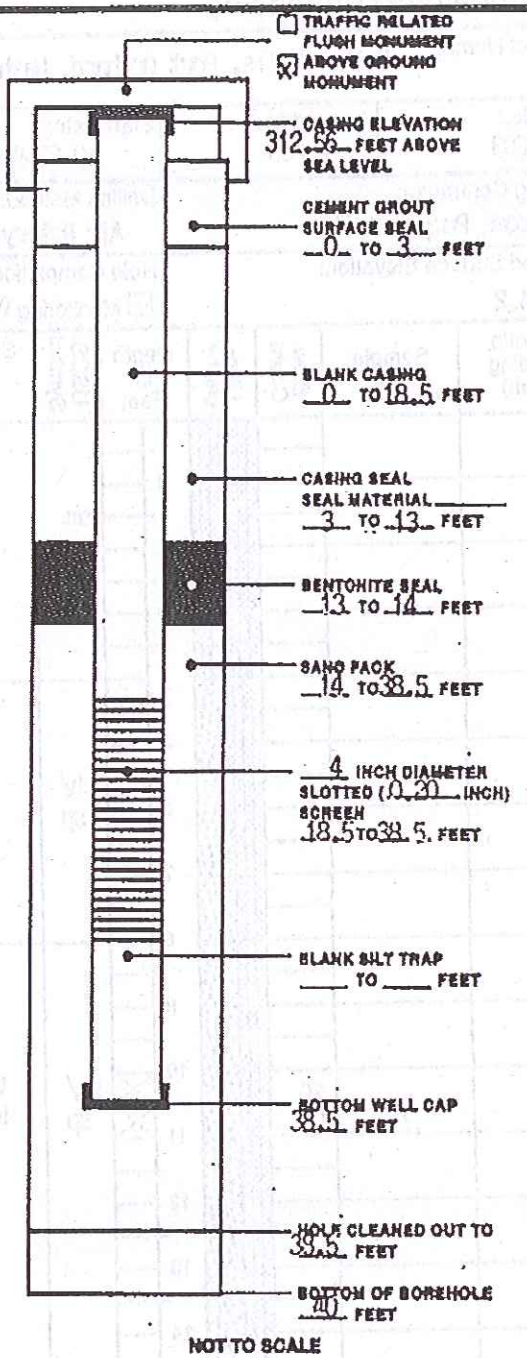
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	RSS
LOGGED BY:	RSS	REVIEWED BY:	RSS
WELL I.D.:	MW-1-S	DATE:	10-15-90
DRILLING COMPANY:	Tacoma Pump and Drill		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ ____
____ FEET OF ____ INCH SCREEN	____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ ____
____ FEET OF ____ INCH STEEL CONDUCTOR CASING	
____ YARD^3 CEMENT-SAND (REDI-MIX) ORDERED:	
____ YARD^3 CEMENT-SAND (REDI-MIX) USED:	
CONCRETE PUMPER USED?	☐ YES ☐ NO
NAME:	



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ADDITIONAL INFORMATION

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NORTHWEST REGIONAL OFFICE

Proj. No. J5E03	Drwn.	Date	Checked	Date Aug 91	Plate 11

Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington					Sheet 1 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: grass lawn
				1–4	sm	Brown silty SAND, fine grained, dry to moist.
				5–8	sm/sp	Brown SAND, fine grained, some silt, moist.
	1	30/30		9–11	sm/sp	Gray SAND, fine grained, trace silt and gravel, moist to wet.
	2	125/18"		12–15	sm/sp	Gray SAND, fine grained, some silt, moist.
				16	sm/ml	Tan sandy SILT, silty SAND, moist
				17–19	sm/sp	Gray SAND, fine grained, some silt, moist.

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NORTHWEST REGIONAL OFFICE

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: RSS	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:
				21		
				22		
				23	sm/ sp	Gray SAND, fine grained, trace silt, moist.
				24		
				25		
				26		
				27		
				28	sm	Dark gray silty SAND, fine grained, damp
				29		
				30		
				31		
				32		
				33		
				34		
				35	sp	Gray SAND, fine grained, trace silt, saturated.
	3	102 12"		36		
				37		
				38		
				39		

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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 interpretations by others of information presented on this log.

Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington				Sheet 3 of 4
Job No.: J5E03	Logged by: RSS	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:
				41		
				42		
				43	SP	Gray SAND, fine grained, trace silt, wet.
				44		
				45		
				46		
				47		
				48		
				49		
				50		
				51		
				52		
				53		
				54	SP	Gray clean SAND, fine grained, saturated.
				55		
				56		
				57		
	4			58		
				59		

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Proj. No. J5E03 | Date Aug 91 | Plate 14

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 contained on this log.

Environmental Boring Log

Project Name: Bethel Wells, Port Orchard, Washington				Sheet 4 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				61	sp	Gray clean SAND, fine grained, saturated.
				62		
				63		
				64		
				65		
				66		
				67		
				68		gravels noted while drilling at 68 ft
				69		Blue gray SAND, fine grained, trace silt, saturated.
				70	SD	
				71		
				72		
				73		
				74		
				75		
				76		
				77		
	5			78		
				79	SM	Gray gravelly silty SAND, wet.
	6	100 6"				

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Proj. No. J5E03	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 interpretations by others of subsurface conditions.

Monitor Well Completion Form

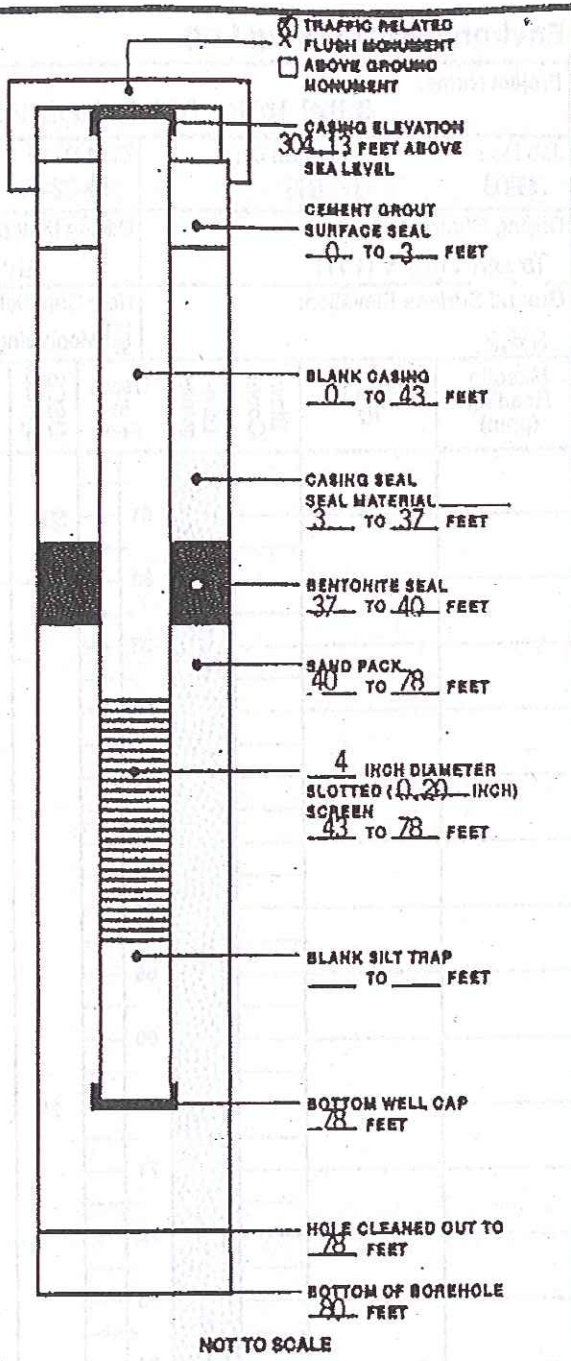
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	RSS
LOGGED BY:	RSS	REVIEWED BY:	RSS
WELL I.D.:	MW-2-D	DATE:	10-23-90
DRILLING COMPANY:	Tacoma Pump and Drill		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ ____
____ FEET OF ____ INCH SCREEN	____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ ____
____ FEET OF ____ INCH STEEL CONDUCTOR CASING	
____ YARD^3 CEMENT-SAND (READI-MIX) ORDERED:	
____ YARD^3 CEMENT-SAND (READI-MIX) USED:	
CONCRETE PUMPER USED?	☐ YES ☐ NO
NAME:	



NOT TO SCALE

ADDITIONAL INFORMATION

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Proj. No. J5E03	Drwn.	Date	Checked	Date Aug 91	Plate 16

Environmental Boring Log

Project Name: Bethel 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		

Microtip Reading (ppm)	Sample ID	Blow Count	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: grass lawn
				1–5		Brown SAND, fine grained, some silt, dry to moist.
				5	sm/sp	becomes gray
				6–10		
				11		gravels encountered at 11 ft
				12–19	sm/sp	Gray silty gravelly SAND, fine grained, moist.

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Proj. No. J5E03	Date Aug 91	Plate 17

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.: JSE03	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:
				21	sm/sp	Gray silty gravelly SAND, fine grained, moist.
				22		
				23		
				24		
				25		
				26		
				27	sm/sp	Gray SAND, fine grained, some silt, moist.
				28		
				29		
				30		
				31		
				32		
				33		
				34		
				35		
				36		
				37		
				38		
				39		

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Proj. No. JSE03 | 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 use of [illegible]

Monitor Well Completion Form

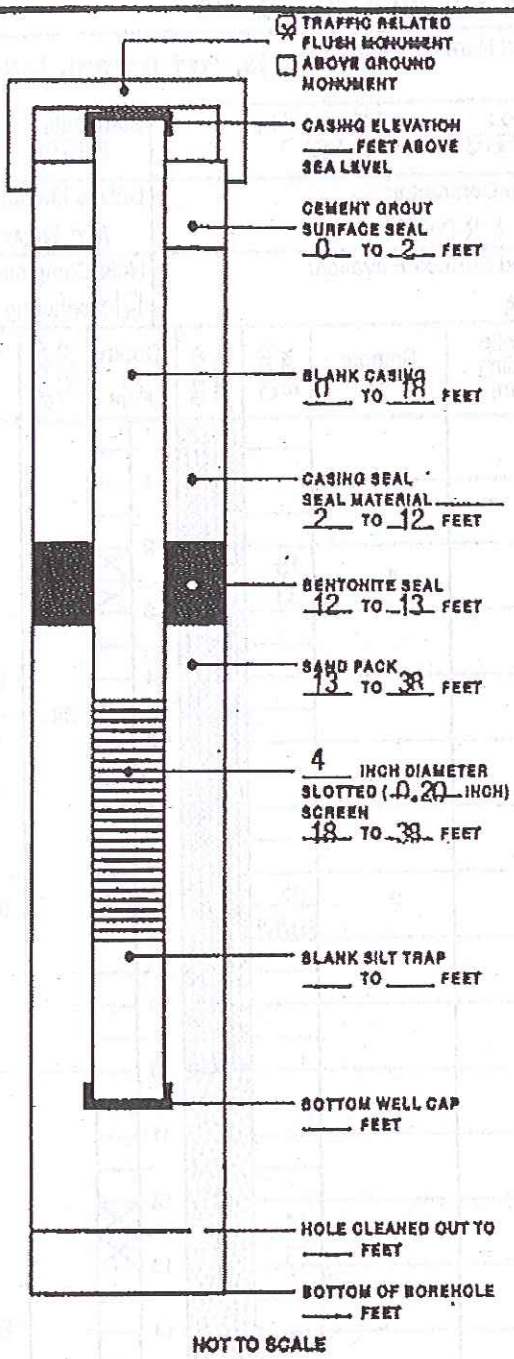
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	BSS
LOGGED BY:	BSS	REVIEWED BY:	BSS
WELL I.D.:	MW-2-S	DATE:	10-23-90
DRILLING COMPANY:	Tacoma Pump and Drill		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD^3 CEMENT-SAND (READI-MIX) ORDERED:	
_____ YARD^3 CEMENT-SAND (READI-MIX) USED:	
CONCRETE PUMPER USED?	☐ YES ☐ NO
NAME:	



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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: 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: [x] Monitoring Well [ ] Piezometer [ ] Abandoned, sealed with bentonite		

Microtip Reading (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions: dirt road
	1	15 33		1–4	SM	Gray brown mottled SAND with some silt, moist, dense.
	2	22 50/5"		7–10	SM	more gravel, becomes very dense.
	3	14 25		12–15	SP	Brown SAND, fine grained, moist, dense.
	4	27 48		17–18	SP	becomes very dense.

WASHINGTON STATE DEPT. OF ECOLOGY
NORTHWEST REGIONAL OFFICE

Proj. No. J5E03 | Date Aug 91 | Plate 20

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: 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:
				21		
				22		
				23		
	5	28 23		24		
				25		
				26		
				27		Brown SAND, fine grained, moist, very dense.
		28 38		28 29	SP	
				30		
				31		
				32		
		34 28		33 34		
				35		
				36		
				37		
		38 28		38 39		becomes wet.

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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:
				41		
				42		
				43		
	6	21 / 23		44		
				45		
				46		Brown SAND, fine grained, wet to saturated, dense to very dense.
				47	SD	
		9 / 26		48		
				49		
				50		
				51		
				52		
				53		
	7	50/3" / 50/3"		54		
				55		
				56		
				57		
				58		
	8	6 / 12		59		becomes medium dense.

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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 4 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		
				62		
				63		
		8				
		10		64		
				65		
				66		
				67	SP	Brown SAND, fine grained, saturated, medium dense to very dense.
				68		
		29				
	9	50/5"		69		
				70		
				71		
				72		
				73		
		50/5"		74		
				75		
				76		
				77	SP	Blue SAND, medium grained with gravel, saturated, very dense.
				78		
		41				
	10	50/6"		79		

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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, 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

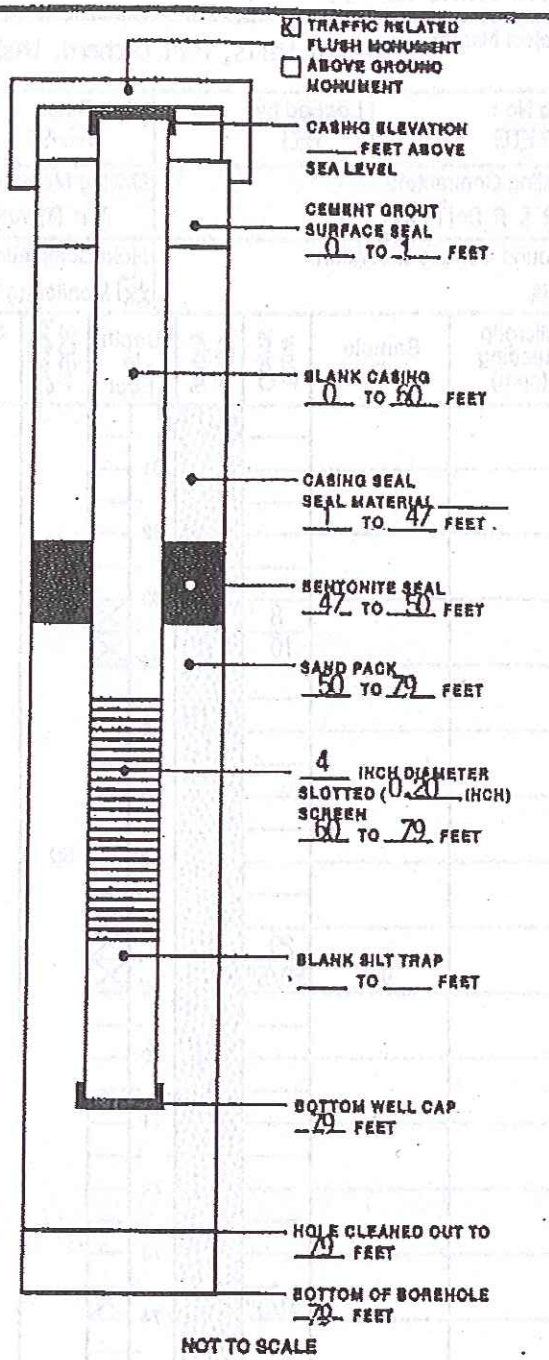
PROJECT NAME:	Bethel Wells, Port Orchard, WA
PROJECT NUMBER:	J5E03
PROJECT MANAGER:	RSS
LOGGED BY:	RSS
REVIEWED BY:	RSS
WELL I.D.:	MW-101
DATE:	5-13-91
DRILLING COMPANY:	R & R Drilling
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR	☐ SLIGHTLY CLOUDY
	☐ MOD. TURBID	☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE	☐ TANK TRUCK
	☐ SANITARY SEWERS	☐ STORAGE TANK
	☐ DRUMS	☐ 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	☐ PVC ☐ _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD^3 CEMENT-SAND (READI-MIX) ORDERED:	
_____ YARD^3 CEMENT-SAND (READI-MIX) USED:	
CONCRETE PUMPED USED?	☐ YES ☐ NO
NAME:	



NOT TO SCALE

ADDITIONAL INFORMATION

WASHINGTON STATE DEPT. OF ECOLOGY
NORTHWEST REGIONAL OFFICE

Proj. No. J5E03	Drwn.	Date	Checked	Date Aug 91	Plate 24

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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions: grass
				1		
				2		
				3		Gray SAND, fine grained, some silt and gravel, moist, very dense.
	1	34 / 50/3"		4		
				5		
				6		
				7	SM	
				8		
				9		
				10		
				11		
				12		
				13		
	2	24 / 25		14		
				15		
				16		
				17		
				18		
				19		

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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: Bethel Wells, Port Orchard, Washington				Sheet 3 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	Litho-graphy	Depth in Feet	USCS Symbol	Surface Conditions:
				41	ml	Gray SILT with sand, moist, very dense
				42		
				43		
	5	26 50/4"		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		

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Proj. No. J5E03	Date Aug 91	Plate 27

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 4 of 5
Job No.: J5E03	Logged by: RSS	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: [X] Monitoring Well [ ] Piezometer [ ] Abandoned, sealed with bentonite		

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

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NORTHWEST REGIONAL OFFICE

Proj. No. J5E03	Date Aug 91	Plate 21

Subsurface conditions depicted represent only those present at the time and location of this boring

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	Litho-graphy	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		

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NORTHWEST REGIONAL OFFICE

Proj. No. J5E03 | Date Aug 91 | Plate 29

Monitor Well Completion Form

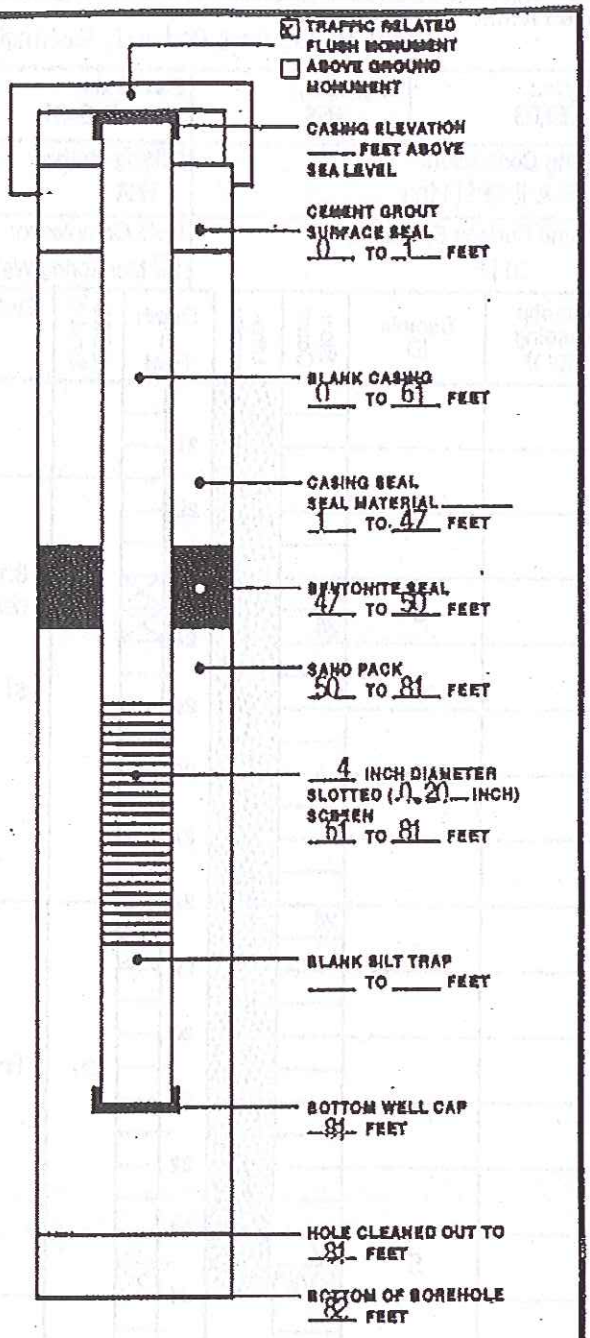
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	BSS
LOGGED BY:	BSS	REVIEWED BY:	BSS
WELL I.D.:	MW-102	DATE:	5-13-91
DRILLING COMPANY:	R & R Drilling		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD^3 CEMENT-SAND (READI-MIX) ORDERED:	
_____ YARD^3 CEMENT-SAND (READI-MIX) USED:	
CONCRETE PUMPER USED?	☐ YES ☐ NO
NAME:	



NOT TO SCALE

ADDITIONAL INFORMATION

WASHINGTON STATE DEPT. OF ECOLOGY
NORTHWEST REGIONAL OFFICE

Proj. No.	Drwn.	Date	Checked	Date	Plate
J5E03				Aug 91	30

Project Name: Bethel Wells, Port Orchard, Washington				Sheet 2 of 2
Job No.: J5E03	Logged by: BSS	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 (ppm)	Sample ID	Blow Count	Lithography	Depth in Feet	USCS Symbol	Surface Conditions:
				21		
				22		
				23	sp	Brown SAND, some silt and gravel, moist to wet, medium dense.
	3	17		24		
		24		25		slight gas odor
				26		
				27		
				28		
		24		29		
	4	41		30		
				31	sp	Brown SAND, some silt and gravel, saturated, very dense.
				32		
				33		
	5	27		34		
		50/6"		35		
				36		
				37		
				38		
				39		

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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 or interpretation by others of information presented on this log.

Monitor Well Completion Form

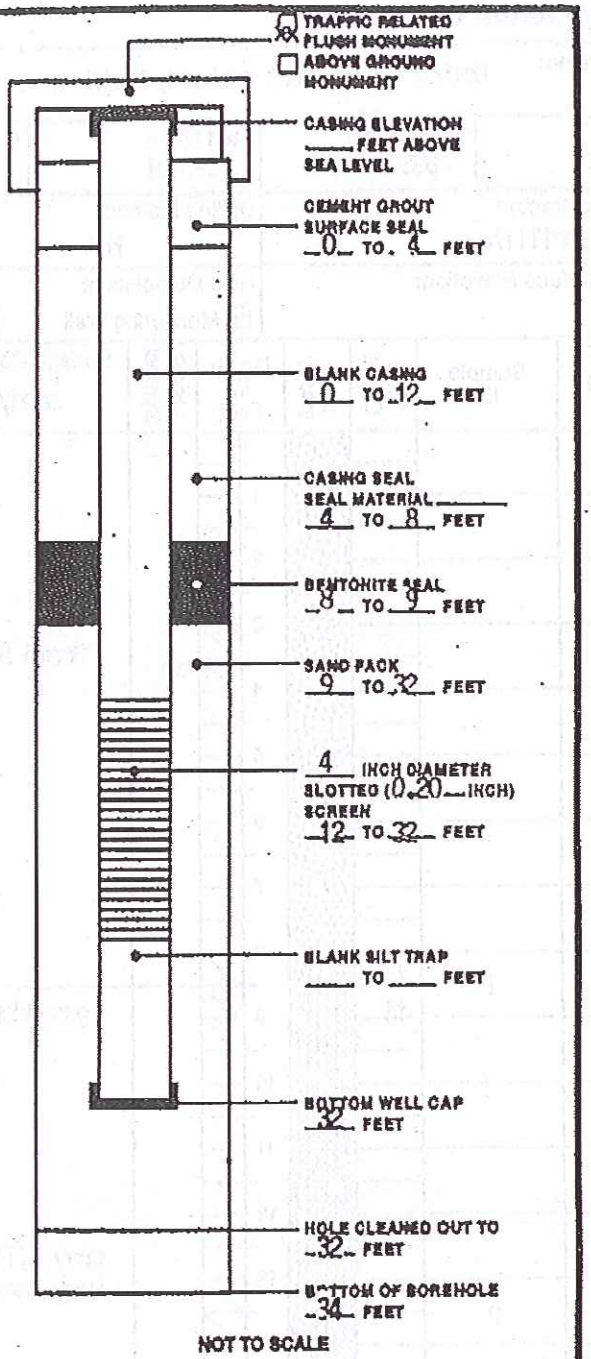
PROJECT NAME:	Bethel Wells, Port Orchard, WA		
PROJECT NUMBER:	J5E03	PROJECT MANAGER:	BSS
LOGGED BY:	BSS	REVIEWED BY:	BSS
WELL I.D.:	MW-103	DATE:	5-6-91
DRILLING COMPANY:	R & R Drilling		
METHOD OF DECONTAMINATION PRIOR TO DRILLING:	steam clean		

DEVELOPMENT

METHOD OF DEVELOPMENT:		
DEVELOPMENT DATE:		
YIELD (GAL)	TIME: FROM	TO
DESCRIPTION OF TURBIDITY AT END OF DEVELOPMENT:	☐ CLEAR ☐ MOD. TURBID	☐ SLIGHTLY CLOUDY ☐ VERY MUDDY
ODOR OF WATER:		
WATER DISCHARGED TO:	☐ GROUND SURFACE ☐ SANITARY SEWERS ☐ DRUMS	☐ TANK TRUCK ☐ STORAGE TANK ☐ 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	☐ PVC ☐ _____
_____ FEET OF _____ INCH SCREEN	_____ INCH SLOT SIZE
☐ SLOTTED PVC	☐ _____
_____ FEET OF _____ INCH STEEL CONDUCTOR CASING	
_____ YARD^3 CEMENT-SAND (REDI-MIX) ORDERED:	
_____ YARD^3 CEMENT-SAND (REDI-MIX) USED:	
CONCRETE PUMPED USED?	☐ YES ☐ NO
NAME:	



NOT TO SCALE

ADDITIONAL INFORMATION

WASHINGTON STATE DEPT. OF
ECOLOGY
NORTHWEST REGIONAL OFFICE

Proj. No. J5E03	Drwn.	Date	Checked	Date Aug 91	Plate 33

ıvironmental Boring Log

oject Name: Bethel Wells, Port orchard, Washington				Sheet 1 of 2
b No.: J5E03	Logged by: BSS	Start Date: 5-6-91	Completion Date: 5-6-91	Boring No: **MW-104**
illing Contractor: R & R Drilling		Drilling Method: HSA		Sampling Method: SPT
ound Surface Elevation: 311±		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: sandy gravel, unpaved empty lot
		7		3		Brown SAND, moist, medium dense.
		12		4	SP	
	1	14		8		
		14		9		gas odor
				13		Gray silty SAND, moist to wet, medium dense to very dense.
	2			14		
				15		gas odor
	3	50/5"		18		contains gravel
				19		gas odor

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NORTHWEST REGIONAL OFFICE

Proj. No. J5E03	Date Aug 91	Plate 34

arface 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	3.5-5.0	85	15:33	SM	DRY	8,9,13
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	14,35,28
6/13/95	18.5-20.0	1605*	16:05	SM, CL	MOIST	14,28,27
6/13/95	23.5-25.0	1880*	16:15	SM	WET	17,34,20
6/13/95	28.5-30.0	1076*	16:40	SM	WET	17,30,24
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	3.5-5.0	16	6:30	SM	DRY	3,4,6
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	8,30,5

06-10-95 11:03AM FROM- T-788 P.11 F-840

FIELD HEAD-SPACE VOA RESULTS - SOIL SAMPLES (CONT.)

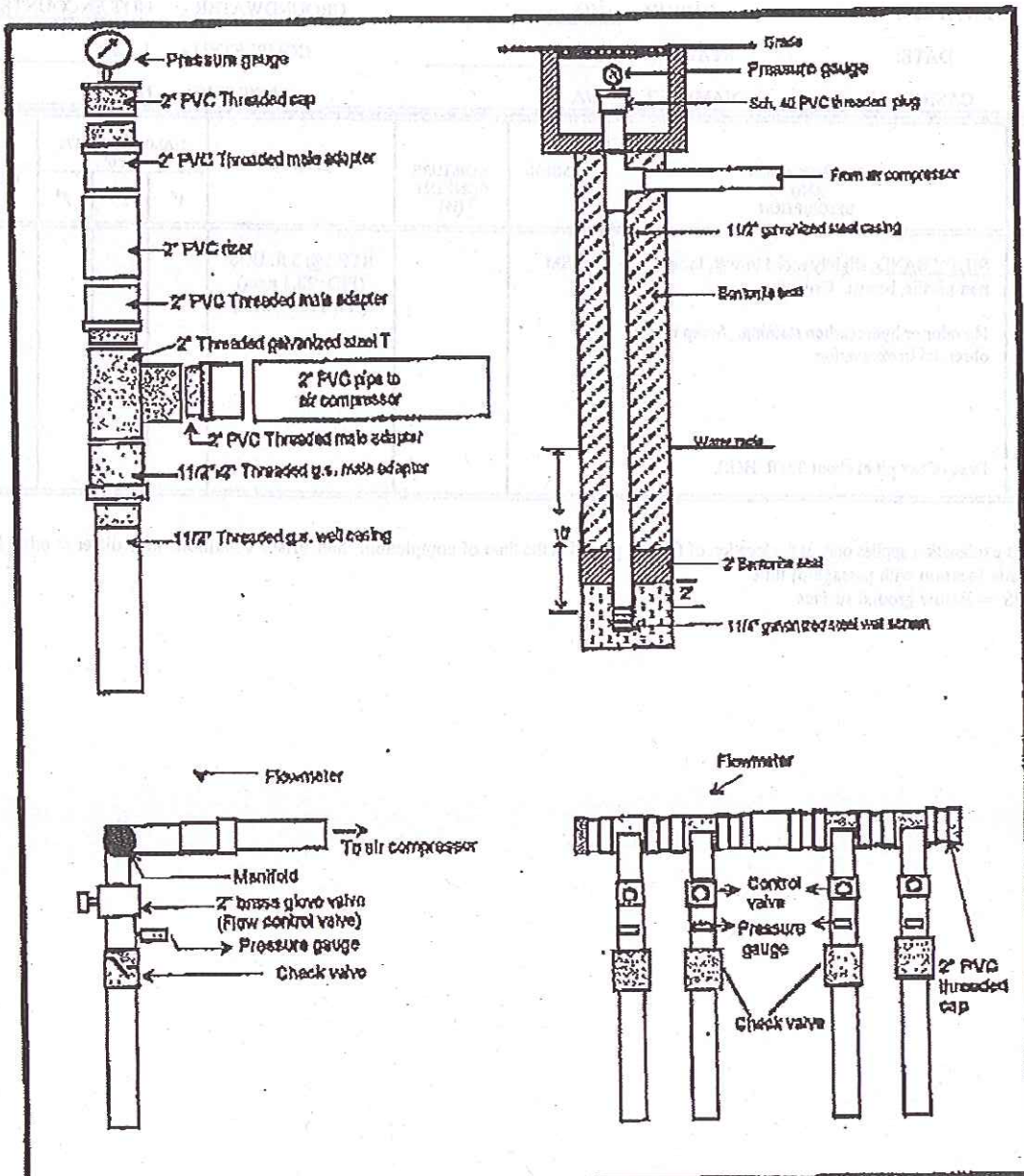
SPARGING WELL SP-3

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	1838*	13:05	SM	MOIST	15,21,27
6/13/95	23.5-25.0	629*	13:15	SM	WET	14,27,33
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*	10:05	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	5,14,13

* Sample submitted to laboratory for analysis using modified EPA 8020 and WTPH-G



BETHEL - FORMER TEXACO PORT ORCHARD, WA			Detailed drawings of Sparging well and pipe connections
Proj. No.	Drwn. 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 3.0	SILTY SAND; slightly moist to wet, loose, non-plastic, brown. Organics. No odor or hydrocarbon staining. Scrap metal observed in excavation. Base of test pit at about 3.0 ft. BGS.	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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 2.0	SILTY SAND; slightly moist to moist, loose, non-plastic, brown. No odor or hydrocarbon staining. Tires and I-CO, canister observed in excavation. Base of test pit at about 2.0 ft. BGS.	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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 2.5	SILTY SAND; slightly moist to moist, loose, non-plastic, brown. No odor or hydrocarbon staining. Scrap metal, tires, and rusted paint cans observed in excavation. Base of test pit at about 2.5 ft. BGS.	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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 2.5	SILTY SAND; slightly moist to moist, loose, non-plastic, brown. No odor or hydrocarbon staining. Tires and wood debris observed in excavation. Base of test pit at about 2.5 ft. BGS.	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.: 198-801 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 3.0	SILTY SAND; slightly moist to moist, loose, non-plastic, brown. 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. Base of test pit at about 3.0 ft. BGS.	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

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

DEPTH IN FEET	CLASSIFICATION AND DESCRIPTION	SYMBOL	MOISTURE CONTENT (%)	SAMPLE	HAMMER BLOWS per 6" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 3.0	SILTY SAND; 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) (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 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 6.0	SAND with SILT and GRAVEL; moist, loose, brown	SP-SM							
6.0 - 12.0	CLAYEY SAND with GRAVEL; dry to saturated, hard, gray to brown.	SC		BH-1-S@9.0 ft. BGS					
	Groundwater encountered at about 12.0 ft. BGS.								
	Base of boring at about 12.0 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 3.0	SILTY SAND with GRAVEL; moist, medium dense, brown.	SM							
	Groundwater encountered at about 3.0 ft. BGS.								
3.0 - 8.0	CLAYEY SAND with GRAVEL; dry to saturated, hard, gray to brownish gray.	SC		BH-2-W@3.0 ft. BGS (EPA 8021B)					
				BH-2-S@6.0 ft. BGS					
	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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 1.0	TOPSOIL.								
1.0 - 2.0	SILTY SAND with GRAVEL; moist to very moist, medium dense, brown.	SM							
2.0 - 10.0	CLAYEY SAND with GRAVEL; moist, hard, gray.	SC							
				BH-3-S@4.0 ft. BGS					
	Groundwater encountered at about 5.0 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 6.0	SAND with SILT; 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	SILTY SAND; 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	CLAYEY SAND; 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.6	TOPSOIL.								
0.6 - 6.5	SILTY SAND; 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) Grab 5.0-6.0 ft. BGS (PID = 7.7 ppm)					
6.5 - 10.0	CLAYEY SAND with GRAVEL; slightly moist, hard, gray. Groundwater encountered at about 6.5 ft. BGS. Base of boring at about 10.0 ft. BGS.	SC							

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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 1.0	TOPSOIL.								
1.0 - 5.5	SILTY SAND; 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	SILTY CLAYEY SAND; moist, medium dense, gray to brownish gray .	SC - SM							
	Base of boring at about 7.0 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 3.5	SILTY SAND; saturated, loose, brown. Groundwater encountered at about 1.5 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)					
	Base of boring at about 3.5 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 1.0	TOPSOIL.								
1.0 - 2.5	SILTY SAND with GRAVEL; saturated, loose, dark brown.	SM		Grab 1.5-2.5 ft. BGS (PID = 24.6ppm)					
	Groundwater encountered at about 2.5 ft. BGS.			BH-8-W@2.5 ft. BGS (EPA 8021B)					
2.5 - 5.0	SILTY CLAYEY SAND; moist, loose to medium dense, brown.	SC - SM							
5.0 - 7.0	SILTY CLAY; slightly moist, firm, gray to brown.	CL - ML							
	Base of boring at about 7.0 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-9 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 - 4.5 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 4.0	SILTY CLAYEY SAND; 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	SILTY SAND; saturated, medium dense, gray brown.	SM							
	Groundwater encountered at about 4.5 ft. BGS.								
5.0 - 7.0	SILTY CLAY; slightly moist to moist, firm to hard, gray brown.	CL - ML							
	Base of boring at about 7.0 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 8.0	SAND with SILT; moist, loose to medium dense, brown to gray.	SW - SM		Grab 3.0-4.0 ft. BGS (PID = 10.1 ppm)					
	Groundwater encountered at about 3.5 ft. BGS.			BH-10-W@3.5 ft. BGS (EPA 8021B)					
				BH-10-S@6.0 ft. BGS					
	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-11 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 - 9.5 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" 1st	2ed	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 1.5	TOPSOIL.								
1.5 - 2.0	SAND; slightly moist, loose, gray brown, coarse grained sand.	SP							
2.0 - 3.0	SILTY SAND; moist, medium dense, gray brown.	SM							
3.0 - 4.5	SAND with SILT and GRAVEL; slightly moist, medium dense, gray brown.	SP - SM							
4.5 - 7.0	SANDY SILT with CLAY; slightly moist to moist, firm, light brownish gray.	ML		BH-11-S@6.0 ft. BGS Grab 6.0-7.0 ft. BGS (PID = 10.8 ppm)					
7.0 - 11.0	SILTY SAND with GRAVEL; moist to saturated, medium dense, brown.	SM							
	Groundwater encountered at about 9.5 ft. BGS.			BH-11-W@9.5 ft. BGS (EPA 8021B)					
	Base of boring at about 11.0 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 1.0	TOPSOIL.								
1.0 - 5.5	SANDY SILT with CLAY; moist to very moist, soft to firm, light brown.	ML		BH-12-S@5.0 ft. BGS					
5.5 - 7.0	SAND with SILT; moist to saturated, medium dense, gray.	SP - SM		Grab 5.0-6.0 ft. BGS (PID = 12.9 ppm)					
7.0 - 10.0	SILTY CLAY; moist, firm, light brown to gray.	CL - ML		BH-12-W@7.0 ft. BGS (EPA 8021B)					
	Groundwater encountered at about 7.5 ft. BGS.								
	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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.25	TOPSOIL.								
0.25 - 5.0	SANDY SILT; moist to very moist, soft to firm, brown to gray brown.	ML		Grab 4.0-5.0 ft. BGS (PID = 15.6 ppm)					
5.0 - 8.0	SAND with SILT; moist to very moist, medium dense, gray.	SP - SM		BH-13-S@5.0 ft. BGS					
8.0 - 10.0	SANDY SILT with CLAY; moist, firm, gray.	ML							
10.0 - 11.0	SANDY SILTY CLAY; dry, hard, gray.	CL - ML							
11.0 - 23.0	SAND with GRAVEL and SILT; dry to saturated, dense, gray.	SP - SM							
	Groundwater encountered at about 21.5 ft. BGS.			BH-13-W@21.5 ft. BGS (EPA 8021B)					
	Base of boring at about 23.0 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.33	TOPSOIL.								
0.33 - 14.5	SILTY SAND; moist to saturated, loose to medium dense, brown to gray brown.	SM							
				Grab 7.0-8.0 ft. BGS (PID = 21.8 ppm)					
	Groundwater encountered at about 10.5 ft. BGS.			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	SILT with CLAY and SAND; slightly moist, hard, gray to oxidized gray brown. No hydrocarbon odor.	ML							
	Base of boring at about 15.0 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-15 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 - 6.0 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	ASPHALT and TOP COARSE.								
0.5 - 4.5	SILTY SAND; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	SAND with GRAVEL; moist to saturated, medium dense, non-plastic, brown.	SW		Grab 5.5 ft. BGS					
	Groundwater encountered at about 6.0 feet BGS.								
9.0 - 10.0	SILTY SAND; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 18.0	SILTY SAND with GRAVEL; dry to slightly moist, dense, gray.	SM		BH-15-15@15.0 ft. BGS (NWTPH-Gx and EPA 8020)					
	Strataprobe refusal at about 18.0 feet 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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	ASPHALT and TOP COARSE.								
0.5 - 4.5	SILTY SAND; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	SAND with GRAVEL; moist to saturated, medium dense, non-plastic, brown. Groundwater encountered at about 6.0 feet BGS.	SW							
9.0 - 10.0	SILTY SAND; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 20.0	SILTY SAND with GRAVEL; dry to slightly moist, dense, gray.	SM							
20.0 - 23.0	SILTY SAND; 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	ASPHALT and TOP COARSE.								
0.5 - 4.5	SILTY SAND; dry, medium dense, non-plastic, brown. No hydrocarbon odor or staining.	SM							
4.5 - 9.0	SAND with GRAVEL; moist to saturated, medium dense, non-plastic, brown. Groundwater encountered at about 6.0 feet BGS.	SW							
9.0 - 10.0	SILTY SAND; slightly moist, medium dense, non-plastic, brown.	SM							
10.0 - 20.0	SILTY SAND with GRAVEL; dry to slightly moist, dense, gray.	SM							
20.0 - 23.0	SILTY SAND; 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: 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 1.5	SILTY SAND; moist, medium dense, non-plastic, reddish-brown.	SM							
1.5 - 3.0	SANDY SILT; moist, soft, non-plastic, brown.	ML							
3.0 - 7.0	SAND with SILT; 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	SANDY SILT; 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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 5.5	SILTY SAND; moist, medium dense, non-plastic, brown.	SM		BH-17-S@2.0-3.0 ft. BGS					
	Groundwater encountered at about 3.0 feet BGS.			BH-17-W@3.0 ft. BGS (EPA 8020)					
5.5 - 8.0	SANDY SILT with CLAY; slightly moist, firm, non-plastic, gray brown.	ML							
	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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.1	ASPHALT.								
0.1 - 0.5	TOP COARSE GRAVEL.								
0.5 - 4.5	SILTY SAND; slightly moist to saturated, medium dense, non-plastic, brown. Iron oxide staining to about 1.5 ft. BGS	SM							
	Groundwater encountered at about 3.5 feet BGS.			BH-18-W@3.5 ft. BGS (EPA 8020)					
4.5 - 6.0	SILT with CLAY; slightly moist, firm, non-plastic, reddish-brown.	ML							
6.0 - 7.0	SILTY SAND with GRAVEL; moist, medium dense, non-plastic, gray brown.	SM							
7.0 - 8.0	SANDY SILT; moist, soft to firm, non-plastic, brownish-gray to gray.	ML							
	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-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" 1st	2nd	3rd	N or CR	PERCENT Gravel / Sand / Silt
0.0 - 0.5	TOPSOIL.								
0.5 - 6.0	SILTY SAND; moist to saturated, medium dense, non-plastic, brown to reddish brown,	SM							
	Groundwater encountered at about 3.0 feet BGS.			BH-19-W@3.0 ft. BGS (EPA 8020)					
6.0 - 7.0	SANDY SILT with CLAY; moist, firm, non-plastic, brown to reddish brown.	ML							
7.0 - 8.0	SILTY SAND with GRAVEL; 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

PROJECT: Fred Meyer - Port Orchard **BORING No.: VP-1** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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 moist, grayish brown, gravelly SAND.						Slip Cap	
			VP1-1				Hydrated Granular Bentonite	
	Loose, moist, grayish brown, silty SAND FILL with some gravel.						Well Casing (3/4-inch i.d., Schedule 80 PVC)	
5			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)	
	Medium dense, moist, light olive-brown, silty, fine-grained SAND with occasional fine gravel.		VP1-3		650			
10	Saturated, gray, silty, fine-grained SAND. Strong gasoline odor.							
	Dense, moist, light olive-brown, silty, fine-grained SAND. Strong gasoline odor.		VP1-4		950			BTEX
15							Screw-on End Cap	
	Very dense, saturated, light olive-brown, silty, fine-grained SAND with occasional rocks to 1.5-inch diameter (till-like).		VP1-5					
						TS		
20	Loose to medium dense, wet, brown, fine- to medium-grained SAND. Gasoline odor. Collected groundwater sample VP1-23W from screened interval at 21.0-23.0 feet.		VP1-6					
	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)
- 8015 / 8240 — Soil Analysis (Test Method Shown)
- WD — Groundwater level at time of drilling
- 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

Drilling Started: 7/28/99 Drilling Completed: 7/28/99 Logged By: J. Houck s:\10282\FredMeyn\VP1.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: VP-2** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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 minor gravel.						Slip Cap	
	Loose, brown, slightly silty to silty, fine- to medium-grained SAND.		VP2-1				Hydrated Granular Bentonite	
	Loose, light gray, slightly silty, fine- to medium-grained SAND with some orange banding. No odor.						Well Casing (3/4-inch i.d., Schedule 80 PVC)	
5			VP2-2		67		10-20 Colorado Silica Sand	
							Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)	
	Saturated, brown, silty, fine- to medium-grained SAND below 10.0 feet.		VP2-3					
10	Gasoline odor at 11.5 feet.				60			
	Dense, moist, gray, silty SAND with occasional 1.0-inch graval (till-like). Gasoline odor.		VP2-4		884			BTEX
15							Screw-on End Cap	
	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.							
	Collected groundwater sample VP2-22W from screened interval at 20.0-22.0 feet.		VP2-6		880			
	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
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling
- Groundwater Analysis (BTEX, TPH-D)
- 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

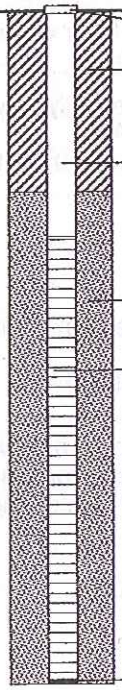
Drilling Started: 7/28/99 Drilling Completed: 7/28/99 Logged By: J. Houck a:\10282\FredMeyr\VP2.DRW

PROJECT: Fred Meyer - Port Orchard | **BORING No.: VP-3** | **PAGE 1 OF 1**

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

Depth (feet)	SOIL DESCRIPTION	Soil Type Log	Sample ID	Sample Type	Volatile Readings (ppm)	Ground Water
0	Asphalt over loose, dark olive-gray, gravelly SAND.					
			VP3-1			
	Olive mottled orange-brown SILT.					
	Saturated at 4.3-6.5 feet. Slight gasoline odor.				61	
5			VP3-2			
	Moist, gray, sandy GRAVEL.					
	Perched groundwater at 8.0 feet.					WD
10			VP3-3		0.0	
	Moist, gray, silty, fine-grained SAND with occasional gravel.					
	Rock - no recovery at 12.0-16.0 feet.					
				NR		
15						
	Saturated, olive, silty, fine-grained SAND with occasional gravel.					TS
			VP3-4		0.0	
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	
	Dense, saturated, silty, fine- to medium-grained SAND.					
25	Dense, moist, brown, silty SAND. Liner became jammed inside rods.		VP3-6			
	Total depth = 24.0 feet.					
	Installed temporary vapor extraction test well which was removed on 7/29/99.					
30						

AS-BUILT DESIGN



- Slip Cap
- Hydrated Granular Bentonite
- Well Casing (3/4-inch i.d., Schedule 80 PVC)
- 10-20 Colorado Silica Sand
- Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)
- Screw-on End Cap

ANALYSES

BTEX

Groundwater Analysis

LEGEND

- 2.0-inch O.D. Strataprobe soil core sample with % recovered
- NR No recovery
- WD Groundwater level at time of drilling
- TS Groundwater level at time of sampling
- Groundwater Analysis (BTEX, TPH-D)
- 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

Drilling Started: 7/28/99 | Drilling Completed: 7/28/99 | Logged By: J. Houck | a:\10282\FredMeyr\VP3.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: VP-4** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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	
	Loose, moist, brown, slightly silty, fine- to medium-grained SAND. Decomposed root (wood) at 2.5 feet.		VP4-1				Hydrated Granular Bentonite	
5			VP4-2				Well Casing (3/4-inch i.d., Schedule 80 PVC)	
	Gray, silty, fine- to medium-grained SAND. Loose, gray, slightly silty SAND.						10-20 Colorado Silica Sand	
10	Dense, silty, gray, fine- to medium-grained SAND with occasional gravel (some angular) to 1.0-inch diameter (till-like)		VP4-3				Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)	
	Denser at 12.0-16.0 feet.		VP4-4					
15							Screw-on End Cap	
	Medium dense, wet to saturated, olive, silty, fine- to medium-grained SAND.		VP4-5					
20	Hard, moist, olive, layered, disturbed SILT.							
	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).		VP4-6					
25	Collected groundwater sample VP4-21W from screened interval at 21.0-23.0 feet.							
	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
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling
- Groundwater Analysis (BTEX, TPH-D)
- 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

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7477 SW Tech Center Drive
Portland, Oregon 97223-8025
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Drilling Started: 7/29/99 Drilling Completed: 7/29/99 Logged By: J. Houck a:\10282\FredMeyr\VP4.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: VP-5** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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	VP-5 was drilled with no sampling to 15.0 feet in order to install a vapor test well.						Slip Cap; Hydrated Granular Bentonite; Well Casing (3/4-inch i.d., Schedule 80 PVC); 10-20 Colorado Silica Sand; Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots); Screw-on End Cap	
5								
10								
15	Total depth = 15.0 feet. Installed temporary vapor extraction test well which was later removed.							
20								
25								
30								

LEGEND

- 2.0-inch O.D. Strataprobe soil core sample with % recovered
- Groundwater Analysis (Test Method Shown)
- 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

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Drilling Started: 7/29/99 Drilling Completed: 7/29/99 Logged By: J. Houck a:\10282\FredMeyr\VP5.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: VP-6** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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, moist, brown, fine- to medium-grained SAND.		VP6-1				Slip Cap; Hydrated Granular Bentonite; Well Casing (3/4-inch i.d., Schedule 80 PVC)	
5	Medium dense, moist, gray, fine- to medium-grained SAND.		VP6-2			WD	10-20 Colorado Silica Sand	
	Dense, moist, silty, fine- to medium-grained SAND with scattered angular gravel (glacial moraine till?).						Well Screen (3/4-inch i.d., Schedule 80 PVC with 0.010-inch slots)	
10			VP6-3					BTEX
	Dense, saturated, silty, fine- to medium-grained SAND with scattered angular gravel (glacial moraine till?).				0.0			
			VP6-4					
15							Screw-on End Cap	
	Collected groundwater sample VP6-18W from screened interval at 18.0-20.0 feet.		VP6-5			TS		
20	Very dense, moist, dark grayish brown, silty SAND grading to sandy SILT (till) with scattered gravel.		VP6-6					
	Total depth = 23.5 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
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling
- Groundwater Analysis (BTEX, TPH-D)
- 8015 / 8240 — Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 7/28/99 Drilling Completed: 7/28/99 Logged By: J. Houck a:\10282\FredMeyr\VP6.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: BH-20** **PAGE 1 OF 2**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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.							
	Damp, brown to brown-gray at 3.0 feet, slightly silty, fine- to medium-grained SAND.		BH20-1				Hydrated Granular Bentonite	
5	Moist, gray, fine- to medium-grained SAND with slight to some silt.		BH20-2					
10	Dense, moist, gray, silty SAND with occasional gravel (till-like).		BH20-3					
	Gravel increases (20%).		BH20-4					
15	Moist, slightly silty fine- to medium-grained SAND.		BH20-5					
20	Stong gasoline odor.		BH20-6			SW TS		
25			BH20-7					
30			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 / 8240 — Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 7/27/99 Drilling Completed: 7/27/99 Logged By: J. Houck a:\10282\FredMeyr\BH20.DRW

PROJECT: Fred Meyer - Port Orchard | BORING No.: BH-20 | PAGE 2 OF 2

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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.						Hydrated Granular Bentonite	
35	Total depth = 32.0 feet. PID was not functioning properly.							
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

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Drilling Started: 7/27/99 | Drilling Completed: 7/27/99 | Logged By: J. Houck | a:\10282\FredMey\BH20PG2.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: BH-20A** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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.						Hydrated Granular Bentonite	
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
- 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

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Drilling Started: 7/27/99 Drilling Completed: 7/27/99 Logged By: J. Houck a:\10282\FredMey\BH20A.DRW

PROJECT: Fred Meyer - Port Orchard | **BORING No.: BH-21** | **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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.						Hydrated Granular Bentonite	
	Damp, brown with some mottling at 3.0-4.0 feet, silty SAND with trace gravel.		BH21-1					
	Siltier at 4.0-5.0 feet.							
5	SAND and GRAVEL at 5.5-5.7 feet.		BH21-2					
	Moist, gray, silty SAND with some gravel.							
10	Grades to denser with more gravel (till).		BH21-3					
	(Glacial Marine Till)		BH21-4					
15						TS		
			BH21-5					
20								
	Collected groundwater sample BH21-25W from screened interval at 23.0-25.0 feet. Saturated, brown, silty SAND.		BH21-6					
25								
			BH21-7					
	Saturated, brown, silty to slightly silty SAND (heave).							
	Total depth = 28.0 feet. No PID reading above 0.0 at this boring.							
30								

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

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Drilling Started: 7/27/99 | Drilling Completed: 7/27/99 | Logged By: J. Houck | a:\10282\FredMey\BH21.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: BH-22** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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 8.0-inch layer of gravel.						Hydrated Granular Bentonite	
	Dense, damp, gray-brown, silty SAND.		BH22-1					
5	Grades to moist to saturated and mottled.		BH22-2					
	Moist, gray, sandy GRAVEL.							
10	SILT.		BH22-3					
	Silty SAND with some gravel.							
	Density increases (till-like).		BH22-4					
15								
	Saturated, gray-brown, silty fine-grained SAND to sandy SILT.		BH22-5			SW		
20								
	Saturated, silty fine- to medium-grained SAND with occasional gravel.		BH22-6					
25	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.							
30								

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

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Drilling Started: 7/27/99 Drilling Completed: 7/27/99 Logged By: J. Houck e:\10282\FredMeyr\BH22.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: BH-23** **PAGE 1 OF 2**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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	Forest duff, grass.							
	Moist, orange-brown, silty, fine-grained SAND.		BH23-1		0.0		Hydrated Granular Bentonite	
	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			
10	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			
15	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.		BH23-6		0.0			
	Hard SILT with fine-grained sand.							
25	Dense to medium dense, moist, olive-brown, silty, fine- to medium-grained SAND.		BH23-7		0.0			
			BH23-8		0.0			
30								

LEGEND

- 2.0-Inch O.D. Strataprobe soil core sample with % recovered
- Groundwater Analysis (BTEX, TPH-D)
- 8016 / 8240 — Soil Analysis (Test Method Shown)
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 7/29/99 Drilling Completed: 7/29/99 Logged By: J. Houck a:\10282\FredMeyr\BH23.DRW

PROJECT: Fred Meyer - Port Orchard | **BORING No.: BH-23** | **PAGE 2 OF 2**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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	Dense to medium dense, moist, olive-brown, silty, fine- to medium- grained SAND.					TS	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			BTEX
	Total depth = 36.0 feet.							
40								
45								
50								
55								
60								

LEGEND

- 2.0-Inch O.D. Strataprobe soil core sample with % recovered
- Groundwater Analysis (BTEX, TPH-D)
- 8015 / 8240 — Soil Analysis (Test Method Shown)
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard
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Drilling Started: 7/29/99 | Drilling Completed: 7/29/99 | Logged By: J. Houck | a:\10282\FredMeyr\BH23PG2.DRW

PROJECT: Fred Meyer - Port Orchard **BORING No.: BH-24** **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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	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					
	Collected groundwater sample BH24-16W from screened interval at 14.0-16.0 feet.		BH24-4			TS		BTEX
15	Gray, slightly silty, medium-grained SAND.		BH24-5					
	Total depth = 18.0 feet.							
20								
25								
30								

LEGEND

- 2.0-inch O.D. Strataprobe soil core sample with % recovered
- Groundwater Analysis (BTEX, TPH-HCID)
- 8015 / 8240 — Soil Analysis (Test Method Shown)
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 7/29/99 Drilling Completed: 7/29/99 Logged By: J. Houck a:\10282\FredMey\BH24.DRW

PROJECT: Fred Meyer - Port Orchard | **BORING No.: BH-25** | **PAGE 1 OF 1**

Elevation Reference: NA
Relative Ground Surface Elevation: NA
Well Completed: NA
Relative Casing Elevation: NA
Boring Method: Strataprobe
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 moist, dark brown, silty SAND with scattered gravel.						Hydrated Granular Bentonite	
	Moist, olive to olive-gray, silty, fine-grained SAND. No gravel.		BH25-1					
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					BTEX
	Collected groundwater sample BH25-22W from screened interval at 20.0-22.0 feet.							
20	SAND.		BH25-6					
	Total depth = 22.0 feet.							
25								
30								

LEGEND

- 2.0-inch O.D. Strataprobe soil core sample with % recovered
- WD — Groundwater level at time of drilling
- TS — Groundwater level at time of sampling
- Groundwater Analysis (BTEX, TPH-HCID)
- 8015 / 8240 — Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

Fred Meyer - Port Orchard
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Drilling Started: 7/29/99 | Drilling Completed: 7/29/99 | Logged By: J. Houck | a:\10282\FredMeyr\BH25.DRW

PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-105 | PAGE 1 OF 2

Elevation Reference: | Well Completed: 11/10/99 | 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	Medium dense, moist, brownish gray, fine-grained SAND.	S-SP1		27	0.0		Casing (2-inch ID, Schedule 40 PVC)	
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		10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
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		WD		
30								

PROJECT NUMBER: 9-61M-10282-0

LEGEND

- 2-inch OD split-spoon sample with % recovered
- NR No recovery
- WD Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 Soil Analysis (Test Method Shown)

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Drilling Started: 11/10/99 | Drilling Completed: 11/10/99 | Logged By: GAN

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PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-105 | PAGE 2 OF 2

Elevation Reference:
Relative Ground Surface Elevation:
Well Completed: 11/10/99
Relative Casing Elevation:
Boring Method: Hollow Stem Auger
Borehole Diameter: 10.25"

Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
30			NR	100/6			10-20 Colorado Silica Sand	
	Total depth = 31.5 feet.						Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
35							Threaded End Cap	
40								
45								
50								
55								
60								

LEGEND

- 2-inch OD split-spoon sample with % recovered
- NR No recovery
- WD Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 11/10/99 | Drilling Completed: 11/10/99 | Logged By: GAN

PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-106 | PAGE 1 OF 2

Elevation Reference: | Well Completed: 11/10/99 | 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	Medium dense, moist, brown and gray, fine- to coarse-grained SAND.	S-SP1		34	0.0		Casing (2-inch ID, Schedule 40 PVC)	
10	Dense, moist, brownish gray, fine- to coarse-grained SAND with 2.0-inch minus subangular gravel.	S-SP2		46	0.0		10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
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								

PROJECT NUMBER: 9-61M-10282-0

LEGEND

- 2-inch OD split-spoon sample with % recovered
- WD Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 Soil Analysis (Test Method Shown)

Fred Meyer - Port Orchard
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Drilling Started: 11/10/99 | Drilling Completed: 11/10/99 | Logged By: GAN

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PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-106 | PAGE 2 OF 2

Elevation Reference:
Relative Ground Surface Elevation:
Well Completed: 11/10/99
Relative Casing Elevation:
Boring Method: Hollow Stem Auger
Borehole Diameter: 10.25"

Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
30		S-SP6		44	0.0		10-20 Colorado Silica Sand; Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots); Threaded End Cap	
	Total depth = 32.0 feet.							
35								
40								
45								
50								
55								
60								

LEGEND

- 2-inch OD split-spoon sample with % recovered
- Groundwater level at time of drilling (WD)
- 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

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Phone (503) 639-3400 FAX (503) 620-7892

c:\10282\FredMey\MW106PG2.DRW

Drilling Started: 11/10/99 | Drilling Completed: 11/10/99 | Logged By: GAN

PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-107 | PAGE 1 OF 2

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	Medium dense, moist, brownish gray, fine- to coarse-grained SAND.	S-SP1		14	0.0		Casing (2-inch ID, Schedule 40 PVC)	
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		10-20 Colorado Silica Sand Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
15	Dense, moist, brown, silty fine-grained SAND with trace 1.0-inch minus subrounded gravel.	S-SP3		31	0.0			
	Grading to fine-grained SAND.							
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
- WD Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 11/9/99 | Drilling Completed: 11/9/99 | Logged By: GAN

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PROJECT: Fred Meyer - Port Orchard START CARD/TAG NO.: BORING No.: MW-107 PAGE 2 OF 2

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

Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
30	Dense, moist, brown, fine-grained SAND with some silt.	S-SP6		43	0.0		10-20 Colorado Silica Sand; Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots); Threaded End Cap	
	Total depth = 31.5 feet.							
35								
40								
45								
50								
55								
60								

LEGEND

- 2-inch OD split-spoon sample with % recovered
- WD Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 11/9/99 Drilling Completed: 11/9/99 Logged By: GAN

PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-108 | PAGE 1 OF 2

Elevation Reference:
Relative Ground Surface Elevation:
Well Completed: 11/9/99
Relative Casing Elevation:
Boring Method: Hollow Stem Auger
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	
15	Very dense, moist, gray, fine- to medium-grained SAND with trace silt.	S-SP3		70	0.0		Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots)	
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
- WD — Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 — Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 11/9/99 | Drilling Completed: 11/9/99 | Logged By: GAN

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PROJECT: Fred Meyer - Port Orchard | START CARD/TAG NO.: | BORING No.: MW-108 | PAGE 2 OF 2

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

Depth (feet)	SOIL DESCRIPTION	Sample Number	Sample Type	Blow Counts	Volatile Readings (ppm)	Ground Water	AS-BUILT DESIGN	ANALYSES
30	Medium dense, wet, brown, fine- to medium-grained SAND.	S-SP8		32	0.0		10-20 Colorado Silica Sand; Well Screen (2-inch ID, Schedule 40 PVC with 0.020-inch slots); Threaded End Cap	
	Total depth = 31.5 feet.							
35								
40								
45								
50								
55								
60								

LEGEND

- 2-inch OD split-spoon sample with % recovered
- WD — Groundwater level at time of drilling
- Groundwater Analysis (Test Method Shown)
- 8015 / 8240 — Soil Analysis (Test Method Shown)

PROJECT NUMBER: 9-61M-10282-0

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Drilling Started: 11/9/99 | Drilling Completed: 11/9/99 | Logged By: GAN

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DEPTH (ft bgs)	USCS SYMBOL	SOIL DESCRIPTION	VOLATILE READING (ppm)	TESTING AND LABORATORY DATA
0	SM	Asphalt and GRAVEL at surface.		
		Red, fine to coarse SAND with gravel; dry.		
	SP	Gray SAND with gravel; dry.	0.0	
5	SM	Gray, fine to medium to coarse SAND.		
	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.		
10		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.		
20		Brown, fine to medium SAND with silt, trace gravel; moist.	0.0	B1-20-22'
		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
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: 08/13/2008 - 08/13/2008

REMARKS:

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

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LOG OF BORING
B1

DEPTH (ft bgs)	USCS SYMBOL	SOIL DESCRIPTION	VOLATILE READING (ppm)	TESTING AND LABORATORY DATA
0	GP	Asphalt and GRAVEL (6-inch layer).		
	SP	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	Light brown SAND with silt.		
	GM	GRAVEL with fine to medium sand.	0.0	
	SM	Gray-brown, fine to medium SAND with silt.		
	SM	Light brown, fine to medium SAND with silt and gravel; moist.	0.0	
10		White, angular rock; dry.		
	SM	Brown, fine to medium SAND with silt, trace gravel; moist.	0.0	
	SM	Light brown to gray, fine to medium SAND, trace gravel.		
15			0.0	
	SM	Light brown, fine to medium SAND with silt; moist.		
			0.0	
20	SM	Brown, fine to medium SAND with gravel; moist.		
			0.0	B2-22-24'
25		End of boring at 24 ft bgs. No groundwater encountered. Backfilled boring with bentonite chips which were hydrated after placement.		
30				
35				
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: 08/13/2008 - 08/13/2008

REMARKS:

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LOG OF BORING
B2

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									△ 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.						

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: 08/13/2008 - 08/13/2008

REMARKS:
Tubing placed at approximately 33 ft bgs.

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LOG OF BORING
B3

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									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.						

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 29 ft bgs.

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LOG OF BORING
B4

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									

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 29 ft bgs.

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LOG OF BORING
B5

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

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 25.5 ft bgs.

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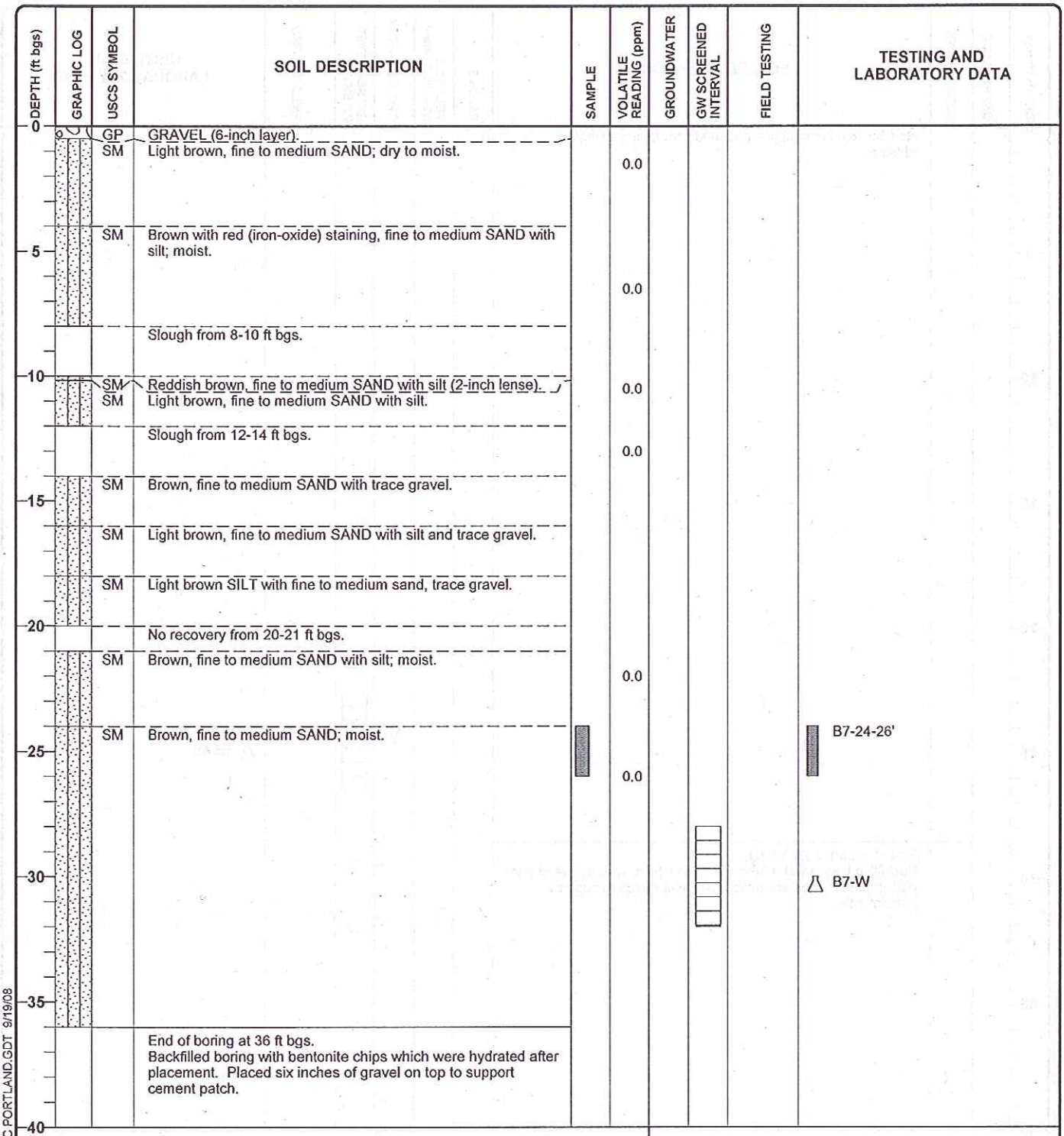
LOG OF BORING
B6



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:

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LOG OF BORING B7

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									

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:

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

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LOG OF BORING B8

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.						
35						▽			
36			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.						
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:

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

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LOG OF BORING
B9

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						▽			△ B10-W
30			End of boring at 31 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
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

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LOG OF BORING
B10

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						▽			B11-W
30									
			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.						
35									
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

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LOG OF BORING
B11

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									B12-W
30									
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: 08/15/2008 - 08/15/2008

REMARKS:
Tubing placed at approximately 24 ft bgs.

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

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LOG OF BORING
B12

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

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: 08/15/2008 - 08/15/2008

REMARKS:
Did not drill due to location of underground utilities.

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

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LOG OF BORING
B13

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						▽			△ B14-W
30									
			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed grass patch on top.						
35									
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: 08/15/2008 - 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

amec

LOG OF BORING B14

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
			End of boring at 32 ft bgs. Backfilled boring with bentonite chips which were hydrated after placement. Placed cavity cover on top.						
35									
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: 08/15/2008 - 08/15/2008

REMARKS:
Tubing placed at approximately 28 ft bgs.

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

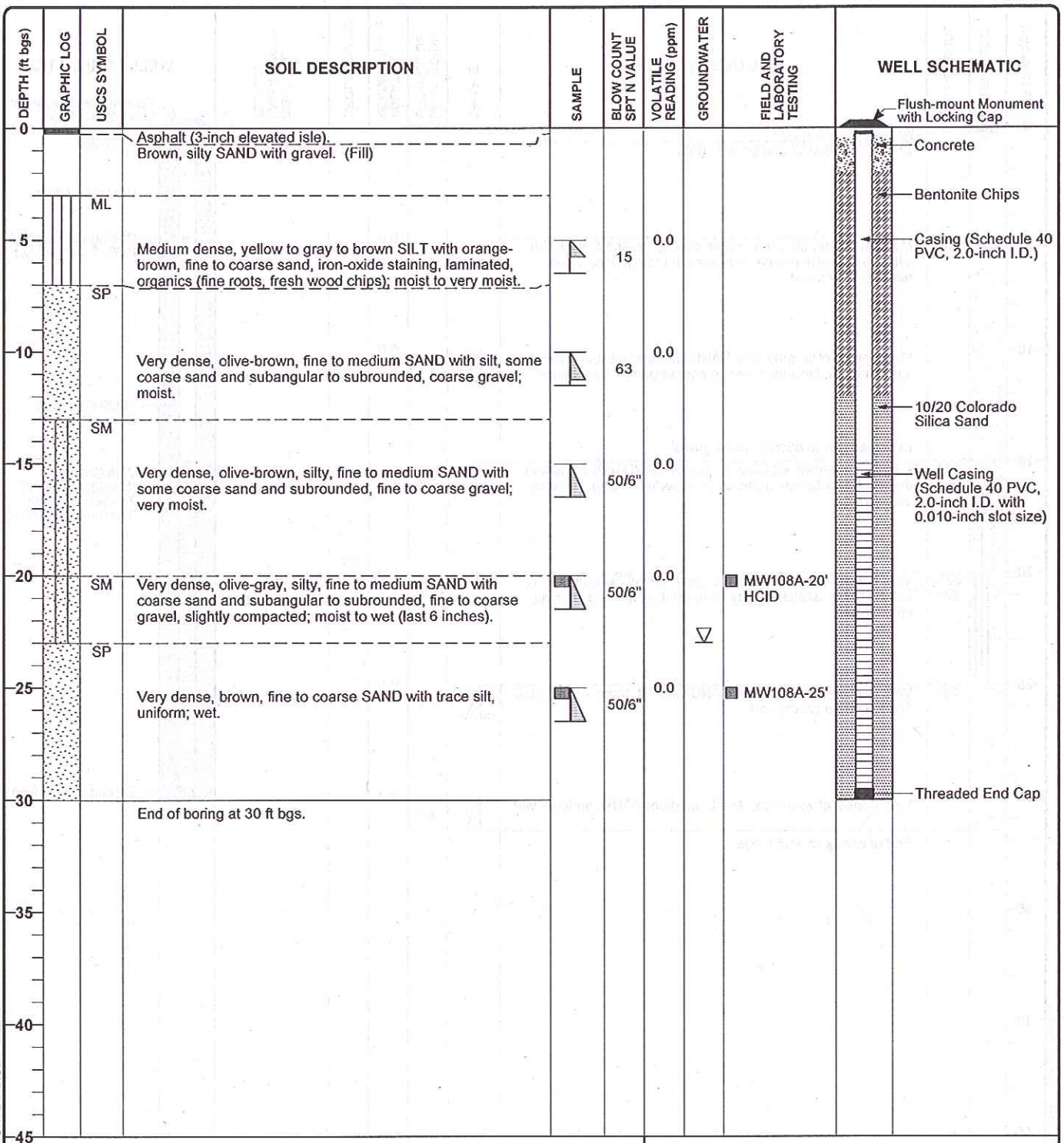
Fred Meyer Port Orchard

9-61M-102820

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

amec

LOG OF BORING
B15



BORING METHOD: Hollow Stem Auger
BOREHOLE DIAMETER: 8.0 (in)
DRILL RIG: Hollow Stem Auger
CONTRACTOR: Cascade Drilling/HS
LOGGED BY: A. Speransky

ELEVATION REFERENCE: NA
GROUND SURFACE ELEVATION: NA
CASING ELEVATION: NA
START CARD/TAG ID: APE951
DRILLING DATES: 10/01/2008 - 10/01/2008

REMARKS:

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

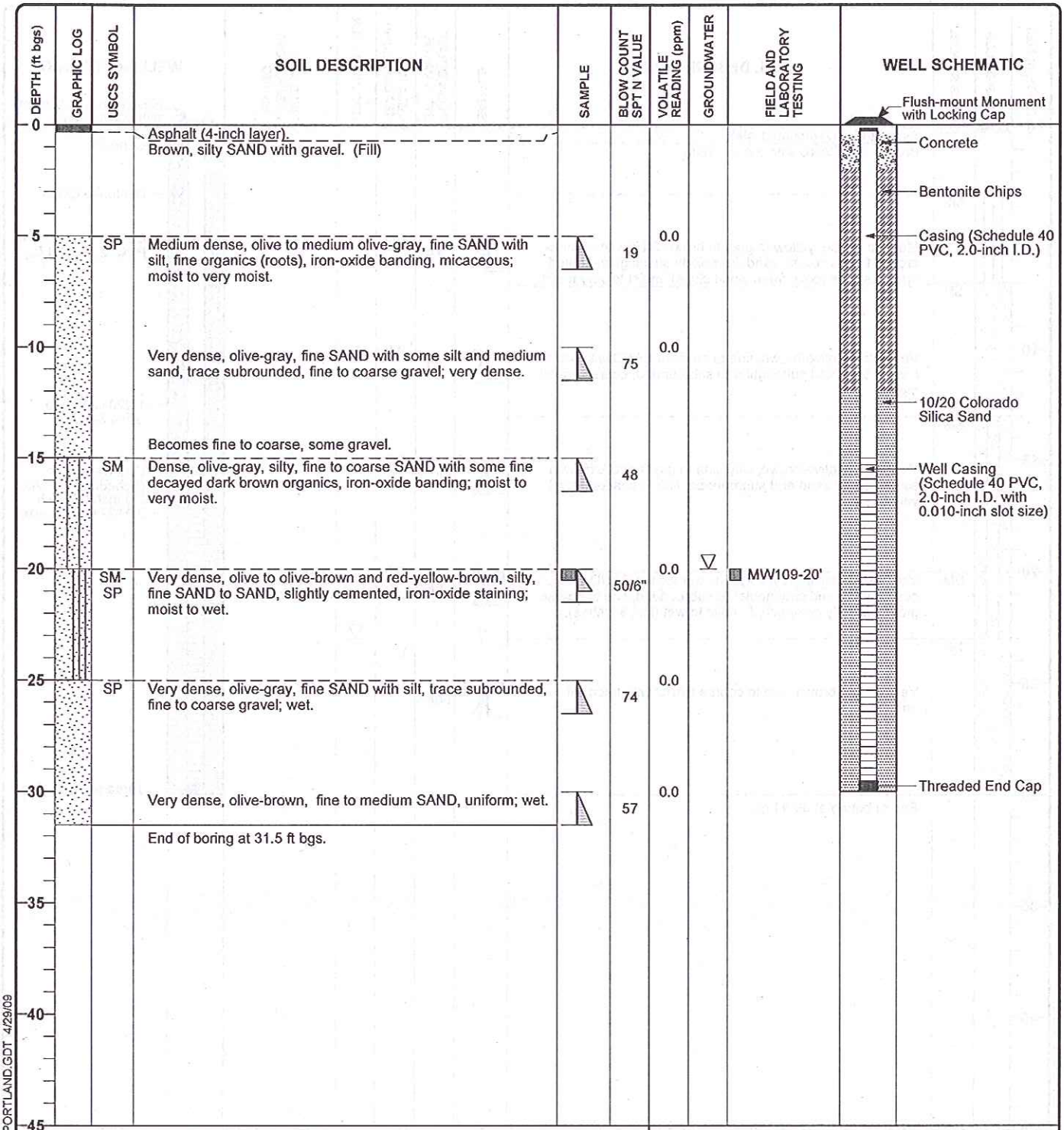
Fred Meyer Port Orchard

9-61M-102820

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

amec

LOG OF BORING MW-108A



BORING METHOD: Hollow Stem Auger
BOREHOLE DIAMETER: 8.0 (in)
DRILL RIG: Hollow Stem Auger
CONTRACTOR: Cascade Drilling/HS
LOGGED BY: A. Speransky

ELEVATION REFERENCE: NA
GROUND SURFACE ELEVATION: NA
CASING ELEVATION: NA
START CARD/TAG ID: APE950
DRILLING DATES: 10/02/2008 - 10/02/2008

REMARKS:

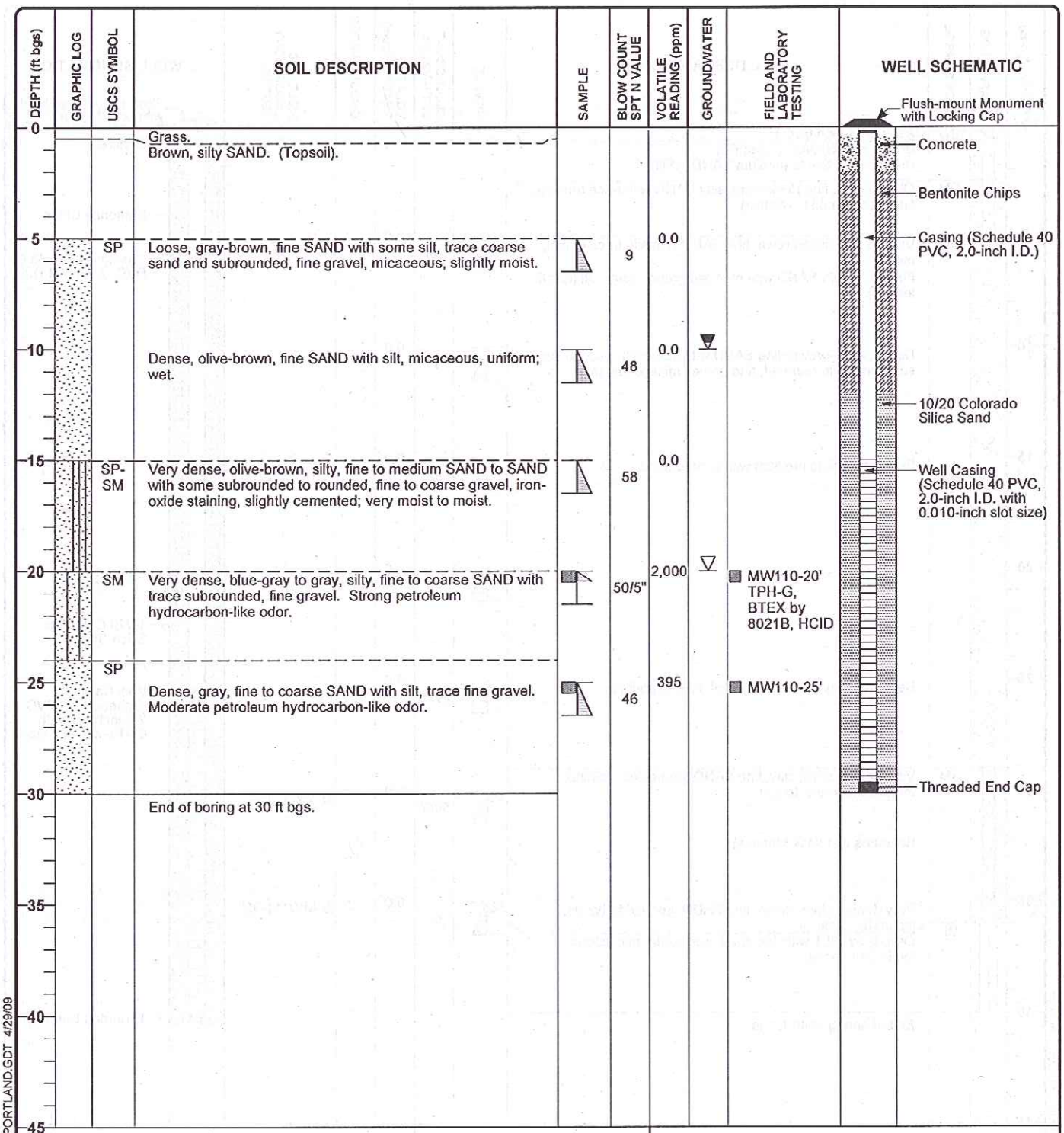
ENVR+WELL BORING 9-61M-102820.GPJ AMEC.PORTLAND.GDT 4/29/09

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



BORING METHOD: Hollow Stem Auger
BOREHOLE DIAMETER: 8.0 (in)
DRILL RIG: Hollow Stem Auger
CONTRACTOR: Cascade Drilling/HS
LOGGED BY: A. Speransky

ELEVATION REFERENCE: NA
GROUND SURFACE ELEVATION: NA
CASING ELEVATION: NA
START CARD/TAG ID: APE949
DRILLING DATES: 10/01/2008 - 10/01/2008

REMARKS:

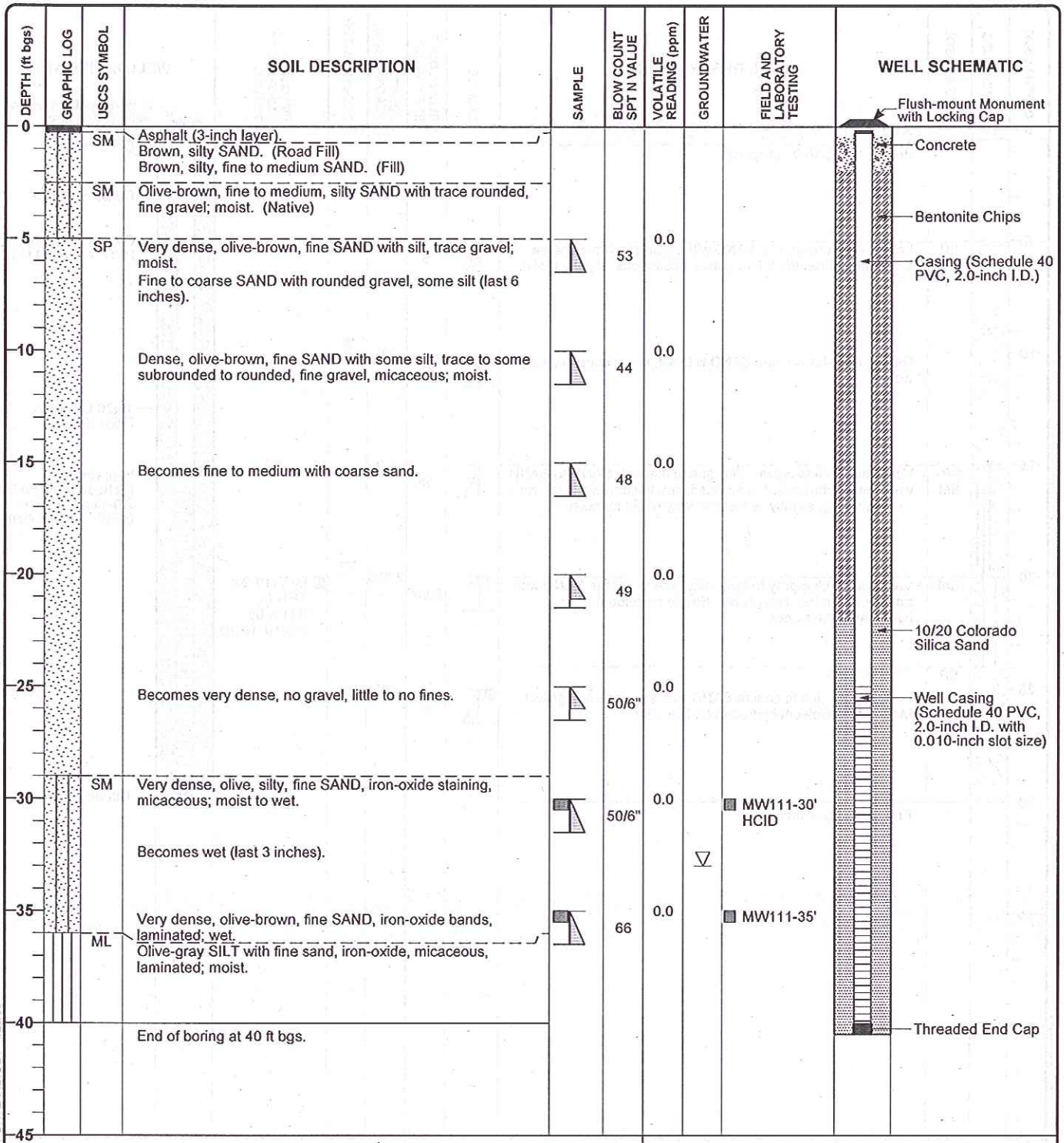
ENVR+WELL BORING 9-61M-102820.GPJ AMEC PORTLAND.GDT 4/29/09

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



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

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 Hydro-carbon
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 associa 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).

SAMPLE NO.	SAMPLING DATE	APPROXIMATE SAMPLE DEPTH (FT)	TOTAL PETROLEUM HYDROCARBONS GASOLINE RANGE (MTBE-C) (mg/kg)	TOTAL LEAD (EPA 6010) (mg/L)	BENZENE (ug/kg)	TOLUENE (ug/kg)	ETHYL-BENZENE (ug/kg)	TOTAL XYLENE (ug/kg)
SP-1-20	6/13/95	20	7,800		ND	2.5	11	56
SP-1-25	6/13/95	25	5,300		ND	140	72	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	1.5	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	0.16	0.97
SP-4-20	6/13/95	20	3,000		ND	25	10	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
[illegible]			10	5.0	0.5	0.5	0.5	0.5

NOTES:

NA - Samples not analyzed

All results reported in parts per million (mg/kg)

"<" identifies that the results are below the indicated reporting limits

AGRA
ENGINEERING GLOBAL SOLUTIONS

AGRA Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon
USA 97223-8025
Tel (503) 639-3400
Fax (503) 620-7892

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

Sample Name:	(a) BH20-6	BH21-5	BH22-5	VP3-2	VP6-3	(b) VP1-4	Method Reporting Limit
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
Sample Date:	07/27/99	07/27/99	07/27/99	07/27/99	07/28/99	07/28/99	
Extraction Date:	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	08/10/99	
Analysis Date:	08/11/99	08/12/99	08/11/99	08/12/99	08/12/99	08/12/99	
Surrogate Recovery: (a,a,a-Trifluorotoluene):							**Control Limits**
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)						57%-143%
BTEX Analysis(PID):	(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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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:	(a) VP2-4	BH23-9	BH24-4	BH25-5	Lab Blank	Method Reporting Limit
Lab Code:	0753-43	0753-56	0753-61	0753-67	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
Sample Date:	07/28/1999	07/29/1999	07/29/1999	07/29/1999	08/10/1999	
Extraction Date:	08/10/1999	08/10/1999	08/10/1999	08/10/1999	08/10/1999	
Analysis Date:	08/12/1999	08/12/1999	08/12/1999	08/12/1999	08/11/1999	
Surrogate Recovery: (a,a,a-Trifluorotoluene):						**Control Limits**
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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	Blank Spike	Percent Recovery	Blank Spike Duplicate	Percent Recovery	Relative Percent	Control
Lab Code:	0753-MB	(mg/kg)	(BS)	(BS)	(BSD)	(BSD)	Difference	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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
Lab Code:	0777-2	(mg/kg)	Difference
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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:**	BH22-5 0753-21	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	<0.05	1.0	0.75	75	0.73	73	59%-124%	3
Toluene	<0.05	1.0	0.84	84	0.83	83	62%-120%	1
Ethylbenzene	<0.05	1.0	0.82	82	0.81	81	54%-125%	1
Total Xylenes	<0.15	3.0	2.6	87	2.6	87	56%-130%	<1
Sample Date:	7/27/99	~	7/27/99	~	7/27/99	~	~	
Extraction Date:	8/10/99	~	8/10/99	~	8/10/99	~	~	
Analysis Date:	8/11/99	~	8/11/99	~	8/11/99	~	~	
Surrogate Recovery:							**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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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 122nd 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.

Laboratory ID	AMEC
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.

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)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (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)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (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

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.

Laboratory ID	AMEC
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

Sample ID Laboratory ID	Gasoline	Diesel	Heavy Oil	Surrogate (% Recovery) (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)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (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

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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 probablility.

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.

Anastasia → will be on vacation 6/11 10/27/08 → don't send me anything

SAMPLE CHAIN OF CUSTODY

HE 10/2/08

810034

Page # 1 of 1

Send Report To Harding or Kurt / Leah Vegoren

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 9-61 M-10282

PO #

REMARKS NW HCID: if diesel is detected → NWTPH-Dx & PAHs analyses

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	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	HCID					Notes
MW ~~107A~~ 111 - 30	01A-E	10/1/08	1000	soil	5							X					if PHC detected, analyse for specific chemical
MW ~~107A~~ 115 - 35	02A-E		1005													hold	
MW ~~106A~~ 110 - 10	03A-E		1010													hold	
~~MW-110-20~~ MW ~~106A~~ - 20	04A-E		1220				X	X				X					if D - detected, & Dx & PAHs
MW ~~106A~~ 110 - 25	05A-E		1225													hold	
MW 108A - 20	06A-E		1410									X					if detected → follow up
MW 108A - 25	07A-E		1415													hold	
MW ~~106A~~ 109 - 20	08A-E	10/2/08	830									X					if detected → follow up
TRIP BLANK	09A-B	1	1	H_2O	2												

Friedman & Bruya, Inc.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
3012 16th Avenue West	Relinquished by: [signature]	A. Spencer-Hy	AMEC	10/2/08	1400
Seattle, WA 98119-2029	Received by: [signature]	Fred Bruya	FB	10/2/08	14:00
Ph. (206) 285-8282	Relinquished by:				
Fax (206) 283-5044	Received by:				

FORMS\COC\COC.DOC

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					200	ND	
Total Xylene					170	ND	
6/27/90							
Benzene	ND		ND	31	166	ND	
Total Xylene	ND		ND	13.4	120	ND	
8/1/90							
Benzene		ND	ND	ND	21	ND	
Total Xylene		ND	ND	ND	54	ND	
8/31/90							
Benzene				ND	130		
Total Xylene				ND	120		
10/11/90							
Benzene							ND
Total Xylene							ND
10/23/90							
Benzene					320		
Total Xylene					270		
12/17/90							
Benzene	ND	ND	ND	9.6	21	ND	
Total Xylene	ND	ND	ND	3.2	41	ND	
3/5/91							
Benzene	ND	ND	ND	38	15	ND	
Total Xylene	ND	ND	ND	16	25	ND	
TVPH				93	130		

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	X
MW-104 (well head Elevation= 311	5/22/91			<1000	<1	<20	<1	<1
	3/25/93	24.04	287.68	<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	880	3200	11	9800
	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	830	360	7800
MW-1S (well head Elevation= 312.55	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-1D (well head Elevation= 313	3/5/91			17000	2200	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
MW-2S (well head Elevation= 304.53	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				
TRFP (well head Elevation= 313.42	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	58	<5	<5	47
	2/18/98			120	2.1	1	1	15

DATE	TIME HR:MIN	PRESSURE IN PSI SP-1	SP-2	SP-3	SP-4	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
1/15/97	13:00	x	x	x	x	644	35	264	340	35	[illegible]	[illegible]	[illegible]	429.9	[illegible]
2/5/97	13:00	x	x	x	x	645	35	480	133	35	[illegible]	[illegible]	[illegible]	449.9	[illegible]
2/28/97	13:00	x	x	x	x	640	35	288	57	35	[illegible]	[illegible]	[illegible]	455.9	[illegible]
3/13/97	13:00	12	12	12	12	640	35	456	58	35	[illegible]	[illegible]	[illegible]	462.9	[illegible]
4/2/97	13:00	x	x	x	x	628	35	335	15	35	[illegible]	[illegible]	[illegible]	476.9	[illegible]
4/15/97	13:00	x	x	x	x	635	30	288	10	35	[illegible]	[illegible]	[illegible]	488.9	[illegible]
5/2/97	12:00	x	x	x	x	658	30	2	40	35	[illegible]	[illegible]	[illegible]	489.0	[illegible]
5/29/97	12:00	x	x	x	x	628	28	648	10	30	[illegible]	[illegible]	[illegible]	516.0	[illegible]
6/4/97	12:00	x	x	x	x	624	26	144	10	30	[illegible]	[illegible]	[illegible]	522.0	[illegible]
6/10/97	3:00	x	x	x	x	615	25	2	64.5	30	[illegible]	[illegible]	[illegible]	522.0	[illegible]
6/16/97	3:00	x	x	x	x	620	28	120	11	45	[illegible]	[illegible]	[illegible]	527.0	[illegible]
7/9/97	3:00	x	x	x	x	576	25	1	55	45	[illegible]	[illegible]	[illegible]	527.1	[illegible]
7/18/97	11:00	x	x	x	x	683	25	150	310	45	[illegible]	[illegible]	[illegible]	533.8	[illegible]
8/11/97	11:00	x	x	x	x	684	25	168	10	45	[illegible]	[illegible]	[illegible]	540.8	[illegible]
9/8/97	10:00	x	x	x	x	652	25	168	50	45	[illegible]	[illegible]	[illegible]	547.8	[illegible]
10/6/97	9:00	x	x	x	x	625	25	167	49	45	[illegible]	[illegible]	[illegible]	554.7	[illegible]
11/3/97	10:00	x	x	x	x	635	25	168	20	45	[illegible]	[illegible]	[illegible]	561.7	[illegible]
12/8/97	12:00	x	x	x	x	630	25	170	10	45	[illegible]	[illegible]	[illegible]	568.8	[illegible]
1/12/98	9:30	x	x	x	x	624	25	168	8	45	[illegible]	[illegible]	[illegible]	575.7	[illegible]
2/17/98	10:00	x	x	x	x	643	25	192	5	45	[illegible]	[illegible]	[illegible]	583.7	[illegible]
3/16/98	12:00	x	x	x	x	635	25	170	5	45	[illegible]	[illegible]	[illegible]	590.8	[illegible]
4/20/98	10:00	x	x	x	x	630	25	169	5	45	[illegible]	[illegible]	[illegible]	597.8	[illegible]

BETHEL - FORMER TEXACO

REMEDIAL SYSTEM PERFORMANCE DATA

DATE	TIME HR:MIN	PRESSURE IN PSI				TEMP DEG.F	VACUUM IN. H2O	HRS AFT. LST READING	PID PPMv	FLOW SCFM	AVE PPMv	LBS/DAY REMVD	LBS REMVD	TOT. DAYS RUN	LBS TO DATE REMVD
		SP-1	SP-2	SP-3	SP-4										
7/27/95	13:30	x	x	x	x	614	25	26	997	51	1003.5	35.91	37.23	1.1	37.23
7/31/95	12:30	x	x	x	x	734	25	96	1736	51	1388.5	104.5	537.90	5.1	75.09
8/7/95	16:30	x	x	x	x	689	28	172	1947	50	1941.5	139.00	1390.43	12.3	213.65
8/14/95	10:30	x	x	x	x	659	28.5	162	1810	48	1575.5	108.79	1329.21	19.0	339.87
8/22/95	9:30	x	x	x	x	684	28.5	192	1919	47	1884.5	109.93	1145.58	27.0	453.44
9/28/95	9:30	x	x	x	x	679	25	144	1523	48.5	1731	17.31	103.85	33.0	561.29
9/11/95	10:30	11	10	12	12	701	28.5	337	1822	49	1652.5	16.69	239.52	47.0	800.80
9/12/95	13:30	10	9	10	10	701	26	27	1822	45	1822	12.40	18.62	48.2	845.36
9/20/95	13:00	8	8	9	9	724	25	24	3000	45	3000	7.99	7.99	49.2	873.53
9/22/95	14:00	7	6	8	8	701	25	25	2925	45	2952.5	27.64	28.90	50.2	902.35
9/25/95	10:00	6	5	7	8	723	25	68	2789	45	2857	25.65	76.51	53.0	972.08
9/27/95	10:00	6	5	7	8	723	25	48	2772	45	2780.5	25.95	51.90	55.0	1029.37
10/2/95	10:00	8	6	9	9	687	25	120	2760	45	2766	25.81	129.05	60.0	1158.52
10/4/95	11:15	6	6	9	9	745	28	49	2560	45	2663	20.73	40.55	62.0	1208.97
10/9/95	10:00	10	9	9	10	739	28	120	2485	45	2621.5	23.39	112.49	67.0	1325.53
10/20/95	11:30	9	7	10	10	680	30	264	2448	40	2467	10.10	225.09	76.0	1550.61
10/25/95	14:00	9	7	10	10	658	35	125	2215	35	2331.5	16.92	89.152	83.3	1639.80
10/31/95	11:00	9	7	10	10	658	37	139	2209	35	2212	15.06	92.89	89.0	1732.69
11/3/95	14:00	9	7	10	10	685	35	72	1550	30	1879.5	11.69	35.08	92.0	1767.77
11/18/95	10:00	x	x	x	x	628	35	312	1520	30	1535	2.65	124.14	105.0	1891.91
11/19/95	15:00	x	x	x	x	658	35	5	2245	30	2245	13.97	13.97	105.3	1905.88
11/21/95	10:00	x	x	x	x	712	35	43	1640	30	1942.5	12.08	21.69	107.0	1915.81
11/30/95	16:00	x	x	x	x	690	35	222	1583	30	1611	10.02	92.73	116.3	2008.54

DATE	TIME HR:MIN	PRESSURE IN PSI SP-1	SP-2	SP-3	SP-4	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
12/13/95	12:00	x	x	x	x	623	37	312	898	28	229.5	2.70	83.55	129.3	3156.10
1/3/96	14:00	x	x	x	x	638	35	506	890	34	842	18.20	182.74	150.4	3294.84
1/10/96	13:00	x	x	x	x	606	35	169	619	34	252.4	5.42	37.24	157.4	3332.08
1/25/96	13:00	x	x	x	x	612	35	360	600	35	504	3.42	68.4	172.4	3400.48
2/1/96	13:00	x	x	x	x	620	35	4	820	35	720	18.85	6.90	172.5	3407.38
2/29/96	13:00	x	x	x	x	615	35	696	740	35	750	5.66	1162.17	201.5	4569.55
3/22/96	9:00	x	x	x	x	590	35	513	430	35	565	3.25	9075	222.9	4654.55
3/31/96	9:00	x	x	x	x	628	35	216	400	35	15	3.04	477.1	231.9	5131.65
4/10/96	11:00	x	x	x	x	556	29	0	407	45	497	3.08	93.60	231.9	5225.25
4/21/96	13:00	x	x	x	x	605	28	266	540	47	473.5	4.5	1135	243.0	5372.50
4/30/96	13:00	x	x	x	x	624	29	216	510	47	525	5.1	961.2	252.0	5276.54
5/23/96	8:00	x	x	x	x	652	37	1	630	51	565.1	6.29	1035	252.8	5219.90
5/24/96	12:00	x	x	x	x	667	37	28	640	51	660	6.68	614.7	253.2	5277.04
5/31/96	12:00	x	x	x	x	585	37	168	630	51	575	6.79	4701	260.2	5274.05
6/15/96	12:00	x	x	x	x	625	37	360	383	51	500.5	4.36	2135	275.2	5884.49
7/25/96	12:00	x	x	x	x	667	30	1	540	40	540	4.98	6.9	275.3	5955.50
7/31/96	12:00	x	x	x	x	668	30	144	890	40	81	5.93	33.06	281.3	5988.47
9/15/96	16:00	x	x	x	x	647	30	1108	503	40	590.8	5.79	2367.1	327.4	8155.57
9/25/96	10:00	12	12	12	12	680	35	3	1303	35	190.5	2.56	51.16	327.5	8155.05
10/9/96	17:00	8	8	8	8	725	35	343	890	35	1355.5	9.46	1163.2	341.8	8424.20
10/15/96	17:00	8	8	8	8	675	35	144	682	35	581	5.70	342.0	347.8	8306.0
10/31/96	12:00	18	18	18	18	680	30	1	1280	40	280	5.16	0.5	347.9	8306.45
11/18/96	13:00	18	18	18	18	692	30	432	580	40	680	8.16	1248.1	365.9	9462.6
21/26/96	13:00	15	15	15	15	635	30	192	682	40	691	5.15	551.6	373.9	9437.85
1/4/97	11:00	x	x	x	x	635	35	836	100	35	351	2.9	1338.7	412.9	9776.53

05-10-99 11:05AM FROM- T-788 P.15 F-840

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	7300
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

Summary of EPA Method 8021B and NWTPH-HCID Analysis in Water

Date	1-6-99	1-6-99	1-6-99	1-5-99	1-5-99	1-5-99	1-5-99	1-5-99	1-5-99	1-5-99	1-5-99	1-5-99
Sample No. Location[1] Concentration[2]	SW-1 Wetland (ug/l)	SW-2 Wetland (ug/l)	SW-3 Wetland (ug/l)	BH-1-W 12.0 ft. (ug/l)	BH-2-W 3.0 ft. (ug/l)	BH-3-W 5.0 ft. (ug/l)	BH-4-W 5.0 ft. (ug/l)	BH-5-W 5.0 ft. (ug/l)	BH-6-W 1.5 ft. (ug/l)	BH-7-W 1.5 ft. (ug/l)	BH-8-W 2.5 ft. (ug/l)	BH-9-W 3.0 ft. (ug/l)
Analyte												
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1Dichloro-ethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloro-methane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1Dichloro-ethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,2 Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1Trichloro-ethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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												
1,2Dichloro-ethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloro-ethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2Trichloro-ethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloro-ethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2Tetra-chloroethane	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	I-6-99	1-6-99	1-6-99
Sample No. Location[1] Concentration[2]	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	
1,1,1Trichloro-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
Analyte					
1,2Dichloro-ethane	ND	ND	ND	ND	
Trichloro-ethene	ND	ND	ND	ND	
1,1,2Trichloro-ethane	ND	ND	ND	ND	
Tetrachloro-ethene	ND	ND	ND	ND	
1,1,1,2Tetra-chloroethane	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[1]	Sample Type Matrix	*Analyte*				
			TPH-G[2] (ug/l)[3]	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.
Projcet 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	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	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		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	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	--	--	--
Spike Recovery (%)		97	82	

"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.

AGRA
ENGINEERING GLOBAL SOLUTIONS

AGRA Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon
USA 97223-8025
Tel (503) 639-3400
Fax (503) 620-7892

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**
Lab Code:	737-1	737-MB	**Limit**
(C7-C12) Gasoline Range	Positive ID	ND	20
(>C12-C24) Diesel Range	Present(a)	ND	50
(>C24) Fuel Oil Range	ND	ND	100
Sample Date:	07/21/99	08/03/99	
Extraction Date:	08/03/99	08/03/99	
Analysis Date:	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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)

Sample Name:	MW-103Prod	Sample
Lab Code:	737-1	Duplicate
Gasoline:	Positive ID	Positive ID
Diesel:	Present (a)	Present (a)
Heavy Oil:	ND	ND
Control Limits:	~	~
Sample Date:	07/21/99	07/21/99
Extraction Date:	08/03/99	08/03/99
Analysis Date:	08/03/99	08/03/99
Surrogate Recovery:		
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.

Dan Hines
Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

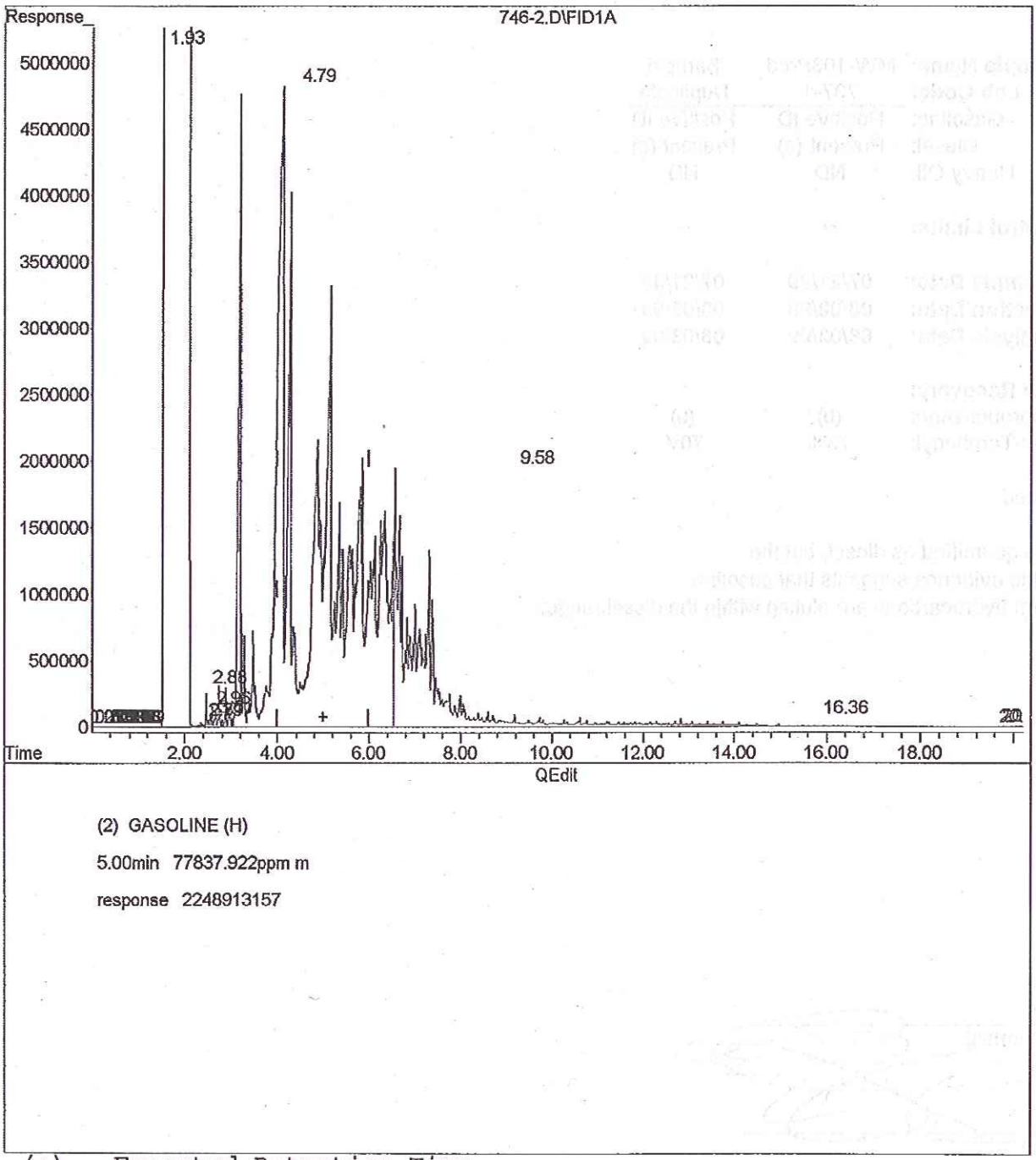
Quantitation Report (Qedit)

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



(+) = Expected Retention Time

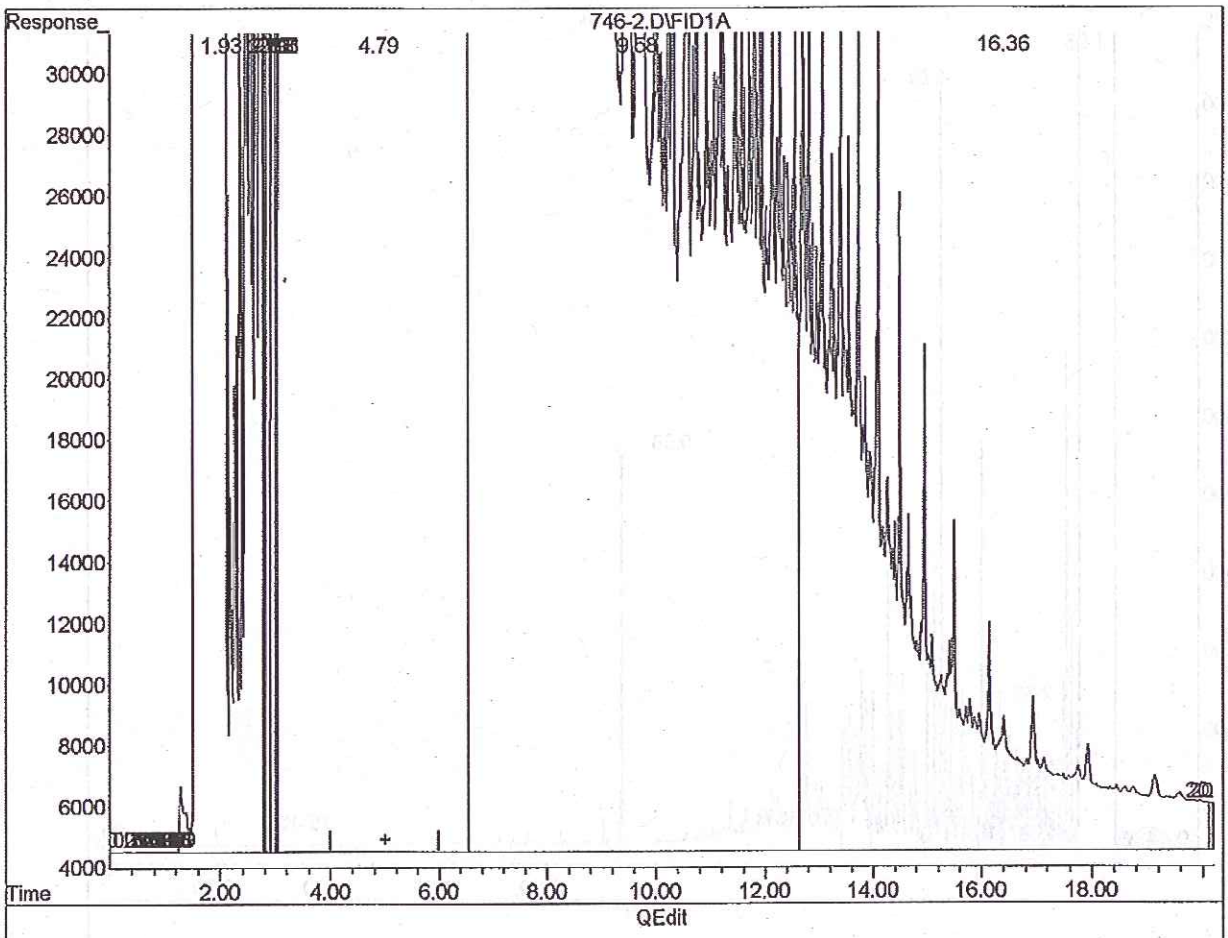
Quantitation Report (Qedit)

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

(+) = Expected Retention Time

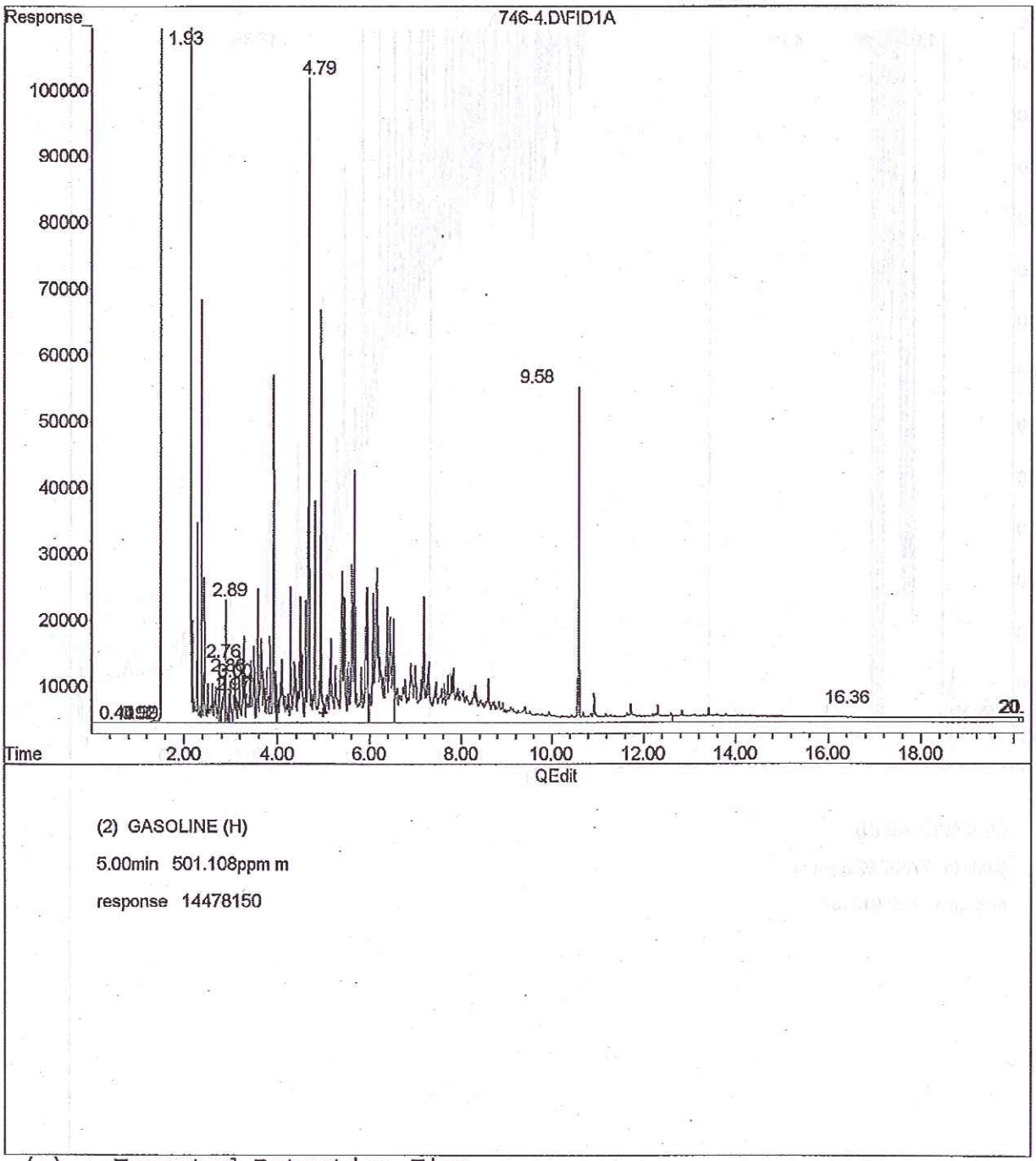
746-2.D W-ID0808.M Mon Aug 09 08:28:36 1999

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 :
IntFile : EVENTSA.E
Quant Time: Aug 9 7:25 1999 Quant Results File: W-ID0808.RES

Vial: 3
Operator: DPM
Inst : GC/FID I
Multiplr: 1.00
Sample Amount: 0.00

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



(+) = Expected Retention Time

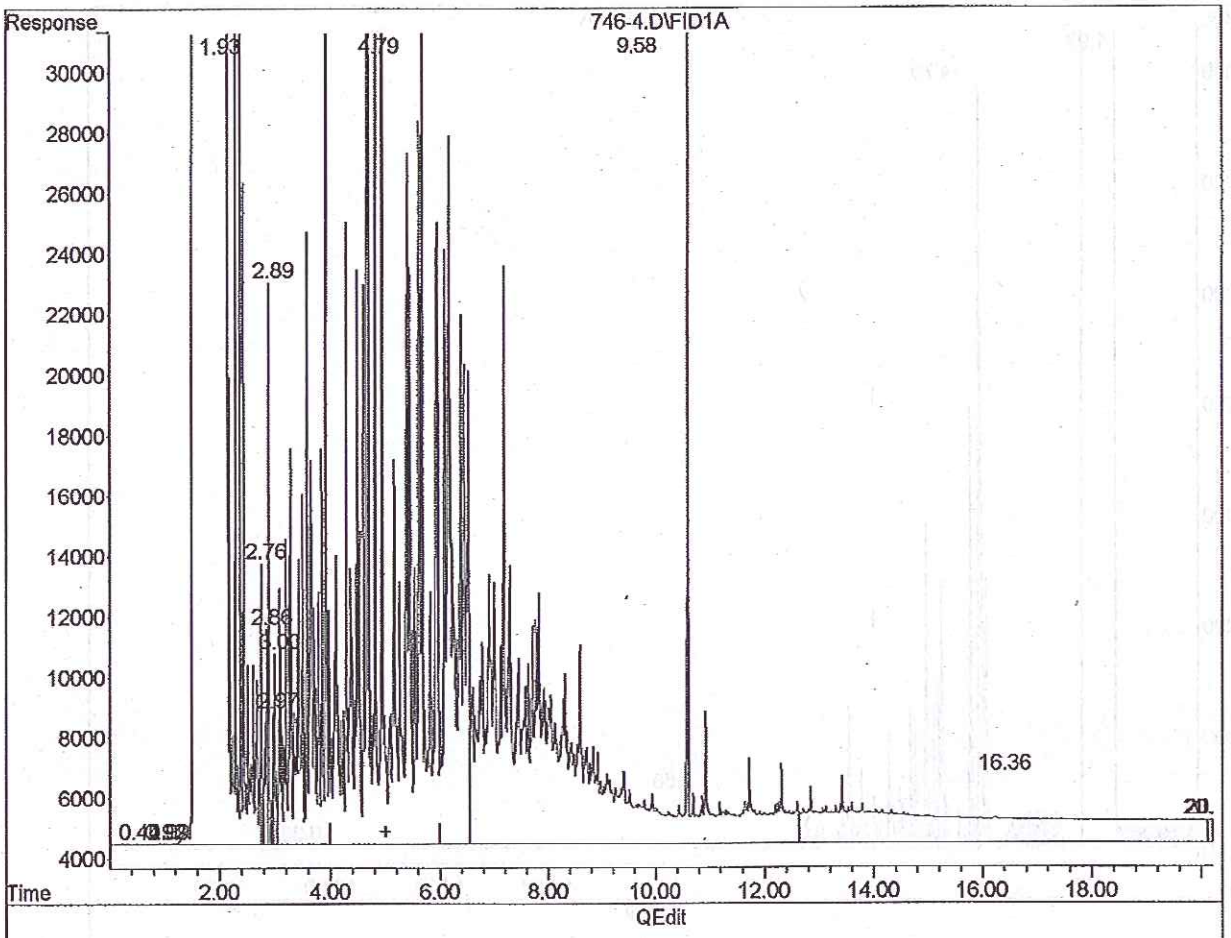
Quantitation Report (Qedit)

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

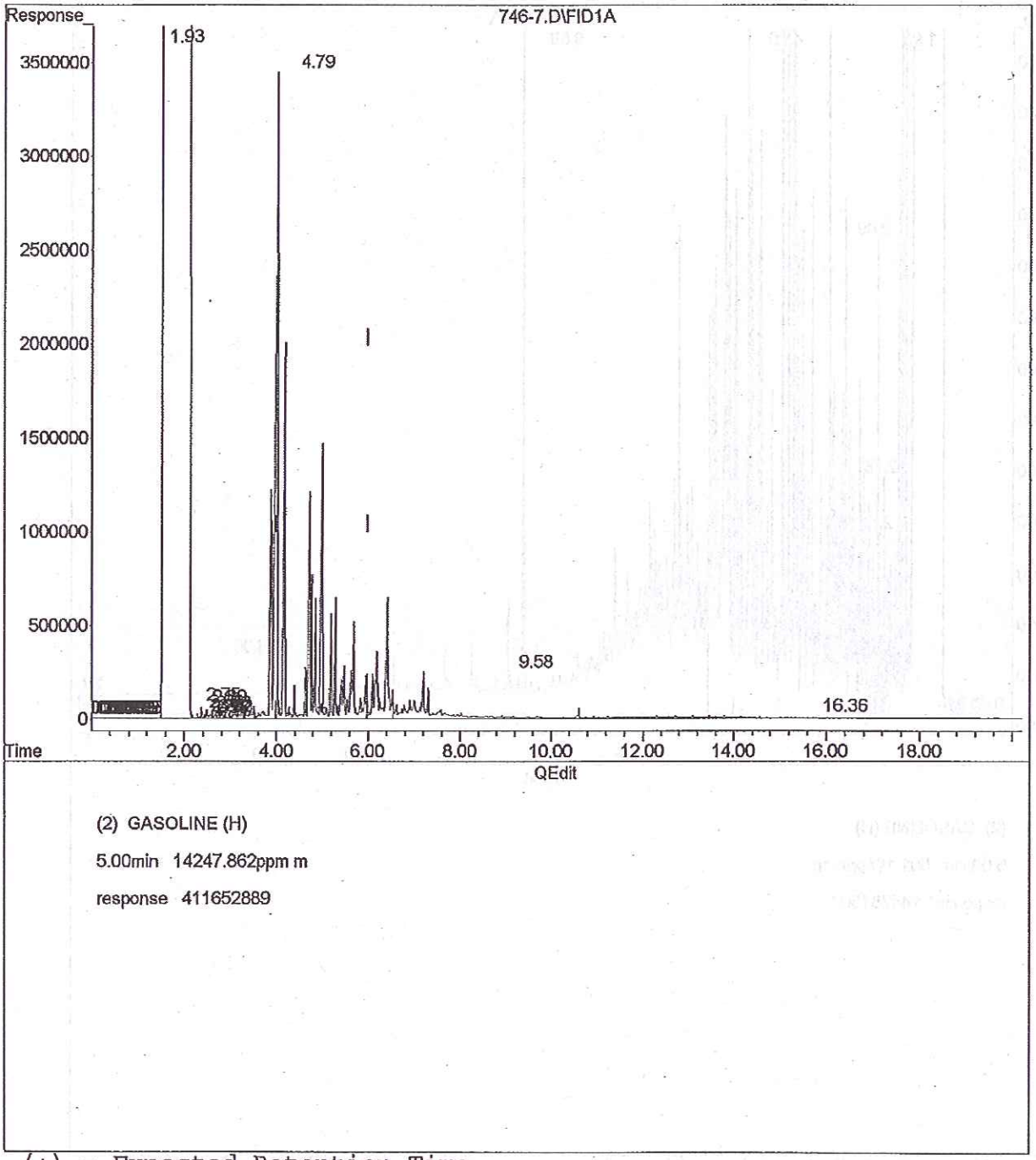
(+) = Expected Retention Time

746-4.D W-ID0808.M Mon Aug 09 08:30:40 1999

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-7.D Vial: 6
Acq On : 8-8-1999 17:43:03 Operator: DPM
Sample : hcid h2o Inst : GC/FID I
Misc : 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



(+) = Expected Retention Time
746-7.D W-ID0808.M Mon Aug 09 08:33:17 1999

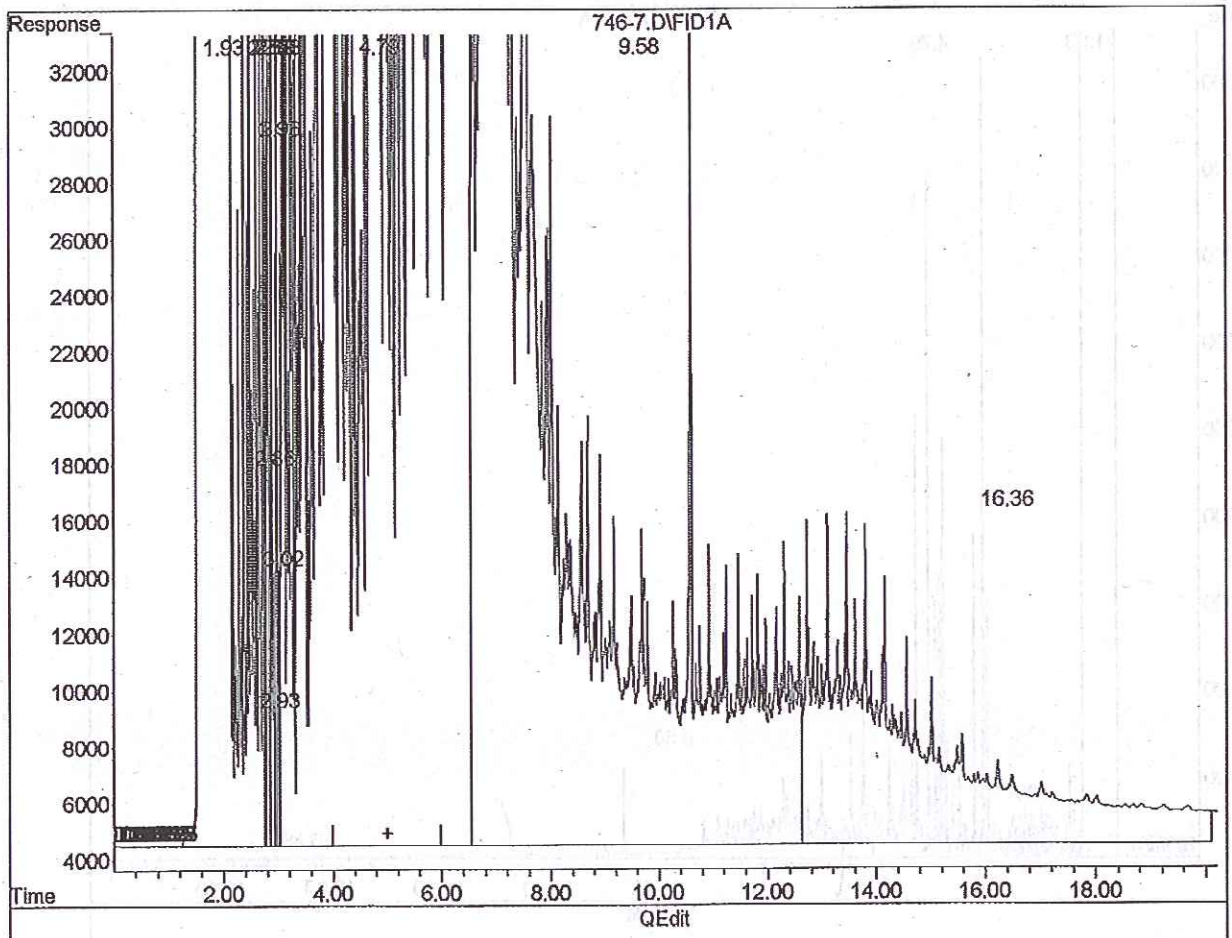
Quantitation Report (Qedit)

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

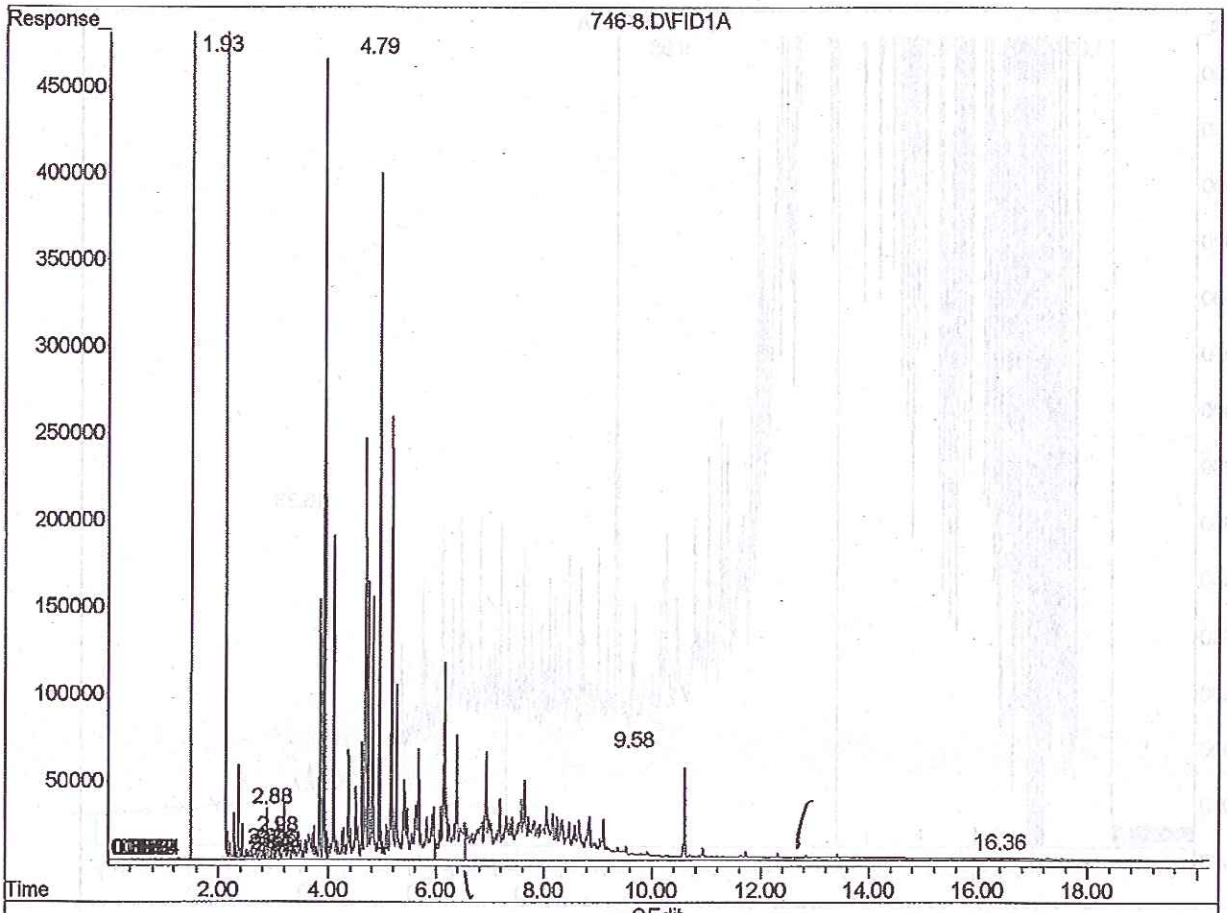
response 411652889

(+) = Expected Retention Time

Quantitation Report (Qedit)

Data File : C:\HPCHEM\1\DATA\990808\746-8.D Vial: 7
Acq On : 8-8-1999 18:13:19 Operator: DPM
Sample : hcid h2o Inst : GC/FID I
Misc : 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

(+) = Expected Retention Time

746-8.D W-ID0808.M Mon Aug 09 08:34:38 1999

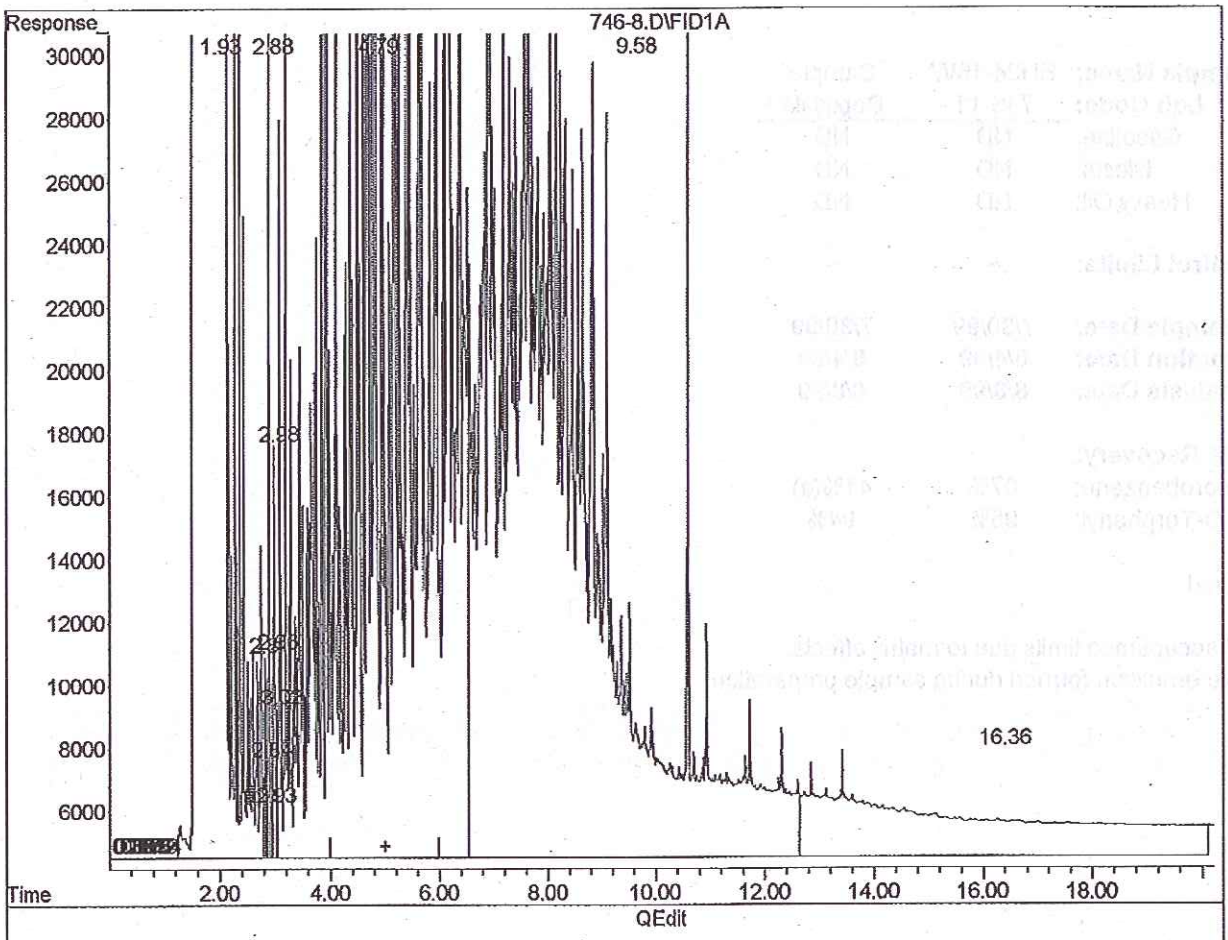
Quantitation Report (Qedit)

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

(+) = Expected Retention Time

746-8.D W-ID0808.M Mon Aug 09 08:34:50 1999

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)

Sample Name:	BH24-16W	Sample
Lab Code:	746-11	Duplicate
Gasoline:	ND	ND
Diesel:	ND	ND
Heavy Oil:	ND	ND
Control Limits:	~	~
Sample Date:	7/30/99	7/30/99
Extraction Date:	8/4/99	8/4/99
Analysis Date:	8/8/99	8/8/99
Surrogate Recovery:		
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

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AGRA Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon
USA 97223-8025
Tel (503) 639-3400
Fax (503) 620-7892

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:	BH20-31W	(a) BH20A-24W	BH21-25W	BH22-28W	VP3-23W	VP6-18W	VP1-23W	Method Reporting
Lab Code:	0746-1	0746-2	0746-3	0746-4	0746-5	0746-6	0746-7	Limit
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:	(1:25 dilution)	**Control Limits**
Gasoline Analysis(FID):	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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_1	
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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_2	**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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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	Blank Spike	Percent Recovery	Blank Spike Duplicate	Percent Recovery	Relative Percent	Control
Lab Code:	0746-MB_1	(ug/L)	(BS)	(BS)	(BSD)	(BSD)	Difference	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):							**Control Limits**	
Gasoline Analysis(FID):	102%	~	113%	~	112%	~	66% - 144%	
BTEX Analysis(PID):	96%	~	96%	~	97%	~	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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	Control
Lab Code:	0746-MB_2	(ug/L)	(BS)	(BS)	(BSD)	(BSD)	Difference	Limits
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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: / Lab Code:	Batch QC 0743-1	Spike Level (ug/L)	Matrix Spike (MS)	Percent Recovery (MS)	Matrix Spike Duplicate (DMS)	Percent Recovery (DMS)	AEE Acceptance Limits	Relative Percent Difference (RPD)
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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: / Lab Code:	Batch QC 748-9	Spike Level (ug/L)	Matrix Spike (MS)	Percent Recovery (MS)	Matrix Spike Duplicate (DMS)	Percent Recovery (DMS)	AEE Acceptance Limits	Relative Percent Difference (RPD)
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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
Lab Code:	746-2	746-3	746-4	746-5	746-6	Limit
(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.

Dan Hines for Pat Marshall
Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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	BH23-36W (a)	BH24-16W	Reporting
Lab Code:	746-7	746-8	746-9	746-10	746-11	Limit
(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:						Control Limits
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.

Dan Hines for Pat Marshall
Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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**
(C7-C12) Gasoline Range	ND	ND	0.25
(>C12-C24) Diesel Range	ND	ND	0.50
(>C24) 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	
Surrogate Recovery:			**Control Limits**
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.

Dan Hines for Pat Marshall
Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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)

Sample Name:	BH24-16W	Sample
Lab Code:	746-11	Duplicate
Gasoline:	ND	ND
Diesel:	ND	ND
Heavy Oil:	ND	ND
Control Limits:	~	~
Sample Date:	07/30/99	07/30/99
Extraction Date:	08/06/99	08/06/99
Analysis Date:	08/08/99	08/08/99
Surrogate Recovery:		
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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ENGINEERING GLOBAL SOLUTIONS

AGRA Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon
USA 97223-8025
Tel (503) 639-3400
Fax (503) 620-7892

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:	MW-106	MW-107	MW-108	MW-105	MW-103 (a)	Lab Blank	Reporting
Lab Code:	126-1	126-2	126-3	126-4	126-5	126-MB	Limit
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
Sample Date:	03/01/00	03/01/00	03/01/00	03/01/00	03/01/00	03/08/00	
Analysis Date:	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_8:	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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: / Lab Code:	Batch QC 123-7	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
Sample Date:	02/29/00	~	02/29/00	~	02/29/00	~		
Analysis Date:	03/08/00	~	03/08/00	~	03/08/00	~		
Surrogate Recovery:							**Control Limits**	
Dibromofluoromethane:	103%	~	102%	~	99%	~	81%-115%	
Toluene-d_8:	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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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 Code:**	Lab Blank 126-MB1	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Gasoline:	<50.0	1000	868	87	903	90	4
AEE Acceptance Limits:	~	~	~	76%-113%	~	76%-113%	<25
Sample Date:	03/08/00	~	03/08/00	~	03/08/00	~	~
Analysis Date:	03/08/00	~	03/08/00	~	03/08/00	~	
Surrogate Recovery:							**Control Limits**
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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	Blank Spike	Percent Recovery	Blank Spike Duplicate	Percent Recovery	Relative Percent
Lab Code:	126-MB2	(ug/L)	(BS)	(BS)	(BSD)	(BSD)	Difference
Gasoline:	<50.0	1000	890	89	918	92	3
AEE Acceptance Limits:	~	~	~	76%-113%	~	76%-113%	<25
Sample Date:	03/09/00	~	03/09/00	~	03/09/00	~	~
Analysis Date:	03/09/00	~	03/09/00	~	03/09/00	~	
Surrogate Recovery:							Control Limits
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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)

		Duplicate	Relative
Sample Name:	MW-106	Sample	Percent
Lab Code:	126-1	(µg/L)	Difference
Gasoline:	<50.0	<50.0	(a)
Acceptance Limits:	~	~	<25
Sample Date:	03/01/00	03/01/00	~
Analysis Date:	03/08/00	03/08/00	
Surrogate Recovery:			**Control Limits**
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

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ENGINEERING GLOBAL SOLUTIONS

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.

C. Tracey Dalin
Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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)

		Duplicate	Relative
Sample Name:	MW-103	Sample	Percent
Lab Code:	303-1	(µg/L)	Difference
Gasoline:	3900(a)	3900(a)	<1
Acceptance Limits:	~	~	<25
Sample Date:	05/24/00	05/24/00	~
Analysis Date:	05/30/00	05/30/00	
Surrogate Recovery:			**Control Limits**
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

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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 Code:**	Lab Blank 303-MB	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Gasoline:	<50	1000	956	96	910	91	5%
AEE Acceptance Limits:	~	~	~	76%-113%	~	76%-113%	<25
Sample Date:	05/30/00	~	05/30/00	~	05/30/00	~	~
Analysis Date:	05/30/00	~	05/30/00	~	05/30/00	~	
Surrogate Recovery:							**Control Limits**
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

AGRA
ENGINEERING GLOBAL SOLUTIONS

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:	MW-103	Lab Blank	**Reporting**
Lab Code:	303-1	303-MB	**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
Sample Date:	05/24/00	05/31/00	
Analysis Date:	05/31/00	05/31/00	
Surrogate Recovery:			**Control Limits**
Dibromofluoromethane:	101%	101%	81%-115%
Toluene-d_8:	101%	99%	88%-106%
4-Bromofluorobenzene:	98%	101%	88%-111%

ND Not Detected

Signature of Chemist

QA/QC Review

AGRA
ENGINEERING GLOBAL SOLUTIONS

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: / **Lab Code:**	Batch QC 306-1	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	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
Sample Date:	05/25/00	~	05/25/00	~	05/25/00	~		
Analysis Date:	05/31/00	~	05/31/00	~	05/31/00	~		
Surrogate Recovery:							**Control Limits**	
Dibromofluoromethane:	100%	~	102%	~	103%	~	81%-115%	
Toluene-d_8:	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
ENGINEERING GLOBAL SOLUTIONS

AGRA Earth & Environmental Portland Chemistry Laboratory
Sample Receipt Documentation Form

Project: Fred Meyer - Port Orchard	Cooler Temperatures
SR No.: OR0003037	11.5°C 11.7°C 11.9°C
Date: 5/26/00	
Time: 9:30	
Temperature of Cooler Upon Receipt (Record to the Right):	
Received By: Stan Lamley	

Section One: Shipping/Delivery Issues

1.	Method of Sample Delivery: NA			
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	(NA)

Section Two: Sample Custody Issues

4.	Are custody seals on the shipping container intact?	(Yes)	No	(NA)
5.	Is a 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 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.	2oz. amber (MeOH):
15.	8 oz. glass jars:	20.	Encore samplers:
16.	40ml VOA vials: 3	21.	500ml plastic:
17.	1 liter glass:	22.	1liter 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

Sean Gormley
Laboratory Manager

AMEC Earth & Environmental, Inc.
7477 SW Tech Center Drive
Portland, Oregon USA 97223

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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 Code:	Lab Blank 601-MB	Spike Level (ug/L)	Blank Spike (BS)	Percent Recovery (BS)	Blank Spike Duplicate (BSD)	Percent Recovery (BSD)	Relative Percent Difference
Gasoline:	<50.0	1000	909	91	938	94	3
AEE Acceptance Limits:	~	~	~	80%-109%	~	80%-109%	<25
Sample Date:	10/26/00	~	10/26/00	~	10/26/00	~	~
Analysis Date:	10/26/00	~	10/26/00	~	10/26/00	~	
Surrogate Recovery:							**Control Limits**
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
Lab Code:	601-4	(µg/L)	Difference
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:	MW103	MW105	MW106	MW107	MW108	Lab Blank	Lab Blank	**Reporting**
Lab Code:	601-3	601-4	601-5	601-6	601-7	601-MB1	601-MB2	**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
Sample Date:	10/19/00	10/19/00	10/20/00	10/20/00	10/19/00	10/26/00	10/31/00	
Analysis Date:	10/26/00	10/26/00	10/31/00	10/31/00	10/31/00	10/26/00	10/31/00	
Surrogate Recovery:								**Control Limits**
Dibromofluoromethane:	103%	101%	103%	102%	101%	100%	101%	81%-115%
Toluene-d_8:	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

amec

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)

Sample Name:	EB	Lab Blank	**Reporting**
Lab Code:	601-2	601-MB	**Limit**
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	
Surrogate Recovery:			**Control Limits**
Dibromofluoromethane:	104%	101%	81%-115%
Toluene-d_8:	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	Relative Percent Difference
Lab Code:	601-MB1	(µg/L)	Spike	(BS)	Duplicate	(BSD)	Criteria	(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
Sample Date:	10/26/00	~	10/26/00	~	10/26/00	~		
Analysis Date:	10/26/00	~	10/26/00	~	10/26/00	~		
Surrogate Recovery:							**Control Limits**	
Dibromofluoromethane:	100%	~	101%	~	101%	~	81%-115%	
Toluene-d_8:	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 Code:	Lab Blank 601-MB2	Spike Level (µg/L)	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
Sample Date:	10/31/00	~	10/31/00	~	10/31/00	~		
Analysis Date:	10/31/00	~	10/31/00	~	10/31/00	~		
Surrogate Recovery:							**Control Limits**	
Dibromofluoromethane:	101%	~	101%	~	104%	~	81%-115%	
Toluene-d_8:	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	Percent Recovery	Matrix Spike	Percent Recovery	% Recovery Control	Relative Percent Difference
Lab Code:	601-4	(µg/L)	Spike	(MS)	Duplicate	(MSD)	Criteria	(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
Sample Date:	10/19/00	~	10/19/00	~	10/19/00	~		
Analysis Date:	10/26/00	~	10/26/00	~	10/26/00	~		
Surrogate Recovery:							**Control Limits**	
Dibromofluoromethane:	101%	~	100%	~	99%	~	81%-115%	
Toluene-d_8:	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: / Lab Code:	MW106 601-5	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	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_8:	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: Fred Meyer Port Orchard	Cooler Temperatures
SP No.: 420040001	0.0°C 1.1°C
Date: 10/28/100	1.4°C
Time: 830	1.4°C 0.0°C
Temperature of Cooler Upon Receipt:	
Received By: KD	

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.	9 oz. glass jars:	20.	Encore samplers:
16.	40 mL VOA vials: 19	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

amec
ENVIRONMENTAL CHEMISTRY LABORATORY
7477 SW Tech Center Drive
Portland, Oregon, U.S.A. 97223-8025
Tel (503)639-3400 Fax (503) 620-7892

1097

ORO00600

CHAIN OF CUSTODY

PROJECT	PROJECT No.
Fred Meyer Port Orchard	9-4em-10282-0
REPORT TO: Paul Stull	PHONE No.
PROJECT MANGER	PHONE No.
SAMPLER'S NAME (please print) McFarland	PHONE No.
SAMPLER'S SIGNATURE	

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.	HUSTPH-G		8021B BTEX-MTBE	
1. mw-x	10-19-00	8:00	H2O	HCl/ice	2	VOA				
2. EB		21:10			2				X	
3. mw-103		20:50			3		X		X	
4. mw-105		20:05					X		X	
5. mw-104	10-20-00	8:45					X		X	
6. mw-107		8:00					X		X	
7. mw-108	10-19-00	19:20					X		X	
8.										
9.										
10.										

SAMPLE RECEIPT	LABORATORY	TURNAROUND TIME	QC Reporting Requirements (Add'l charges may apply)	COMMENTS / INSTRUCTIONS
See SRDF	See SRDF	☐ 8 HOUR ☐ 24 HOUR ☐ 1 WEEK ~~☐ 2 WEEK~~ (standard) ☐ OTHER ____	☐ LEVEL I ☒ LEVEL II ☐ LEVEL II w/project specific Duplicates/Spikes ☐ Level III & IV (Full validation package)	
TOTAL # CONTAINERS	SHIPPING I.D. / AIRBILL #			
CONDITION OF CONTAINERS	CARRIER			
CONDITION OF SEALS	DOT DESIGNATION			

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1. [signature] AMEC	10-25-00	13:20	1.		
2.			2.		
3.			3. Kimberly A. Davis AMEC	10/26/00	820

PAGE 1 OF 1

10/00

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

Tel +1 (503) 639-3400
Fax +1 (503) 620-7892

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 972238024	Project Manager: Paul Stull	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 972238024	Project Manager: Paul Stull	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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									
Gasoline (NWTPH-Gx)	**3810**	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
Methyl tert-Butyl Ether (MTBE)	**2.21**	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 972238024	Project Manager: Paul Stull	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									
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)		*102 %*		*88-111*	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene (PID)		*92.0 %*		*74-120*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene (PID)		*94.0 %*		*72-118*	"	"	"	"	

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene (FID)		*94.0 %*		*88-111*	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene (PID)		*92.0 %*		*74-120*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene (PID)		*91.0 %*		*72-118*	"	"	"	"	

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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									
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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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									
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)		*99.0 %*		*88-111*	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene (PID)		*94.0 %*		*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

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										
Matrix Spike (0121907-MS1)	Source: 0000723-03			Prepared: 12/18/00		Analyzed: 12/19/00				
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			
Surrogate: a,a,a-Trifluorotoluene (PID)	*52.5*		"	*50.0*		*105*	*74-120*			
Surrogate: 4-Bromofluorobenzene (PID)	*55.0*		"	*50.0*		*110*	*72-118*			
Matrix Spike Dup (0121907-MSD1)	Source: 0000723-03			Prepared: 12/18/00		Analyzed: 12/19/00				
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	
Surrogate: a,a,a-Trifluorotoluene (PID)	*48.6*		"	*50.0*		*97.2*	*74-120*			
Surrogate: 4-Bromofluorobenzene (PID)	*56.0*		"	*50.0*		*112*	*72-118*			

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 972238024	Project Manager: Paul Stull	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	"							
Surrogate: 4-Bromofluorobenzene (FID)	*51.3*		"	*50.0*		*103*	*88-111*			
Surrogate: a,a,a-Trifluorotoluene (PID)	*51.3*		"	*50.0*		*103*	*74-120*			
Surrogate: 4-Bromofluorobenzene (PID)	*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			
Surrogate: a,a,a-Trifluorotoluene (PID)	*47.5*		"	*50.0*		*95.0*	*74-120*			
Surrogate: 4-Bromofluorobenzene (PID)	*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	
Surrogate: 4-Bromofluorobenzene (FID)	*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	
Surrogate: a,a,a-Trifluorotoluene (PID)	*47.0*		"	*50.0*		*94.0*	*74-120*			
Surrogate: 4-Bromofluorobenzene (PID)	*49.0*		"	*50.0*		*98.0*	*72-118*			

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 972238024	Project Manager: Paul Stull	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: Fred Meyer Port Orchard	Cooler Temperatures
SR No.: 0000723	5.2°C 5.1°C
Date: 12/18/00	5.5°C
Time: 1130	
Temperature of Cooler Upon Receipt:	4.4°C 5.4°C
Received By: KD	

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.	9 oz. glass jars:	20.	Encore samplers:
16.	40 mL VOA vials: 19	21.	500 ml plastic:
17.	1 liter glass: 10 HCl preserved	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

amec
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	PROJECT No.
Fred Meyer Port Orchard	10282-0
REPORT TO: Paul Stull	PHONE No. 6393400
PROJECT MANGER John Kuiper	PHONE No.
SAMPLER'S NAME (please print) MCFarland	PHONE No.
SAMPLER'S SIGNATURE	

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.	NWTPH-G		BTEX 8021B MTBE																
1. MW-X	12-13-00	8:00	H2O	HCl/ml	~~3~~	40A																			
2. EB		19:35			2	↓			X																
3. MW-03		21:40			3/2	40A ~~Later~~	X		X																
4. MW-05		19:20					X		X																
5. MW-06		20:20					X		X																
6. MW-07		20:55					X		X																
7. MW-08	↓	16:45	↓	↓	↓		X		X																
8.																									
9.																									
10.																									

SAMPLE RECEIPT	LABORATORY	TURNAROUND TIME	QC Reporting Requirements (Add'l charges may apply)	COMMENTS / INSTRUCTIONS
See SRDF	See SRDF	☐ 8 HOUR	☐ LEVEL I	Check with Paul Stull if NWTPH-Dx is to be Ran
TOTAL # CONTAINERS	SHIPPING I.D. / AIRBILL #	☐ 24 HOUR	☒ LEVEL II	
CONDITION OF CONTAINERS	CARRIER	☐ 1 WEEK	☐ LEVEL II w/project specific Duplicates/Spikes	
CONDITION OF SEALS	DOT DESIGNATION	☒ 2 WEEK (standard)	☐ Level III & IV (Full validation package)	
		☐ OTHER ____		

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1. [signature]	12/18/00	11:30	1.		
2.			2.		
3.			3. Kimberly E. Davis AMEC	12/18/00	1130

PAGE 1 OF 1

10/00

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, Inc.
7477 SW Tech Center Drive
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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

Project Chemist

The results in 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 & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 97223-8024	Project Manager: Paul Stull	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 97223-8024	Project Manager: Paul Stull	04/02/01 13:06

MW105

0100139-04 (Water)

AMEC Environmental Chemistry Laboratory

BTEX/EDC/EDB/MTBE/Naphthalene/Alkylbenzenes by EPA Methods 5030B/8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 97223-8024	Project Manager: Paul Stull	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	"	"	"	"	"	"	
Toluene	**218**	10.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10.0	"	"	"	"	"	"	
Ethylbenzene	**528**	10.0	"	"	"	"	"	"	
m,p-Xylene	**2690**	20.0	"	"	"	"	"	"	
o-Xylene	**1060**	10.0	"	"	"	"	"	"	
Isopropylbenzene	**21.0**	10.0	"	"	"	"	"	"	
n-Propylbenzene	**58.5**	10.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**389**	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1290**	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
4-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	50.0	"	"	"	"	"	"	
Naphthalene	**309**	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									
Gasoline (NWTPH-Gx)	**16600**	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 97223-8024	Project Manager: Paul Stull	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	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland OR, 97223-8024	Project Manager: Paul Stull	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	Project:	Fred Meyer - Port Orchard
7477 SW Tech Center Drive	Project Number:	9-61M-10282-0
Portland OR, 97223-8024	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										
Matrix Spike (1033001-MS1)	**Source: 0100132-06**			Prepared & Analyzed: 03/30/01						
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			
Surrogate: Dibromofluoromethane	*51.6*		"	*50.0*		*103*	*81-115*			
Surrogate: Toluene-d8	*49.5*		"	*50.0*		*99.0*	*88-106*			
Surrogate: 4-Bromofluorobenzene	*49.5*		"	*50.0*		*99.0*	*88-111*			
Matrix Spike Dup (1033001-MSD1)	**Source: 0100132-06**			Prepared & Analyzed: 03/30/01						
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	
Surrogate: Dibromofluoromethane	*51.9*		"	*50.0*		*104*	*81-115*			
Surrogate: Toluene-d8	*49.2*		"	*50.0*		*98.4*	*88-106*			
Surrogate: 4-Bromofluorobenzene	*49.0*		"	*50.0*		*98.0*	*88-111*			

AMEC Earth & Environmental	Project: Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland OR, 97223-8024	Project Manager: Paul Stull	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
Batch 1032601 - EPA 5030B Water GC										
Blank (1032601-BLK1)				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*
LCS (1032601-BS2)				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*
LCS Dup (1032601-BSD2)				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*
Duplicate (1032601-DUP1)		**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	Project:	Fred Meyer - Port Orchard	
7477 SW Tech Center Drive	Project Number:	9-61M-10282-0	**Reported:**
Portland OR, 97223-8024	Project Manager:	Paul Stull	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 Port Orchard	Cooler Temperatures
SR No.: 0100139	2.5°C 4.3°C
Date: 3/21/01	3.9°C
Time: 11:05	2.2°C 5.0°C
Temperature of Cooler Upon Receipt:	3.6
Received By: KD	

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: 16	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 5 in 1L for sample MW103

Reviewed By:

Laboratory Manager or Designee

amec
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	PROJECT No. Q-Kinn-
Fred Meyer Port Orchard	10282-0
REPORT TO: P. Stull	PHONE No. 6393400
PROJECT MANGER	PHONE No.
SAMPLER'S NAME (please print) MCFarland	PHONE No.
SAMPLER'S SIGNATURE	

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.	NWTPH-Dx	NWTPH-Dx NO PAS	8021-B BTEX MTBE	See comments
1. MW-X	3-19-01	8:00	H2O	HCl	2	VOA				
2. EB		14:00		HCl	2	V		PAS		
3. MW108		16:00		HCl	6	vaires	X	X	X	X
4. MW105		16:30		HCl	6		X	X	X	X
5. MW103		16:50		HCl	6		X	X	X	X
6.										
7.										
8.										
9.										
10.										

SAMPLE RECEIPT	See SRDF	LABORATORY	See SRDF
TOTAL # CONTAINERS		SHIPPING I.D. / AIRBILL #	
CONDITION OF CONTAINERS		CARRIER	
CONDITION OF SEALS		DOT DESIGNATION	

TURNAROUND TIME
- ☐ 8 HOUR
- ☐ 24 HOUR
- ☐ 1 WEEK
- ☒ 2 WEEK (standard)
- ☐ OTHER ____

QC Reporting Requirements (Add'l charges may apply)
- ☐ LEVEL I
- ☒ LEVEL II
- ☐ LEVEL II w/project specific Duplicates/Spikes
- ☐ Level III & IV (Full validation package)

COMMENTS / INSTRUCTIONS

Run for BTEX
EDB, EDC, MTBE
Naphthalene, Alkylbenzene
suite

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1. [signature] AMEC	3-21-01	11:05	1.		
2.			2.		
3.			3. [signature] AMEC	3/21/01	11:05

PAGE 1 OF ___

10/00

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541.383.9310 fax 541.382.7588

AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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

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.

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97223-8024	Project Manager: Paul Stull	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
MW103 (P1G0092-01RE1) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**9660**	1600	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*98.8 %*	*50-150*							
Surr: 4-BFB (PID)	*83.8 %*	*75-125*							
MW105 (P1G0092-02) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**99.8**	80.0	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*123 %*	*50-150*							
Surr: 4-BFB (PID)	*118 %*	*75-125*							

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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
MW103 (P1G0092-01) Water					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	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	*95.7 %*	*50-150*							
MW105 (P1G0092-02) Water					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	"	"	"	"	"	"	
Surr: 1-Chlorooctadecane	*87.0 %*	*50-150*							

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*118 %*	*75-120*							
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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*121 %*	*75-120*							*S-02*

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.

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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										
Duplicate (1070942-DUP1)	Source: P1G0092-01			Prepared & Analyzed: 07/06/01						
Gasoline Range Hydrocarbons	ND	80.0	ug/l		10000000				50	
Surr: 4-BFB (FID)	*53.3*		"	*50.0*		*107*	*50-150*			
Batch 1070994 - EPA 5030B										
Blank (1070994-BLK1)				Prepared & Analyzed: 07/09/01						
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)	*50.7*		"	*50.0*		*101*	*50-150*			
Surr: 4-BFB (PID)	*43.5*		"	*50.0*		*87.0*	*75-125*			
LCS (1070994-BS1)				Prepared & Analyzed: 07/09/01						
Gasoline Range Hydrocarbons	1450	80.0	ug/l	1250		116	50-150			
Surr: 4-BFB (FID)	*65.6*		"	*50.0*		*131*	*50-150*			
LCS (1070994-BS2)				Prepared & Analyzed: 07/09/01						
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			
Surr: 4-BFB (PID)	*41.6*		"	*50.0*		*83.2*	*75-125*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	07/11/01 16:45

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 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	"							
Surr: 1-Chlorooctadecane	*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			
Surr: 1-Chlorooctadecane	*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	
Surr: 1-Chlorooctadecane	*0.0801*		"	*0.0960*		*83.4*	*50-150*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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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 3400 FAX:

INVOICE TO: AMEC
P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard
PROJECT NUMBER: 9-61m-10282-0
SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-G	NWTPH-D	8021-B BTEX / MTBE	BTEX	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW 103	6-28-01 16:00	X	X	X		W	5		
2. MW 105	6-28-01 15:00	X	X	X		W	5		
3. MW X	6-28-01 8:00				X	W	2		
4. EB	6-28-01				X	W	2		
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

RELINQUISHED BY: W. J. McFarland DATE: 7-3-01
PRINT NAME: W. J. McFarland FIRM: AMEC TIME: 15:30
RECEIVED BY: Camille Holladay DATE: 7/3/01
PRINT NAME: Camille Holladay FIRM: NCA TIME: 1532

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:
TEMP: 0.1

COC REV 3/99

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97223-8024	Project Manager: Paul Stull	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

Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97223-8024	Project Manager: Paul Stull	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
MW103 (P1I0912-03RE1) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**23200**	1600	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*114 %*	*50-150*							
Surr: 4-BFB (PID)	*109 %*	*75-125*							
MW105 (P1I0912-04) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	**135**	80.0	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*110 %*	*50-150*							
Surr: 4-BFB (PID)	*101 %*	*75-125*							

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97223-8024	Project Manager: Paul Stull	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
MW103 (P1I0912-03) Water					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*							
MW105 (P1I0912-04) Water					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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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
MWX (P1I0912-01) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*104 %*	*75-120*							
EB (P1I0912-02) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*99.2 %*	*75-120*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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										
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: P1I0912-03**			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: P1I0686-01**			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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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: P1I0912-01			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: P1I0912-01			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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97223-8024	Project Manager: Paul Stull	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	"							
Surr: 1-Chlorooctadecane	*0.0867*		"	*0.0960*		*90.3*	*50-150*			
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			
Surr: 1-Chlorooctadecane	*0.0771*		"	*0.0960*		*80.3*	*50-150*			
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	
Surr: 1-Chlorooctadecane	*0.0708*		"	*0.0960*		*73.8*	*50-150*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7477 S.W. Tech Center Drive	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97223-8024	Project Manager: Paul Stull	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

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CHAIN OF CUSTODY REPORT

Work Order #: PIT0912

CLIENT: AMEC
REPORT TO: P. Stull
ADDRESS: 7477 S.W. Tech Center Dr. Portland OR. 97223
PHONE: 5036393400 FAX:

INVOICE TO:
P.O. NUMBER:

PROJECT NAME: Port Orchard Fin.
PROJECT NUMBER: 9-Grim-10282-
SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: NWTPH-Gx	NWTPH-Dx	BTEX	MATRIX (W. S. O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW-8	9-25-01 8:00			X				
2. EB	8:20			X				
3. MW-03	9:45	X	X	X				
4. MW-05	10:50	X	X	X				
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

RELINQUISHED BY: [signature] DATE: 9-25-01
PRINT NAME: William Parker FIRM: AMEC TIME: 12:00
RECEIVED BY: [signature]
PRINT NAME: Camille Holladay FIRM: NCA
DATE: 9/27/01 TIME: 9:40

RELINQUISHED BY: [signature] DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: [signature]
PRINT NAME: Camille Holladay FIRM: NCA
DATE: 9/27/01 TIME: 1201

ADDITIONAL REMARKS:
TEMP: 10.6

COC REV 3/99

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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
EB (P1L0426-02RE1) Water					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	
Surr: 4-BFB	*86.2 %*	*50-150*							
MW105 (P1L0426-03RE1) Water					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	
Surr: 4-BFB	*96.2 %*	*50-150*							
MW103 (P1L0426-04RE2) Water					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	
Surr: 4-BFB	*101 %*	*50-150*							

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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
MW105 (P1L0426-03) Water						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	"	"	"	"	"	"	
Surr: 4-BFB	*98.0 %*	*84-118*							
Surr: 1,2-DCA-d4	*104 %*	*79-123*							
Surr: Dibromofluoromethane	*102 %*	*81-121*							
Surr: Toluene-d8	*99.0 %*	*87-111*							
MW103 (P1L0426-04) Water						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	"	"	"	"	"	"	
Toluene	**18.0**	10.0	"	"	"	"	"	"	
Ethylbenzene	**264**	10.0	"	"	"	"	"	"	
Xylenes (total)	**1950**	20.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	40.0	"	"	"	"	"	"	
Naphthalene	**137**	40.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1130**	20.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**441**	10.0	"	"	"	"	"	"	
Isopropylbenzene	ND	40.0	"	"	"	"	"	"	
n-Propylbenzene	**35.0**	10.0	"	"	"	"	"	"	

North Creek Analytical - Portland

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Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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 1120591 - EPA 5030B										
Blank (1120591-BLK1)				Prepared & Analyzed: 12/18/01						
Gasoline Range Hydrocarbons	ND	80.0	ug/l							
Surr: 4-BFB	*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			
Surr: 4-BFB	*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	
Surr: 4-BFB	*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	
Surr: 4-BFB	*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							
Surr: 4-BFB	*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			
Surr: 4-BFB	*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							
Surr: 4-BFB	*46.8*		"	*50.0*		*93.6*	*50-150*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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			
Surr: 4-BFB	*59.4*		"	*50.0*		*119*	*50-150*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Amended Report**
Portland, OR 97224	Project Manager: Paul Stull	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

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ENVIRONMENTAL CHEMISTRY LABORATORY
7477 SW Tech Center Drive
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PIL0426
1562

CHAIN OF CUSTODY

PROJECT	PROJECT No.
Port Orchard Fred Meyer	9-4um-10282
REPORT TO: P. Stull	PHONE No. 6393400
PROJECT MANGER J. Kuiper	PHONE No.
SAMPLER'S NAME (please print) McFarland	PHONE No.
SAMPLER'S SIGNATURE	

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.
1. MW X	12-11-01	8:00	H2O	HCl	2	VOA
2. EB	12-11-01	11:00	H2O	HCl	2	VOA
3. MW 105	12-11-01	12:00	H2O	HCl	5/2	VOA Liter
4. MW 103	12-11-01	13:00	H2O	HCl	5/2	VOA Liter
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 #	☐ 8 HOUR	☐ LEVEL I	
CONDITION OF CONTAINERS	CARRIER	☐ 24 HOUR	☒ LEVEL II	
CONDITION OF SEALS	DOT DESIGNATION	☐ 1 WEEK	☐ LEVEL II w/project specific Duplicates/Spikes	
		☒ 2 WEEK (standard)	☐ Level III & IV (Full validation package)	
		☐ OTHER ____		

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1. [signature] AMEC	12-13-01	9:00	1. [signature]	12/13/01	12:50
2. [signature]			2. [signature] Susan Passage	12/13/01	1400
3.					

PAGE 1 OF 1

10/00

1.9

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW 103 (P2C0728-03) Water					Sampled: 03/20/02 Received: 03/25/02				
Gasoline Range Hydrocarbons	10700	800	ug/l	10	NW TPH-Gx	03/27/02	03/28/02	2030864	
Surr: 4-BFB	*84.2 %*	*50-150*							
MW 105 (P2C0728-04) Water					Sampled: 03/20/02 Received: 03/25/02				
Gasoline Range Hydrocarbons	ND	80.0	ug/l	1	NW TPH-Gx	03/27/02	03/28/02	2030864	
Surr: 4-BFB	*79.6 %*	*50-150*							

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
MWX (P2C0728-01RE1) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*99.8 %*	*75-120*							
EB (P2C0728-02RE1) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*102 %*	*75-120*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
MW 103 (P2C0728-03) Water					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	
p-Isopropyltoluene	**10.1**	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	"	"	"	"	"	"	
Toluene	**10.0**	2.50	"	"	"	"	"	"	
Ethylbenzene	**97.3**	2.50	"	"	"	"	"	"	
Xylenes (total)	**1130**	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Naphthalene	**82.8**	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**948**	5.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**389**	2.50	"	"	"	"	"	"	
Isopropylbenzene	ND	10.0	"	"	"	"	"	"	
n-Propylbenzene	**19.1**	2.50	"	"	"	"	"	"	
Surr: 4-BFB	*107 %*	*84-118*							
Surr: 1,2-DCA-d4	*90.5 %*	*79-123*							
Surr: Dibromofluoromethane	*89.0 %*	*81-121*							
Surr: Toluene-d8	*90.0 %*	*87-111*							
MW 105 (P2C0728-04) Water					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	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**2.84**	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**0.700**	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW 105 (P2C0728-04) Water						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*

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 2030864 - EPA 5030B										
Blank (2030864-BLK1)				Prepared & Analyzed: 03/27/02						
Gasoline Range Hydrocarbons	ND	80.0	ug/l							
Surr: 4-BFB	*39.5*		"	*50.0*		*79.0*	*50-150*			
LCS (2030864-BS1)				Prepared & Analyzed: 03/27/02						
Gasoline Range Hydrocarbons	778	80.0	ug/l	1000		77.8	70-130			
Surr: 4-BFB	*46.2*		"	*50.0*		*92.4*	*50-150*			
Duplicate (2030864-DUP1)		**Source: P2C0728-03**		Prepared: 03/27/02		Analyzed: 03/28/02				
Gasoline Range Hydrocarbons	10500	800	ug/l		10700			1.89	40	
Surr: 4-BFB	*38.2*		"	*50.0*		*76.4*	*50-150*			

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Crystal Burkholder, Project Manager

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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	"							
Surr: 4-BFB (PID)	*38.1*		"	*50.0*		*76.2*	*75-120*			
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			
Surr: 4-BFB (PID)	*40.0*		"	*50.0*		*80.0*	*75-120*			
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			
Surr: 4-BFB (PID)	*44.8*		"	*50.0*		*89.6*	*75-120*			
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	
Surr: 4-BFB (PID)	*43.7*		"	*50.0*		*87.4*	*75-120*			

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Crystal Burkholder, Project Manager

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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	"							
Surr: 4-BFB (PID)	*50.2*		"	*50.0*		*100*	*75-120*			
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			
Surr: 4-BFB (PID)	*46.2*		"	*50.0*		*92.4*	*75-120*			

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Crystal Burkholder, Project Manager

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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	"							
Surr: 4-BFB	*19.0*		"	*20.0*		*95.0*	*84-118*			
Surr: 1,2-DCA-d4	*18.2*		"	*20.0*		*91.0*	*79-123*			
Surr: Dibromofluoromethane	*17.9*		"	*20.0*		*89.5*	*81-121*			
Surr: Toluene-d8	*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			
Surr: 4-BFB	*20.2*		"	*20.0*		*101*	*84-118*			
Surr: 1,2-DCA-d4	*17.6*		"	*20.0*		*88.0*	*79-123*			
Surr: Dibromofluoromethane	*17.7*		"	*20.0*		*88.5*	*81-121*			
Surr: Toluene-d8	*18.1*		"	*20.0*		*90.5*	*87-111*			

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Crystal Burkholder, Project Manager

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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										
Matrix Spike (2030877-MS1)		**Source: P2C0749-01**		Prepared & Analyzed: 03/27/02						
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			
Surr: 4-BFB	*20.1*		"	*20.0*		*100*	*84-118*			
Surr: 1,2-DCA-d4	*18.1*		"	*20.0*		*90.5*	*79-123*			
Surr: Dibromofluoromethane	*18.2*		"	*20.0*		*91.0*	*81-121*			
Surr: Toluene-d8	*18.5*		"	*20.0*		*92.5*	*87-111*			
Matrix Spike Dup (2030877-MSD1)		**Source: P2C0749-01**		Prepared & Analyzed: 03/27/02						
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	
Surr: 4-BFB	*19.9*		"	*20.0*		*99.5*	*84-118*			
Surr: 1,2-DCA-d4	*18.0*		"	*20.0*		*90.0*	*79-123*			
Surr: Dibromofluoromethane	*18.0*		"	*20.0*		*90.0*	*81-121*			
Surr: Toluene-d8	*18.2*		"	*20.0*		*91.0*	*87-111*			

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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
MW103 (P2F0425-01) Water						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*							
MW105 (P2F0425-02) Water						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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MWX (P2F0425-03) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*91.2 %*	*75-120*							
EB (P2F0425-04) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*90.6 %*	*75-120*							

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103 (P2F0425-01) Water					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	"	"	"	"	"	"	
Toluene	**3.05**	2.50	"	"	"	"	"	"	
Ethylbenzene	**32.4**	2.50	"	"	"	"	"	"	
Xylenes (total)	**250**	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	10.0	"	"	"	"	"	"	
Naphthalene	**25.3**	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**141**	5.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**51.8**	2.50	"	"	"	"	"	"	
Isopropylbenzene	ND	10.0	"	"	"	"	"	"	
n-Propylbenzene	**6.10**	2.50	"	"	"	"	"	"	
Surr: 4-BFB	*104 %*	*84-118*							
Surr: 1,2-DCA-d4	*98.0 %*	*79-123*							
Surr: Dibromofluoromethane	*107 %*	*81-121*							
Surr: Toluene-d8	*108 %*	*87-111*							
MW105 (P2F0425-02) Water					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	"	"	"	"	"	"	
Xylenes (total)	**1.69**	1.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
Naphthalene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1.47**	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.500	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
n-Propylbenzene	ND	0.500	"	"	"	"	"	"	

North Creek Analytical - Portland

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Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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										
Duplicate (2060532-DUP1)		**Source: P2F0426-03**		Prepared & Analyzed: 06/17/02						
Gasoline Range Hydrocarbons	ND	80.0	ug/l		ND				40	
Surr: 4-BFB	*50.3*		*"*	*50.0*		*101*	*50-150*			

North Creek Analytical - Portland

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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541.383.9310 fax 541.382.7588

AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: None	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Burkholder, Project Manager

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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: P3F0425

CLIENT: AMEC
REPORT TO: P. Stull
ADDRESS: 7376 SW Durham Port OR 97224
PHONE: 503 639 3400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: ~~Port Orchard~~ Fred Meyer
PROJECT NUMBER:
SAMPLED BY: McFarlane

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 | 4 | 3 | 2 | 1 | <1 STD.

OTHER Please Specify....

*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NW-TPH-Gx	NW-TPH-Dx	8260 ★	BTEX	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW103	6-11-02 7:50	X	X	X		H2O	4		
2. MW105	8:25	X	X	X			2		
3. MWX	7:20				X		2		
4. EB	7:25				X		2		
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

RELINQUISHED BY: [signature] DATE: 6-14-02
PRINT NAME: W. McFarlane FIRM: AMEC TIME: 14:30
RECEIVED BY: [signature] DATE: 6/14/02
PRINT NAME: Bob FIRM: NCA TIME: 15:25

RELINQUISHED BY: [signature] DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: [signature] DATE: 6/14/02
PRINT NAME: Tammy Elston FIRM: NCA TIME: 17:00

ADDITIONAL REMARKS: ★ 8260 = BTEX, MTBE, EDB/EDC, Naphthalene, Alkylbenzene Suite

TEMP: -1.0°C

COC REV 3/99

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,

Jeanne Garthwaite

Jeanne Garthwaite
Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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
MW-103 (B2I0637-01) Water 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*			"	"	"	"	
MW-105 (B2I0637-02) Water 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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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
MW-103 (B2I0637-01) Water 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	"	"	"	"	"	"	
n-Butylbenzene	**6.23**	1.00	"	"	"	"	"	"	
sec-Butylbenzene	**1.74**	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	**51.0**	1.00	"	"	"	"	"	"	E
Isopropylbenzene	**5.07**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
Naphthalene	**152**	1.00	"	"	"	"	"	"	E
n-Propylbenzene	**12.3**	1.00	"	"	"	"	"	"	
Toluene	**1.89**	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**53.8**	1.00	"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	**7.43**	1.00	"	"	"	"	"	"	
m,p-Xylene	**48.0**	2.00	"	"	"	"	"	"	
o-Xylene	**17.2**	1.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*104 %*	*77-122*			"	"	"	"	
Surrogate: Toluene-d8	*96.0 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*102 %*	*77-120*			"	"	"	"	
MW-103 (B2I0637-01RE1) Water 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	
n-Butylbenzene	**18.2**	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
Ethylbenzene	**164**	10.0	"	"	"	"	"	"	
Isopropylbenzene	**12.6**	10.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
Naphthalene	**146**	10.0	"	"	"	"	"	"	
n-Propylbenzene	**34.8**	10.0	"	"	"	"	"	"	
Toluene	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**320**	10.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**31.5**	10.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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
MW-103 (B2I0637-01RE1) Water 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*			"	"	"	"	
MW-105 (B2I0637-02) Water 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*			"	"	"	"	

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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
Batch 2J04048: Prepared 10/04/02 Using EPA 5030B (P/T)										
Blank (2J04048-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	*43.6*		"	*48.0*		*90.8*	*57-125*			
LCS (2J04048-BS1)										
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*			
LCS Dup (2J04048-BSD1)										
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*			
Matrix Spike (2J04048-MS1)					**Source: B2I0628-04**					
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*			
Matrix Spike Dup (2J04048-MSD1)					**Source: B2I0628-04**					
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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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	"							

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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	"							

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

Amec - Portland	Project: Fred Meyer Port Orchard	
7477 SW Tech Center Dr	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97223	Project Manager: Paul Stull	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 2J08046: Prepared 10/08/02 Using EPA 5030B										
Blank (2J08046-BLK1)										
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*			
LCS (2J08046-BS1)										
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*			
LCS Dup (2J08046-BSD1)										
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*			

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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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: B2E0637

CLIENT: AMEC
REPORT TO: Paul Stull
ADDRESS: 7376 SW Durham Rd.
Portland, OR 97224
PHONE: 503-639-3400 FAX: 503-620-7892

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard
PROJECT NUMBER: 9-61M-10282-0
SAMPLED BY: Joe Rock

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: 10 | 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.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx	EPA 8260B*	BTEX/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, EDC, EDB,	02
3.							Naphthalene,	
4.							Alkylbenzene suite	
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

RELINQUISHED BY: Joe Rock — FIRM: AMEC — DATE: 9-27-02 — TIME: 9:15
RECEIVED BY: [signature] — PRINT NAME: [illegible] — FIRM: NA — DATE: 9/27/02 — TIME: 0915

RELINQUISHED BY: — PRINT NAME: — FIRM: — DATE: — TIME:
RECEIVED BY: — PRINT NAME: — FIRM: — DATE: — TIME:

ADDITIONAL REMARKS:
4/0
TEMP: 3.7
PAGE 1 OF 1

COC REV 3/99

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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: AMEC

REPORT TO: Paul Stull

ADDRESS: 7376 SW Durham Rd.
Portland, OR 97224

PHONE: 503-639-3400 FAX: 503-620-7892

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-61M-10282-0

SAMPLED BY: Joe Rock

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.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx / 8260 or EPA 8021B / BTEX/MTBE	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			MtBE, EDC, EDB,	
3.					Naphthalene	
4.					Alkylbenzene suite	
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

RELINQUISHED BY: [signature] DATE: 9-27-02
PRINT NAME: Joe Rock FIRM: AMEC TIME: 9:15

RECEIVED BY: [signature] DATE: 9-27-02
PRINT NAME: DAN NANT FIRM: NCA TIME: 0915

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS:

TEMP:

COC REV 3/99

PAGE 1 OF 1

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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

Jeanne Garthwaite
Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland OR/USA, 97224	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	12/23/02 16:29

Volatile Petroleum Products by NWTPH-Gx
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-103 (B2L0323-01) Water	**Sampled: 12/12/02 13:45 Received: 12/13/02 14:00**								
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*			"	"	"	"	
MW-105 (B2L0323-02) Water	**Sampled: 12/12/02 14:30 Received: 12/13/02 14:00**								
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*			"	"	"	"	

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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
MW-103 (B2L0323-01) Water Sampled: 12/12/02 13:45 Received: 12/13/02 14:00									
Methyl tert-butyl ether	ND	2.00	ug/l	1	2L19026	12/19/02	12/20/02	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
n-Butylbenzene	**54.2**	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	**395**	1.00	"	"	"	"	"	"	E-01
Isopropylbenzene	**34.1**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	**49.4**	1.00	"	"	"	"	"	"	
Naphthalene	**183**	1.00	"	"	"	"	"	"	E
n-Propylbenzene	**157**	1.00	"	"	"	"	"	"	E
Toluene	**6.64**	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**869**	1.00	"	"	"	"	"	"	E-01
1,3,5-Trimethylbenzene	**452**	1.00	"	"	"	"	"	"	E
m,p-Xylene	**754**	2.00	"	"	"	"	"	"	E-01
o-Xylene	**241**	1.00	"	"	"	"	"	"	E
Surrogate: 1,2-DCA-d4	*107 %*	*77-122*			"	"	"	"	
Surrogate: Toluene-d8	*104 %*	*75-124*			"	"	"	"	
Surrogate: 4-BFB	*146 %*	*77-120*			"	"	"	"	*S-04*
MW-103 (B2L0323-01RE1) Water Sampled: 12/12/02 13:45 Received: 12/13/02 14:00									
Methyl tert-butyl ether	ND	100	ug/l	50	2L20013	12/20/02	12/20/02	EPA 8260B	
Benzene	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	**65.3**	50.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	50.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	50.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	50.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	50.0	"	"	"	"	"	"	
Ethylbenzene	**473**	50.0	"	"	"	"	"	"	
Isopropylbenzene	ND	50.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	50.0	"	"	"	"	"	"	
Naphthalene	**163**	50.0	"	"	"	"	"	"	
n-Propylbenzene	**115**	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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
MW-103 (B2L0323-01RE1) Water 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*			"	"	"	"	
MW-105 (B2L0323-02) Water 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*			"	"	"	"	

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland OR/USA, 97224	Project Manager: Paul Stull	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
Batch 2L17005: Prepared 12/17/02 Using EPA 5030B (P/T)										
Blank (2L17005-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	*40.1*		"	*48.0*		*83.5*	*57-125*			
LCS (2L17005-BS1)										
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*			
LCS Dup (2L17005-BSD1)										
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*			
Matrix Spike (2L17005-MS1)					**Source: B2L0324-11**					
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*			
Matrix Spike Dup (2L17005-MSD1)					**Source: B2L0324-11**					
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*			

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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	"							

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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	"							

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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	"							

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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*			

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7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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*			

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland OR/USA, 97224	Project Manager: Paul Stull	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

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

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CHAIN OF CUSTODY REPORT

Work Order #: BL10323

CLIENT: AMEC

REPORT TO: Paul Stull

ADDRESS: 7376 SW Durham Rd.
Portland, OR 97224

PHONE: 503-639-3400 FAX: 503-620-7842

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-61M-10252-0

SAMPLED BY: Joe Rock

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD.)

Petroleum Hydrocarbon Analyses: 5 (STD.) | 4 | 3 | 2 | 1 | <1

OTHER — Please Specify

*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	REQUESTED ANALYSES: NW-TPHGx	REQUESTED ANALYSES: 8260 *	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW-103	12-12-02 13:45	X	X	W	4	8260 = BTEX,	01
2. MW-105	12-12-02 14:30	X	X	W	6	MTBE, EDC, EDB,	02
3.						Naphthalene,	
4.						Alkylbenzene suite	
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

RELINQUISHED BY: Joe Rock — FIRM: AMEC — DATE: 12-13-02 — TIME: 14:00

RECEIVED BY: Don Nunn — PRINT NAME: Don Nunn — FIRM: NCA — DATE: 12/13/02 — TIME: 1400

RELINQUISHED BY: — PRINT NAME: — FIRM: — DATE: — TIME:

RECEIVED BY: — PRINT NAME: — FIRM: — DATE: — TIME:

ADDITIONAL REMARKS: w/o

TEMP: 3.7

COC REV 3/99

PAGE 1 OF 1

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103 (P3D0161-03) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2270	400	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*110 %*	*50-150*							
Surr: 4-BFB (PID)	*106 %*	*75-125*							
MW105 (P3D0161-04) Water					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	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	80.0	"	"	"	"	"	"	
Surr: 4-BFB (FID)	*106 %*	*50-150*							
Surr: 4-BFB (PID)	*104 %*	*75-125*							

North Creek Analytical - Portland

Crystal Jones, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MWX (P3D0161-01) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*107 %*	*75-120*							
EB (P3D0161-02) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*106 %*	*75-120*							

North Creek Analytical - Portland

Crystal Jones, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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										
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	"							
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*			
LCS (3040153-BS1)				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*			
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			
Surr: 4-BFB (PID)	*49.2*		"	*50.0*		*98.4*	*75-125*			
Duplicate (3040153-DUP1)		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*			
Duplicate (3040153-DUP2)		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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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	"							
Surr: 4-BFB (PID)	*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			
Surr: 4-BFB (PID)	*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			
Surr: 4-BFB (PID)	*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	
Surr: 4-BFB (PID)	*49.9*		"	*50.0*		*99.8*	*75-120*			

North Creek Analytical - Portland

Crystal Jones, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

The results in 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 For Crystal Jones, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Trip Blank (P3F0796-01) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*100 %*	*75-120*							
Equip Blank (P3F0796-02) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*102 %*	*75-120*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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										
Blank (3061045-BLK1)				Prepared & Analyzed: 06/26/03						
Benzene	ND	0.500	ug/l							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surr: 4-BFB (PID)	*49.8*		"	*50.0*		*99.6*	*75-120*			
LCS (3061045-BS2)				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			
Surr: 4-BFB (PID)	*47.4*		"	*50.0*		*94.8*	*75-120*			
Matrix Spike (3061045-MS1)		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			
Surr: 4-BFB (PID)	*44.1*		"	*50.0*		*88.2*	*75-120*			
Matrix Spike Dup (3061045-MSD1)		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	
Surr: 4-BFB (PID)	*41.6*		"	*50.0*		*83.2*	*75-120*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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*			

The results in 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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 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 X or ___/___/___

3. Delivered by: BH X NCA courier ___ FedEx ___ UPS X Courier ___ Client ___ Other ____

   Airbill # if applicable ____ (Put copy of shipping papers in file)

4. There were 0 custody seals present, signed by ____ date ___/___/___.

5. Were the custody seals unbroken and intact at the date and time of arrival? ___ Yes ___ No

6. Was ice used? X yes ___ no Type of ice: ___ blue ice X 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 X No

8. Were custody papers filled out properly (ink, signed, etc.)? X Yes ___ No

   If "no" please specify: ____

9. Was project identifiable from custody papers? X 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: NA bubble wrap/bag ___ styrofoam ___ cardboard ___ other

12. Were samples in bags? X Yes ___ No

13. Did all containers indicated on the COC arrive? X Yes ___ No

    If "no" please indicate which containers were absent ____

14. Were all containers unbroken and labels in good condition? X Yes ___ No

    If "no" please indicate which containers ____

15. Were all bottle labels complete (ID, date, time, signature, etc.)? X Yes ___ No

    Do the IDs, times, etc. agree with the COC? X Yes ___ No

    If "no" please indicate which containers ____

16. Are containers properly preserved for indicated analysis? X Yes ___ No

17. Is there adequate volume for the test(s) requested? X Yes ___ No

18. If voa vials were submitted, are they free of bubbles? ___ N/A X Yes ___ No

19. **Log-in phase: Date samples were logged in:** 6/24/03 **Elm Project #** P3F0796

20. Logged in by (print) Callie Fahsholz (sign) [signature]

21. Was the project manager notified of status? (Use back of form as a record) X Yes ___ No

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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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Kortland Orr For Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR/USA 97224	Project Manager: Paul Stull	10/08/03 22:13

Volatile Petroleum Products by NWTPH-Gx
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-103 (B3I0720-01) Water 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*
MW-105 (B3I0720-02) Water 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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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
MW-103 (B3I0720-01) Water Sampled: 09/23/03 13:30 Received: 09/24/03 15:00									
Methyl tert-butyl ether	ND	10.0	ug/l	10	3I30056	09/30/03	09/30/03	EPA 8260B	
Benzene	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	**14.8**	10.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
Ethylbenzene	**354**	10.0	"	"	"	"	"	"	
Isopropylbenzene	**27.0**	10.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
Naphthalene	**80.3**	10.0	"	"	"	"	"	"	
n-Propylbenzene	**70.9**	10.0	"	"	"	"	"	"	
Toluene	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1060**	10.0	"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	**323**	10.0	"	"	"	"	"	"	
o-Xylene	**170**	10.0	"	"	"	"	"	"	
m,p-Xylene	**898**	20.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*111 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*101 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*104 %*	*70-130*			"	"	"	"	
MW-103 (B3I0720-01RE1) Water Sampled: 09/23/03 13:30 Received: 09/24/03 15:00									
Methyl tert-butyl ether	ND	20.0	ug/l	20	3J01020	09/30/03	10/01/03	EPA 8260B	
Benzene	ND	20.0	"	"	"	"	"	"	
n-Butylbenzene	**22.6**	20.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	20.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	20.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	20.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	20.0	"	"	"	"	"	"	
Ethylbenzene	**369**	20.0	"	"	"	"	"	"	
Isopropylbenzene	**32.4**	20.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20.0	"	"	"	"	"	"	
Naphthalene	**85.8**	20.0	"	"	"	"	"	"	
n-Propylbenzene	**81.0**	20.0	"	"	"	"	"	"	
Toluene	ND	20.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1210**	20.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**342**	20.0	"	"	"	"	"	"	
o-Xylene	**188**	20.0	"	"	"	"	"	"	

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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
MW-103 (B3I0720-01RE1) Water Sampled: 09/23/03 13:30 Received: 09/24/03 15:00									
m,p-Xylene	964	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	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*110 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*101 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*106 %*	*70-130*			"	"	"	"	

North Creek Analytical - Bothell

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Kortland Orr For Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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
Batch 3J01001: Prepared 10/01/03 Using EPA 5030B (P/T)										
Blank (3J01001-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Surrogate: 4-BFB (FID)	*48.1*		"	*48.0*		*100*	*62-127*			
LCS (3J01001-BS1)										
Gasoline Range Hydrocarbons	465	50.0	ug/l	500		93.0	80-120			
Surrogate: 4-BFB (FID)	*52.9*		"	*48.0*		*110*	*62-127*			
LCS Dup (3J01001-BSD1)										
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*			
Matrix Spike (3J01001-MS1)					**Source: B3I0720-02**					
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*			
Matrix Spike Dup (3J01001-MSD1)					**Source: B3I0720-02**					
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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR/USA 97224	Project Manager: Paul Stull	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-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	"							
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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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	"							
Surrogate: 1,2-DCA-d4	*44.2*		"	*40.0*		*110*	*70-130*			
Surrogate: Toluene-d8	*40.5*		"	*40.0*		*101*	*70-130*			
Surrogate: 4-BFB	*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			
Surrogate: 1,2-DCA-d4	*39.4*		"	*40.0*		*98.5*	*70-130*			
Surrogate: Toluene-d8	*40.5*		"	*40.0*		*101*	*70-130*			
Surrogate: 4-BFB	*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	
Surrogate: 1,2-DCA-d4	*40.6*		"	*40.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*39.6*		"	*40.0*		*99.0*	*70-130*			
Surrogate: 4-BFB	*39.8*		"	*40.0*		*99.5*	*70-130*			

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7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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										
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*			

The results in 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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 (541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: B3I0720

CLIENT: AMEC

REPORT TO: Paul Skull

ADDRESS: 7376 SW Durham Rd.
Portland, OR 97224

PHONE: 503-639-3400 FAX: 503-620-7842

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-61W-102820

SAMPLED BY: Joe Rock

TURNAROUND REQUEST in Business Days*

Organic & Inorganic Analyses: (10) STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: (5) STD. | 4 | 3 | 2 | 1 | <1

OTHER — Please Specify

*Turnaround Requests less than standard may incur Rush Charges.

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME (PST)	Nwtph-Gx	8260*	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA W ID
1. MW-103	9/23/03 13:30			W	4	8260-BTEX, MTBE,	-01
2. MW-105	↓ 14:15			W	4	EDC, EDB, Naphthalene,	-02
3.						Alkylbenzene Suite	
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

Revised Chain of Custody

RELINQUISHED BY: Joe Rock FIRM: AMEC DATE: 9-24-03 TIME: 1500

RECEIVED BY: Catherine Hardman FIRM: NCA DATE: 9-25 TIME: 15:00

RELINQUISHED BY: PRINT NAME: FIRM: DATE: TIME:

RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

COC REV 3/00

TEMP: 10.0 | PAGE 1 OF 1

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05 January 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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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
MW 103 (B3L0685-01) Water 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*
MW 105 (B3L0685-02) Water 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*			"	"	"	"	
Trip Blank (B3L0685-03) Water 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*			"	"	"	"	
EB (B3L0685-04) Water 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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	01/05/04 15:39

Volatile Organic Compounds by EPA Method 8260B

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW 105 (B3L0685-02) Water Sampled: 12/17/03 15:55 Received: 12/19/03 10:35									
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

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Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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-Dichloroethene	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	"							

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Jeanne Garthwaite, Project Manager

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
MW103 (P4D0111-01RE1) Water					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*							
MW105 (P4D0111-02RE1) Water					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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Trip Blank (P4D0111-03) Water					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	"	"	"	"	"	"	
Surr: 4-BFB (PID)	*105 %*	*70-130*							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103 (P4D0111-01RE1) Water					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*							
MW105 (P4D0111-02) Water					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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 Limits	RPD	RPD Limit	Notes
Batch 4040429 - EPA 5030B										
Blank (4040429-BLK1)				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	ND	80.0	ug/l							
Surr: 4-BFB	*43.5*		"	*50.0*		*87.0*	*50-150*			
LCS (4040429-BS1)				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	750	80.0	ug/l	1000		75.0	70-130			
Surr: 4-BFB	*42.8*		"	*50.0*		*85.6*	*50-150*			
LCS Dup (4040429-BSD1)				Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	879	80.0	ug/l	1000		87.9	70-130	15.8	40	
Surr: 4-BFB	*44.6*		"	*50.0*		*89.2*	*50-150*			
Duplicate (4040429-DUP1)		Source: P4D0046-02		Prepared & Analyzed: 04/12/04						
Gasoline Range Hydrocarbons	743	80.0	ug/l		916			20.9	40	
Surr: 4-BFB	*49.9*		"	*50.0*		*99.8*	*50-150*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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										
Blank (4040238-BLK1)				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*			
LCS (4040238-BS1)				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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	04/14/04 11:46

Sclected 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	"							

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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	"							
Surr: 4-BFB	*20.1*		"	*20.0*		*100*	*75-120*			
Surr: 1,2-DCA-d4	*20.6*		"	*20.0*		*103*	*77-129*			
Surr: Dibromofluoromethane	*20.0*		"	*20.0*		*100*	*80-121*			
Surr: Toluene-d8	*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			
Surr: 4-BFB	*19.6*		"	*20.0*		*98.0*	*75-120*			
Surr: 1,2-DCA-d4	*20.2*		"	*20.0*		*101*	*77-129*			
Surr: Dibromofluoromethane	*20.1*		"	*20.0*		*100*	*80-121*			
Surr: Toluene-d8	*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	
Surr: 4-BFB	*19.5*		"	*20.0*		*97.5*	*75-120*			
Surr: 1,2-DCA-d4	*19.8*		"	*20.0*		*99.0*	*77-129*			
Surr: Dibromofluoromethane	*19.8*		"	*20.0*		*99.0*	*80-121*			
Surr: Toluene-d8	*19.8*		"	*20.0*		*99.0*	*80-120*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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*			

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AMEC- Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Crystal Jones, Project Manager

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CHAIN OF CUSTODY REPORT

Work Order #: P4D0111

CLIENT: AMEC	INVOICE TO:
REPORT TO: Paul Stull	
ADDRESS: 7376 SW Durham Port OR	
PHONE: 503 6393400 FAX:	P.O. NUMBER:
PROJECT NAME: Fred Meyer Port Orchard	
PROJECT NUMBER: 9-01M-10282-0	
SAMPLED BY: McFarland	

TURNAROUND REQUEST in Business Days*
Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: ~~5~~ STD. | 4 | 3 | 2 | 1 | <1
OTHER Please Specify
*Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Dx	8260	BTEX	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW 103	3-31-04 1105	X	X					
2. MW 105	3-31-04 1000	X	X					
3. Trip Blank	~~3-31-04~~ Lab supplied			X				
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								

RELINQUISHED BY:		DATE: 4-1-04	RECEIVED BY:		DATE: 4/1/04
PRINT NAME: W.J. McFarland	FIRM: AMEC	TIME: 0800	PRINT NAME: Bob F	FIRM: NA	TIME: 9:24
RELINQUISHED BY:		DATE: 4/1/04	RECEIVED BY:		DATE: 4/1/04
PRINT NAME: Bob F	FIRM: NA	TIME: [illegible]	PRINT NAME: Kim Davis	FIRM: NCA	TIME: 1021

ADDITIONAL REMARKS:
8260 TO include BTEX, MTBE, EDB, EDC, Naphthalene + Alkylbenzene suite

COC REV 3/99

TEMP: 3.1

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 = 2.10×10^{-4}

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	07/21/04 13:40

Volatile Petroleum Products by NWTPH-Gx
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									
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*			"	"	"	"	
MW103 (B4G0035-02) Water 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*			"	"	"	"	
MW105 (B4G0035-03) Water 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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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	"	"	"	"	"	"	
n-Butylbenzene	**14.4**	2.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	2.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	2.50	"	"	"	"	"	"	
1,2-Dibromoethane	ND	2.50	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.50	"	"	"	"	"	"	
Ethylbenzene	**243**	2.50	"	"	"	"	"	"	
Isopropylbenzene	**24.7**	2.50	"	"	"	"	"	"	
p-Isopropyltoluene	**5.98**	2.50	"	"	"	"	"	"	
Naphthalene	**138**	2.50	"	"	"	"	"	"	
n-Propylbenzene	**69.4**	2.50	"	"	"	"	"	"	
Toluene	ND	2.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1010**	2.50	"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	**281**	2.50	"	"	"	"	"	"	E
o-Xylene	**198**	2.50	"	"	"	"	"	"	

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Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	**Reported:**
Portland, OR/USA 97224	Project Manager: Paul Stull	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									
m,p-Xylene	915	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	"	"	"	"	"	"	
Ethylbenzene	**258**	20.0	"	"	"	"	"	"	
Isopropylbenzene	**26.4**	20.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	20.0	"	"	"	"	"	"	
Naphthalene	**114**	20.0	"	"	"	"	"	"	
n-Propylbenzene	**76.8**	20.0	"	"	"	"	"	"	
Toluene	ND	20.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1150**	20.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**331**	20.0	"	"	"	"	"	"	
o-Xylene	**211**	20.0	"	"	"	"	"	"	
m,p-Xylene	**964**	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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
MW105 (B4G0035-03) Water Sampled: 06/29/04 16:00 Received: 07/01/04 08:20									
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

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Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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							
Surrogate: 4-BFB (FID)	*44.7*		"	*48.0*		*93.1*	*58-144*			
LCS (4G11003-BS1)										
Gasoline Range Hydrocarbons	522	50.0	ug/l	502		104	80-120			
Surrogate: 4-BFB (FID)	*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	
Surrogate: 4-BFB (FID)	*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			
Surrogate: 4-BFB (FID)	*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	
Surrogate: 4-BFB (FID)	*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							
Surrogate: 4-BFB (FID)	*45.1*		"	*48.0*		*94.0*	*58-144*			
LCS (4G13004-BS1)										
Gasoline Range Hydrocarbons	518	50.0	ug/l	502		103	80-120			
Surrogate: 4-BFB (FID)	*49.8*		"	*48.0*		*104*	*58-144*			

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Jeanne Garthwaite

Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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										
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	"							
Surrogate: 1,2-DCA-d4	*40.1*		"	*40.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*39.8*		"	*40.0*		*99.5*	*70-130*			
Surrogate: 4-BFB	*39.9*		"	*40.0*		*99.8*	*70-130*			
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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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			
Surrogate: 1,2-DCA-d4	*41.2*		"	*40.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*39.3*		"	*40.0*		*98.2*	*70-130*			
Surrogate: 4-BFB	*40.4*		"	*40.0*		*101*	*70-130*			
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	
Surrogate: 1,2-DCA-d4	*42.3*		"	*40.0*		*106*	*70-130*			
Surrogate: Toluene-d8	*40.4*		"	*40.0*		*101*	*70-130*			
Surrogate: 4-BFB	*41.2*		"	*40.0*		*103*	*70-130*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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			
Surrogate: 1,2-DCA-d4	*4.08*		"	*4.00*		*102*	*70-130*			
Surrogate: Toluene-d8	*3.99*		"	*4.00*		*99.8*	*70-130*			
Surrogate: 4-BFB	*3.97*		"	*4.00*		*99.2*	*70-130*			
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	
Surrogate: 1,2-DCA-d4	*3.98*		"	*4.00*		*99.5*	*70-130*			
Surrogate: Toluene-d8	*4.08*		"	*4.00*		*102*	*70-130*			
Surrogate: 4-BFB	*3.96*		"	*4.00*		*99.0*	*70-130*			

North Creek Analytical - Bothell

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Jeanne Garthwaite, Project Manager

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Amec - Portland	Project: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Reported:
Portland, OR/USA 97224	Project Manager: Paul Stull	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

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3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: B4G0035

NT: AMEC
RT TO: Paul Stull
RESS: 7376 SW Durham
Port OR
NE: 3639340 FAX:
JECT NAME: Fred Meyer Port Orchard
JECT NUMBER: 9-66M-10282-0
MPLED BY: McFarland

INVOICE TO:

P.O. NUMBER:

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx	8260	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
Trip Blank	6-29-04 1000	X	X	H2O	2		01
MW-03	6-29-04 1650	X	X	H2O	6		02
MW-05	6-29-04 1600	X	X	H2O	6		03

RELEASED BY: [signature]
PRINT NAME: W.S. McFarland FIRM: AMEC DATE: 7-1-04 TIME: 0820
RECEIVED BY: [signature]
PRINT NAME: Dennis Kurdman FIRM: NCA DATE: 7/1/04 TIME: 9:20

RELEASED BY:
PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY:
PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS: 8260 to include BTEX, MTBE, EDC, EDB, Naphthalene, Alkylbenzene suite
TEMP: 2.0

COC REV 1/03

PAGE 1 OF 1

W/D

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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.

Work	Project	ProjectNumber
P4J0076	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini, Project Manager

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Environmental Laboratory Network

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
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
P4J0076-01RE1 Water	**MW103-092904**		**Sampled: 09/29/04 13:45**							
Gasoline Range Hydrocarbons	NW TPH-Gx	9680	-----	800	ug/l	10x	4100613	10/12/04	10/13/04 03:20	
Surrogate(s): 4-BFB	*Recovery: 93.0%*		*Limits: 50 - 150 %*		*1X*				"	
P4J0076-02 Water	**MW105-092904**		**Sampled: 09/29/04 14:00**							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	----	80.0	ug/l	1x	4100493	10/11/04	10/11/04 19:03	
Surrogate(s): 4-BFB	*Recovery: 84.0%*		*Limits: 50 - 150 %*		"				"	

North Creek Analytical - Portland

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Lisa Domenighini

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P4J0076-01 Water	**MW103-092904**	**Sampled: 09/29/04 13:45**								
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	"	"	"	"	"	
Ethylbenzene	"	**276**	-----	5.00	"	"	"	"	"	
Xylenes (total)	"	**1010**	-----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	20.0	"	"	"	"	"	
Naphthalene	"	**94.9**	-----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**1260**	-----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**391**	-----	5.00	"	"	"	"	"	
Isopropylbenzene	"	**30.9**	-----	20.0	"	"	"	"	"	
n-Propylbenzene	"	**88.6**	-----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 99.0%*		*Limits: 75 - 120 %*		*1X*			"	
1,2-DCA-d4		*95.5%*		*77 - 129 %*		"			"	
Dibromofluoromethane		*95.0%*		*80 - 121 %*		"			"	
Toluene-d8		*98.5%*		*80 - 120 %*		"			"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P4J0076-02 Water	**MW105-092904**		**Sampled: 09/29/04 14:00**							
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 97.5%*		*Limits: 75 - 120 %*		"			"	
1,2-DCA-d4		*104%*		*77 - 129 %*		"			"	
Dibromofluoromethane		*101%*		*80 - 121 %*		"			"	
Toluene-d8		*96.5%*		*80 - 120 %*		"			"	

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Lisa Domenighini, Project Manager

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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:
10/18/04 17:26

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
Blank (4100493-BLK1)								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*	
LCS (4100493-BS2)								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*	
LCS Dup (4100493-BSD2)								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*	
Duplicate (4100493-DUP1)					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.*
Duplicate (4100493-DUP2)					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
Blank (4100613-BLK1)								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*	
LCS (4100613-BS2)								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*	
LCS Dup (4100613-BSD2)								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*	
Duplicate (4100613-DUP1)					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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Blank (4100463-BLK1)									Extracted: 10/10/04 10:59					
1,2-Dibromoethane	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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 96.0%*			*Limits: 75-120%*	"							*10/10/04 14:20*	
1,2-DCA-d4		*96.5%*			*77-129%*	"							"	
Dibromofluoromethane		*95.5%*			*80-121%*	"							"	
Toluene-d8		*97.5%*			*80-120%*	"							"	
LCS (4100463-BS1)									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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 75-120%*	"							*10/10/04 12:28*	
1,2-DCA-d4		*99.0%*			*77-129%*	"							"	
Dibromofluoromethane		*100%*			*80-121%*	"							"	
Toluene-d8		*102%*			*80-120%*	"							"	
Matrix Spike (4100463-MS1)					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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 101%*			*Limits: 75-120%*	"							*10/10/04 12:57*	
1,2-DCA-d4		*98.0%*			*77-129%*	"							"	
Dibromofluoromethane		*100%*			*80-121%*	"							"	
Toluene-d8		*99.5%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Matrix Spike Dup (4100463-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 75-120%*	"							*10/10/04 13:25*	
1,2-DCA-d4		*100%*			*77-129%*	"							"	
Dibromofluoromethane		*100%*			*80-121%*	"							"	
Toluene-d8		*102%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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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.

Work	Project	ProjectNumber
P4K0532	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P4K0532-01 Water	**MW103**	**Sampled: 11/09/04 12:30**								
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	"	"	"	"	"	
Ethylbenzene	"	**310**	-----	5.00	"	"	"	"	"	
Xylenes (total)	"	**1020**	-----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	20.0	"	"	"	"	"	
Naphthalene	"	**91.7**	-----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**1420**	-----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**440**	-----	5.00	"	"	"	"	"	
Isopropylbenzene	"	**45.3**	-----	20.0	"	"	"	"	"	
n-Propylbenzene	"	**123**	-----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 75 - 120 %*		*1x*			"	
1,2-DCA-d4		*94.0%*		*77 - 129 %*		"			"	
Dibromofluoromethane		*97.0%*		*80 - 121 %*		"			"	
Toluene-d8		*100%*		*80 - 120 %*		"			"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P4K0532-02 Water	**MW105**	**Sampled: 11/09/04 12:40**								
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 96.5%*		*Limits: 75 - 120 %*	"				"	
1,2-DCA-d4		*94.0%*		*77 - 129 %*	"				"	
Dibromofluoromethane		*97.5%*		*80 - 121 %*	"				"	
Toluene-d8		*94.0%*		*80 - 120 %*	"				"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Blank (4110737-BLK1)									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%*	"							"	
LCS (4110737-BS1)									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%*	"							"	
Matrix Spike (4110737-MS1)						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

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Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Matrix Spike Dup (4110737-MSD1)					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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 75-120%*	"							*11/16/04 18:03*	
1,2-DCA-d4		*97.5%*			*77-129%*	"							"	
Dibromofluoromethane		*89.5%*			*80-121%*	"							"	
Toluene-d8		*100%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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3209 Denali St, Anchorage, AK 99503-4030 907-334-9200 FAX 334-9210

CHAIN OF CUSTODY REPORT

Work Order #: P4K0532

CLIENT: AMEC

REPORT TO: Paul Stull
ADDRESS: 7376 SW Durham
Port OR
PHONE: 503 639 3400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard
PROJECT NUMBER:
SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8260	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	MW 103	11-09-04 1230	X	H2O	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: [signature] DATE: 11-11-04
PRINT NAME: Wes McFarland FIRM: AMEC TIME: 1310

RECEIVED BY: [signature] DATE: 11.11.04
PRINT NAME: Vanessa Vera FIRM: NCA TIME: 13:15

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: cc client

TEMP: 3.3 2.5

COC REV 1/03

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 X or ___/___/___

3. Delivered by: ___NCA courier ___FedEx ___UPS ___Courier X Client ___Other _____

   Airbill # if applicable _____ (Put copy of shipping papers in file)

4. There were 0 custody seals present, signed by _____ date ___/___/___.

5. Were the custody seals unbroken and intact at the date and time of arrival? ____Yes ____No

6. Was ice used? X yes ____no Type of ice: ____ blue ice ____gel ice X real ice

   Temperature (degrees C) 3.3, 2.5 Raytek thermometer _____ Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag ~~and taped inside~~ to lid? X Yes ____No

8. Were custody papers filled out properly (ink, signed, etc.)? X Yes ____No

   If "no" please specify: _____

9. Was project identifiable from custody papers? X 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? X Yes ____No

13. Did all containers indicated on the COC arrive? X Yes (X) No

    If "no" please indicate which containers were absent No Trip Blank Received

14. Were all containers unbroken and labels in good condition? X Yes ____No

    If "no" please indicate which containers _____

15. Were all bottle labels complete (ID, date, time, signature, etc.)? X Yes ____No

    Do the IDs, times, etc. agree with the COC? X Yes ____No

    If "no" please indicate which containers _____

16. Are containers properly preserved for indicated analysis? X Yes ____No

17. Is there adequate volume for the test(s) requested? X Yes ____No

18. If voa vials were submitted, are they free of bubbles? ____N/A X 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) D. McKenzie

21. Was the project manager notified of status? (Use back of form as a record) X Yes ____No

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March 23, 2005

RECEIVED MAR 28 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 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.

Work	Project	ProjectNumber
P5C0595	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Crystal Jones For Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

North Creek Analytical - Portland

Crystal Jones For Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	03/23/05 16:35

Gasoline Hydrocarbons per NW TPH-Gx Method

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5C0595-01 Water	**Trip Blank**	**Sampled: 03/10/05 13:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 01:01	
Surrogate(s): 4-BFB		*Recovery: 96.6%*		*Limits: 50 - 150 %*	"				"	
P5C0595-02 Water	**EB**	**Sampled: 03/10/05 13:15**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 01:28	
Surrogate(s): 4-BFB		*Recovery: 95.2%*		*Limits: 50 - 150 %*	"				"	
P5C0595-03 Water	**MW105**	**Sampled: 03/10/05 14:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5030636	03/15/05	03/16/05 02:23	
Surrogate(s): 4-BFB		*Recovery: 95.6%*		*Limits: 50 - 150 %*	"				"	
P5C0595-04RE2 Water	**MW103**	**Sampled: 03/10/05 14:40**								
Gasoline Range Hydrocarbons	NW TPH-Gx	**1570**	-----	80.0	ug/l	1x	5030730	03/17/05	03/18/05 03:10	
Surrogate(s): 4-BFB		*Recovery: 118%*		*Limits: 50 - 150 %*	"				"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	03/23/05 16:35

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
P5C0595-03 Water	**MW105**	**Sampled: 03/10/05 14:00**								
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 96.5%*		*Limits: 75 - 120 %*	"				"	
1,2-DCA-d4		*102%*		*77 - 129 %*	"				"	
Dibromofluoromethane		*101%*		*80 - 121 %*	"				"	
Toluene-d8		*92.0%*		*80 - 120 %*	"				"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	03/23/05 16:35

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
P5C0595-04 Water	**MW103**	**Sampled: 03/10/05 14:40**								**R-16**
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	"	**140**	-----	5.00	"	"	"	"	"	
Xylenes (total)	"	**612**	-----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	20.0	"	"	"	"	"	
Naphthalene	"	**89.0**	-----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**918**	-----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**266**	-----	5.00	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	20.0	"	"	"	"	"	
n-Propylbenzene	"	**56.1**	-----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 96.0%*		*Limits: 75 - 120 %*		*1x*			"	
1,2-DCA-d4		*101%*		*77 - 129 %*		"			"	
Dibromofluoromethane		*102%*		*80 - 121 %*		"			"	
Toluene-d8		*97.0%*		*80 - 120 %*		"			"	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (5030636-BLK1)							Extracted: 03/15/05 12:13							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/15/05 13:30	
Surrogate(s): 4-BFB		*Recovery: 102%*		*Limits: 50-150%*		"							*03/15/05 13:30*	
LCS (5030636-BS1)							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	
Surrogate(s): 4-BFB		*Recovery: 108%*		*Limits: 50-150%*		"							*03/15/05 13:57*	
LCS Dup (5030636-BSD1)							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	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 50-150%*		"							*03/15/05 14:25*	
Duplicate (5030636-DUP1)							QC Source: P5C0539-01						Extracted: 03/15/05 12:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	NR	(40)	03/15/05 16:44	
Surrogate(s): 4-BFB		*Recovery: 94.2%*		*Limits: 50-150%*		"							*03/15/05 16:44*	
Duplicate (5030636-DUP2)							QC Source: P5C0595-02						Extracted: 03/15/05 12:13	
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	NR	(40)	03/16/05 01:56	
Surrogate(s): 4-BFB		*Recovery: 96.2%*		*Limits: 50-150%*		"							*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
Blank (5030708-BLK1)							Extracted: 03/16/05 13:51							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/16/05 14:04	
Surrogate(s): 4-BFB		*Recovery: 100%*		*Limits: 50-150%*		"							*03/16/05 14:04*	
LCS (5030708-BS1)							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	
Surrogate(s): 4-BFB		*Recovery: 109%*		*Limits: 50-150%*		"							*03/16/05 14:43*	
LCS Dup (5030708-BSD1)							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	
Surrogate(s): 4-BFB		*Recovery: 105%*		*Limits: 50-150%*		"							*03/16/05 15:10*	
Duplicate (5030708-DUP1)							QC Source: P5C0485-07RE1						Extracted: 03/16/05 13:51	
Gasoline Range Hydrocarbons	NW TPH-Gx	277	---	80.0	ug/l	1x	281	--	--	--	1.43%	(40)	03/16/05 16:21	
Surrogate(s): 4-BFB		*Recovery: 101%*		*Limits: 50-150%*		"							*03/16/05 16:21*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	03/23/05 16:35

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
Blank (5030730-BLK1)								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*	
LCS (5030730-BS2)								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*	
LCS Dup (5030730-BSD2)								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*	
Duplicate (5030730-DUP1)					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*	
Duplicate (5030730-DUP2)					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*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (5030854-BLK1)									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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.0%*			*Limits: 75-120%*	"							*03/21/05 20:02*	
1,2-DCA-d4		*100%*			*77-129%*	"							"	
Dibromofluoromethane		*102%*			*80-121%*	"							"	
Toluene-d8		*99.0%*			*80-120%*	"							"	
LCS (5030854-BS1)									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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 100%*			*Limits: 75-120%*	"							*03/21/05 18:15*	
1,2-DCA-d4		*100%*			*77-129%*	"							"	
Dibromofluoromethane		*104%*			*80-121%*	"							"	
Toluene-d8		*99.5%*			*80-120%*	"							"	
Matrix Spike (5030854-MS1)					QC Source: P5C0529-01				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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 99.0%*			*Limits: 75-120%*	"							*03/21/05 18:42*	
1,2-DCA-d4		*99.5%*			*77-129%*	"							"	
Dibromofluoromethane		*102%*			*80-121%*	"							"	
Toluene-d8		*99.0%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Matrix Spike Dup (5030854-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 100%*		*Limits: 75-120%*	"								*03/21/05 19:08*	
1,2-DCA-d4		*99.5%*		*77-129%*	"								"	
Dibromofluoromethane		*102%*		*80-121%*	"								"	
Toluene-d8		*100%*		*80-120%*	"								"	

The results in 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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: PSC0595

NCA CLIENT: AMEC

REPORT TO: Paul Shail

ADDRESS: 7376 SW Durham
Port Or

PHONE: 503 639 3400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-Gim-0282-C

SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: NWTPH Gx		BTEX Suite									MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
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: 3-11-05

PRINT NAME: W. J. McFarland FIRM: AMEC TIME: 0730

RECEIVED BY: [signature] DATE: 3/14/05

PRINT NAME: Bob K FIRM: NCA TIME: 9:21

RELEASED BY: [signature] DATE: 3/14/05

PRINT NAME: [illegible] FIRM: NCA TIME: 9:36

RECEIVED BY: [signature] DATE: 3/14/05

PRINT NAME: Connie Fabisiak FIRM: NCA TIME: 1936

ADDITIONAL REMARKS: 8260 to include BTEX, MTBE, EDC, EDB
Naphthalene & Alkylbenzene suite

TEMP: C.S

COC REV 09/04

PAGE 1 OF 1

NORTH CREEK ANALYTICAL COOLER RECEIPT FORM

(Army Corp. compliant)

Client: AMEC

1. **Please sign for receipt and opening of** 1 **cooler or** _____ **other** _____

   By (print) Curtis Fairchild (sign) [signature]

2. Date samples received 3/4/05 Date opened: Same X or ___/___/___

3. Delivered by: X (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 3/4/05

5. Were the custody seals unbroken and intact at the date and time of arrival? X Yes ___No

6. Was ice used? ✓ yes ___no Type of ice: ___ blue ice ___gel ice X real ice

   Temperature (degrees C) _____ Raytek thermometer ___ Digi-Therm (probe temperature blank)

7. Are custody papers sealed in a plastic bag and taped inside to lid? ___ Yes X No

8. Were custody papers filled out properly (ink, signed, etc.)? X 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:** ___ **(initials)** **date** 3/4/05

11. Packing material: ___bubble wrap/bag X styrofoam ___cardboard _____other

12. Were samples in bags? X 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:** 3/4/05 **Elm Project # P** 50595

20. Logged in by (print) Vanessa Bro (sign) Vanessa Bro

21. Was the project manager notified of status? (Use back of form as a record) ___ Yes ✓ No

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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.

Work	Project	ProjectNumber
P5F1076	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini, Project Manager

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Amended Report

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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Amended Report

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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Amended Report

AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	07/26/05 16:59

Gasoline Hydrocarbons per NW TPH-Gx Method

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5F1076-01 Water	**MWX**	**Sampled: 06/21/05 09:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5061156	06/27/05	06/27/05 19:10	
Surrogate(s): 4-BFB		*Recovery: 93.6%*		*Limits: 50 - 150 %*		"			"	
P5F1076-02 Water	**MW103**	**Sampled: 06/21/05 16:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5061156	06/27/05	06/27/05 19:40	
Surrogate(s): 4-BFB		*Recovery: 92.8%*		*Limits: 50 - 150 %*		"			"	
P5F1076-03RE1 Water	**MW105**	**Sampled: 06/21/05 16:25**								
Gasoline Range Hydrocarbons	NW TPH-Gx	6660	-----	800	ug/l	10x	5061208	06/28/05	06/28/05 14:35	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 50 - 150 %*		*1x*			"	

North Creek Analytical - Portland

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Amended Report

Lisa Domenighini, Project Manager

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Amended Report

AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
P5F1076-02RE1 Water	**MW103**	**Sampled: 06/21/05 16:00**								I-02
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 91.5%*		*Limits: 75 - 120 %*	"				"	
1,2-DCA-d4		*104%*		*77 - 129 %*	"				"	
Dibromofluoromethane		*102%*		*80 - 121 %*	"				"	
Toluene-d8		*92.0%*		*80 - 120 %*	"				"	
P5F1076-03RE1 Water	**MW105**	**Sampled: 06/21/05 16:25**								I-02
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	"	"	"	"	"	
Ethylbenzene	"	**114**	-----	2.50	"	"	"	"	"	
Xylenes (total)	"	**484**	-----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	10.0	"	"	"	"	"	
Naphthalene	"	**57.8**	-----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**474**	-----	5.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**128**	-----	2.50	"	"	"	"	"	
Isopropylbenzene	"	**12.4**	-----	10.0	"	"	"	"	"	
n-Propylbenzene	"	**31.8**	-----	2.50	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: >300%*		*Limits: 75 - 120 %*	"				"	
1,2-DCA-d4		*>300%*		*77 - 129 %*	"				"	
Dibromofluoromethane		*>300%*		*80 - 121 %*	"				"	

North Creek Analytical - Portland

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Lisa Domenighini

Amended Report

Lisa Domenighini, Project Manager

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Amended Report

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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	Sampled: 06/21/05 16:25								I-02
Toluene-d8			*>300%*		*80 - 120 %*		*5x*			*07/06/05 12:18*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (5061156-BLK1)								Extracted: 06/27/05 11:37						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	06/27/05 13:43	
Surrogate(s): 4-BFB		*Recovery: 104%*		*Limits: 50-150%*		"							*06/27/05 13:43*	
LCS (5061156-BS1)								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	
Surrogate(s): 4-BFB		*Recovery: 105%*		*Limits: 50-150%*		"							*06/27/05 12:44*	
LCS Dup (5061156-BSD1)								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	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 50-150%*		"							*06/27/05 13:14*	
Duplicate (5061156-DUP1)						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	
Surrogate(s): 4-BFB		*Recovery: 117%*		*Limits: 50-150%*		*1x*							*06/27/05 17:02*	
Duplicate (5061156-DUP2)						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	
Surrogate(s): 4-BFB		*Recovery: 118%*		*Limits: 50-150%*		*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
Blank (5061208-BLK1)								Extracted: 06/28/05 10:34						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	06/28/05 13:02	
Surrogate(s): 4-BFB		*Recovery: 99.6%*		*Limits: 50-150%*		"							*06/28/05 13:02*	
LCS (5061208-BS1)								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	
Surrogate(s): 4-BFB		*Recovery: 106%*		*Limits: 50-150%*		"							*06/28/05 12:01*	
LCS Dup (5061208-BSD1)								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	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 50-150%*		"							*06/28/05 12:32*	
Duplicate (5061208-DUP1)						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	
Surrogate(s): 4-BFB		*Recovery: 99.8%*		*Limits: 50-150%*		"							*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

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Amended Report

AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (5070129-BLK1)									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%*	"							"	
LCS (5070129-BS1)									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%*	"							"	

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Amended Report

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Matrix Spike (5070129-MS1)				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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 100%*			*Limits: 75-120%*	"							*07/06/05 08:45*	
1,2-DCA-d4		*102%*			*77-129%*	"							"	
Dibromofluoromethane		*104%*			*80-121%*	"							"	
Toluene-d8		*92.0%*			*80-120%*	"							"	
Matrix Spike Dup (5070129-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 102%*			*Limits: 75-120%*	"							*07/06/05 09:11*	
1,2-DCA-d4		*99.5%*			*77-129%*	"							"	
Dibromofluoromethane		*100%*			*80-121%*	"							"	
Toluene-d8		*95.5%*			*80-120%*	"							"	

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Amended Report

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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CHAIN OF CUSTODY REPORT

Work Order #: P5F1076 P5F1032VE

CLIENT: AMEC

INVOICE TO:

REPORT TO: Paul Stull
ADDRESS: 7376 SW Durham
Port OR
PHONE: 5036313400 FAX:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-01M-10282-0

SAMPLED BY: McFarland

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses
~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses
~~5~~ STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: Methanol	PRESERVATIVE: HCl	REQUESTED ANALYSES: NWTPH-Dx	REQUESTED ANALYSES: 8260 Suite	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	MW-X	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: [signature] DATE: 6/23/05
PRINT NAME: W McFarland FIRM: AMEC TIME: 0900
RECEIVED BY: [signature] DATE: 6/24/05
PRINT NAME: Bob FIRM: NCA TIME: 9:18

RELEASED BY: [signature] DATE: 6/24/05
PRINT NAME: Bob FIRM: NCA TIME: 9:35
RECEIVED BY: [signature] DATE: 6-24-05
PRINT NAME: Ernest Jessen FIRM: NCA TIME: 9:35

ADDITIONAL REMARKS: 8260 suite includes BTEX, MTBE, EDC, EDB, Naphthalene, & Alkylbenzene suite
TEMP: 22

COC REV 1/03

NORTH CR :K ANALYTICAL COOLER RECE. 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 ___/___/___

3. Delivered by: ✓ NCA courier (BOB) ___ 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: NA bubble wrap/bag ___styrofoam ___cardboard _____other

12. Were samples in bags? X Yes VE No

13. Did all containers indicated on the COC arrive? ___ Yes X No VE

    If "no" please indicate which containers were absent ~~Did not receive~~ Voas for J

14. Were all containers unbroken and labels in good condition? X 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

    one voa for E bubble

19. **Log-in phase: Date samples were logged in:** 6/25/05 **Elm Project #** P5F1036

20. Logged in by (print) Vanessa Brown (sign) Vanessa Brown

21. Was the project manager notified of status? (Use back of form as a record) ___ Yes ✓ No

RECEIVED OCT 17 2005

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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.

Work	Project	ProjectNumber
P511036	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
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
P5I1036-01 Water	**MW103**	**Sampled: 09/23/05 13:05**								
Gasoline Range Hydrocarbons	NW TPH-Gx	13700	-----	400	ug/l	5x	5091195	09/28/05	09/28/05 16:20	
Surrogate(s): 4-BFB		*Recovery: 82.8%*		*Limits: 50 - 150 %*		*1x*			"	
P5I1036-02 Water	**MW105**	**Sampled: 09/23/05 14:10**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 15:48	
Surrogate(s): 4-BFB		*Recovery: 87.4%*		*Limits: 50 - 150 %*		"			"	
P5I1036-03 Water	**EB**	**Sampled: 09/23/05 13:10**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 14:45	
Surrogate(s): 4-BFB		*Recovery: 90.4%*		*Limits: 50 - 150 %*		"			"	
P5I1036-04 Water	**Trip Blank**	**Sampled: 09/23/05 06:30**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5091195	09/28/05	09/28/05 15:16	
Surrogate(s): 4-BFB		*Recovery: 88.4%*		*Limits: 50 - 150 %*		"			"	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
P5I1036-01 Water	**MW103**	**Sampled: 09/23/05 13:05**								
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 %*	"				"	
P5I1036-02 Water	**MW105**	**Sampled: 09/23/05 14:10**								
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

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Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
P5I1036-02 Water	**MW105**	**Sampled: 09/23/05 14:10**								
Toluene-d8		*102%*			*80 - 120 %*	*1x*			*10/01/05 18:44*	
P5I1036-03 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 %*		"			"	
P5I1036-04 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	"	"	"	"	"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
P5I1036-04	**Water**	**Trip Blank**	**Sampled: 09/23/05 06:30**							
Surrogate(s):	*4-BFB*	*Recovery: 92.5%*		*Limits: 75 - 120 %*		*1x*			*10/01/05 19:40*	
	1,2-DCA-d4	*104%*		*77 - 129 %*		*"*			*"*	
	Dibromofluoromethane	*99.0%*		*80 - 121 %*		*"*			*"*	
	Toluene-d8	*99.0%*		*80 - 120 %*		*"*			*"*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
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 - 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
Blank (5091195-BLK1)								Extracted: 09/28/05 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/28/05 14:01	
Surrogate(s): 4-BFB		*Recovery:*	*91.6%*		*Limits: 50-150%*	"							*09/28/05 14:01*	
LCS (5091195-BS1)								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	
Surrogate(s): 4-BFB		*Recovery:*	*94.4%*		*Limits: 50-150%*	"							*09/28/05 12:58*	
LCS Dup (5091195-BSD1)								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	
Surrogate(s): 4-BFB		*Recovery:*	*94.8%*		*Limits: 50-150%*	"							*09/28/05 13:29*	
Duplicate (5091195-DUP1)					QC Source: P5I0932-01			Extracted: 09/28/05 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	NR	(40)	09/28/05 18:46	
Surrogate(s): 4-BFB		*Recovery:*	*89.4%*		*Limits: 50-150%*	"							*09/28/05 18:46*	
Duplicate (5091195-DUP2)					QC Source: P5I1036-01			Extracted: 09/28/05 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	14300	---	400	ug/l	5x	13700	--	--	--	4.29%	(40)	09/28/05 16:51	
Surrogate(s): 4-BFB		*Recovery:*	*98.2%*		*Limits: 50-150%*	*1x*							*09/28/05 16:51*	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (5100002-BLK1)									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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 92.5%*		*Limits: 75-120%*		"							*10/01/05 12:43*	
1,2-DCA-d4		*96.5%*		*77-129%*		"							"	
Dibromofluoromethane		*93.0%*		*80-121%*		"							"	
Toluene-d8		*96.5%*		*80-120%*		"							"	
LCS (5100002-BS1)									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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 100%*		*Limits: 75-120%*		"							*10/01/05 10:52*	
1,2-DCA-d4		*100%*		*77-129%*		"							"	
Dibromofluoromethane		*100%*		*80-121%*		"							"	
Toluene-d8		*98.5%*		*80-120%*		"							"	

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AMEC- Portland	Project Name: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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%*	"						"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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CHAIN OF CUSTODY REPORT

Work Order #: 15T1036

CLIENT: AMEC	INVOICE TO:
REPORT TO: PAUL STULL	
ADDRESS: 7376 SW Durhamred Portland OR 97224	
PHONE: 503 639 3400 FAX: 503 620 7622	P.O. NUMBER:
PROJECT NAME: Portland Fred Meyer	
PROJECT NUMBER: 9UM102820	
SAMPLED BY: JASON GARDNER	

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.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8260 Suite	MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1.	MW103	9/23/05 1305	X	W	5		
2.	MW105	9/23/05 1418	X	W	5		
3.	FB	1318	X	W	2		
4.	TRIP BLANK	0638	X	W	2		
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

RELINQUISHED BY:		DATE: 9/27/05	RECEIVED BY:		DATE: 9/27/05
PRINT NAME: JASON GARDNER	FIRM: AMEC	TIME: 1000	PRINT NAME:	FIRM: NCA	TIME: 10:40
RELINQUISHED BY:		DATE: 9/27/05	RECEIVED BY:		DATE: 9-27-05
PRINT NAME:	FIRM: NCA	TIME: 10:55	PRINT NAME:	FIRM: NCA	TIME: 10:55

ADDITIONAL REMARKS:
8260 Suite: NWTPH-Gx / EPA 8260 = BTEX, MTBE, EDC, EDB, NAPHTHALENE, Oxygenate Suite -0.5, -0.7, -0.7

COC REV 3/09 | TEMP: | PAGE 1 of 1

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December 14, 2005

RECEIVED DEC 2 0 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.

Work	Project	ProjectNumber
P5L0201	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Lisa Domenighini

Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5L0201-01RE1 Water	**MW103**	**Sampled: 12/01/05 11:40**								
Gasoline Range Hydrocarbons	NW TPH-Gx	3310	-----	400	ug/l	5x	5120357	12/08/05	12/08/05 23:14	
Surrogate(s): 4-BFB		*Recovery: 87.4%*		*Limits: 50 - 150 %*		*1x*			"	
P5L0201-02 Water	**MW105**	**Sampled: 12/01/05 11:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	5120276	12/07/05	12/07/05 23:16	
Surrogate(s): 4-BFB		*Recovery: 84.0%*		*Limits: 50 - 150 %*		"			"	

North Creek Analytical - Portland

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
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

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5L0201-03 Water	**TB**	**Sampled: 12/01/05 10:00**								
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

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/14/05 16:23

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
P5L0201-01RE1 Water	**MW103**	**Sampled: 12/01/05 11:40**								
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	"	**105**	-----	2.50	"	"	"	"	"	
Xylenes (total)	"	**694**	-----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	10.0	"	"	"	"	"	
Naphthalene	"	**25.0**	-----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**780**	-----	5.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**289**	-----	2.50	"	"	"	"	"	
Isopropylbenzene	"	**13.0**	-----	10.0	"	"	"	"	"	
n-Propylbenzene	"	**23.5**	-----	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 %*		"			"	
P5L0201-02 Water	**MW105**	**Sampled: 12/01/05 11:00**								
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

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Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/14/05 16:23

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**	**Sampled: 12/01/05 11:00**							
Toluene-d8		*106%*		*80 - 120 %*		*1x*			*12/07/05 14:31*	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
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 - 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
Blank (5120276-BLK1)								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*	
LCS (5120276-BS1)								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*	
Duplicate (5120276-DUP1)					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*	
Duplicate (5120276-DUP2)					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*	
Matrix Spike (5120276-MS1)					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*	
Matrix Spike Dup (5120276-MSD1)					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*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
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 - 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
Blank (5120357-BLK1)								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*	
LCS (5120357-BS2)								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*	
LCS Dup (5120357-BSD2)								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*	
Duplicate (5120357-DUP1)					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*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Blank (5120292-BLK1)									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)			*81.4%*			*70-130%*	"						"	
LCS (5120292-BS1)									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*	
LCS (5120292-BS2)									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*	
LCS Dup (5120292-BSD2)									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*	
Duplicate (5120292-DUP1)					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*	
Duplicate (5120292-DUP2)					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*	
Matrix Spike (5120292-MS1)					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

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Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Matrix Spike Dup (5120292-MSD1)				QC Source: P5L0223-01				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*	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/14/05 16:23

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
Blank (5120272-BLK1)								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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 107%*		*Limits: 75-120%*	"								*12/07/05 13:39*	
1,2-DCA-d4		*106%*		*77-129%*	"								"	
Dibromofluoromethane		*107%*		*80-121%*	"								"	
Toluene-d8		*107%*		*80-120%*	"								"	
LCS (5120272-BS1)								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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 108%*		*Limits: 75-120%*	"								*12/07/05 11:54*	
1,2-DCA-d4		*102%*		*77-129%*	"								"	
Dibromofluoromethane		*108%*		*80-121%*	"								"	
Toluene-d8		*107%*		*80-120%*	"								"	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/14/05 16:23

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
Matrix Spike (5120272-MS1)					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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*105%*		*Limits:*	*75-120%*	"						*12/07/05 12:20*	
1,2-DCA-d4			*103%*			*77-129%*	"						"	
Dibromofluoromethane			*107%*			*80-121%*	"						"	
Toluene-d8			*108%*			*80-120%*	"						"	
Matrix Spike Dup (5120272-MSD1)					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%	"	"	
Surrogate(s): 4-BFB		*Recovery:*	*107%*		*Limits:*	*75-120%*	"						*12/07/05 12:46*	
1,2-DCA-d4			*104%*			*77-129%*	"						"	
Dibromofluoromethane			*109%*			*80-121%*	"						"	
Toluene-d8			*108%*			*80-120%*	"						"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/14/05 16:23

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
Blank (5120343-BLK1)									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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 87.0%*		*Limits: 75-120%*	"								*12/08/05 13:17*	
1,2-DCA-d4		*100%*		*77-129%*	"								"	
Dibromofluoromethane		*96.0%*		*80-121%*	"								"	
Toluene-d8		*95.0%*		*80-120%*	"								"	
LCS (5120343-BS1)									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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 104%*		*Limits: 75-120%*	"								*12/08/05 11:16*	
1,2-DCA-d4		*117%*		*77-129%*	"								"	
Dibromofluoromethane		*114%*		*80-121%*	"								"	
Toluene-d8		*108%*		*80-120%*	"								"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/14/05 16:23

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
Matrix Spike (5120343-MS1)				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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.5%*		*Limits: 75-120%*		*1x*							*12/08/05 11:54*	
1,2-DCA-d4		*112%*		*77-129%*		"							"	
Dibromofluoromethane		*108%*		*80-121%*		"							"	
Toluene-d8		*104%*		*80-120%*		"							"	
Matrix Spike Dup (5120343-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 94.5%*		*Limits: 75-120%*		*1x*							*12/08/05 12:22*	
1,2-DCA-d4		*106%*		*77-129%*		"							"	
Dibromofluoromethane		*102%*		*80-121%*		"							"	
Toluene-d8		*100%*		*80-120%*		"							"	

North Creek Analytical - Portland

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Lisa Domenighini, Project Manager

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

amec
Earth & Environmental, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone Number (503) 639-3400
Fax Number (503) 620-7892

1045

D5L0201

CHAIN OF CUSTODY

PROJECT	PROJECT No.
FRED MEYER Port Orchard (PORT)	9MM102820
REPORT TO: PAUL STULL	PHONE No. 503 639 3400
PROJECT MANAGER PAUL STULL	PHONE No.
SAMPLER'S NAME (please print) JASON GARDNER	PHONE No.
SAMPLER'S SIGNATURE	

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.
1. MW103	12/1/05	1140	H2O	HCL/ICE	5	VOA
2. MW105		1100			1	
3. TB		NA			2	
4. FB		1030			2	
5.						
6.						
7.						
8.						
9.						
10.						

SAMPLE RECEIPT	LABORATORY	TURNAROUND TIME	QC Reporting Requirements	COMMENTS / INSTRUCTIONS
TOTAL # CONTAINERS	SHIPPING I.D. / AIRBILL #	☐ 8 HOUR ☐ 24 HOUR ☐ 1 WEEK ☐ 2 WEEK (standard) ☐ OTHER ____		
CONDITION OF CONTAINERS	CARRIER			
CONDITION OF SEALS	DOT DESTINATION			

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
1.	12/5/05	1400	1. Bob Fay NCA	12/6/05	9:45
2. Bob Fay NCA	12/6/05	10:16	2. Lisa Johnson NCA	12/6	1014
3.			3.		

PAGE 1 OF 1

1.7

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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.

Work	Project	ProjectNumber
P6C0495	Fred Meyer Port Orchard	9-61M-10282-0

Thank You,

Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P6C0495-01 Water	**T/B**	**Sampled: 03/09/06 08:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	6030726	03/16/06	03/16/06 23:25	
Surrogate(s): 4-BFB		*Recovery: 91.4%*		*Limits: 50 - 150 %*		"			"	
P6C0495-02 Water	**MW105**	**Sampled: 03/09/06 15:45**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	6030726	03/16/06	03/17/06 00:20	
Surrogate(s): 4-BFB		*Recovery: 90.6%*		*Limits: 50 - 150 %*		"			"	
P6C0495-03RE1 Water	**MW103**	**Sampled: 03/09/06 16:40**								
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	6030781	03/17/06	03/17/06 20:26	
Surrogate(s): 4-BFB		*Recovery: 92.8%*		*Limits: 50 - 150 %*		"			"	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
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
P6C0495-01 Water	**T/B**	**Sampled: 03/09/06 08:00**								
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 82.5%*		*Limits: 80 - 120 %*		"			"	
1,2-DCA-d4		*108%*		*80 - 120 %*		"			"	
Dibromofluoromethane		*104%*		*80 - 120 %*		"			"	
Toluene-d8		*97.5%*		*80 - 120 %*		"			"	
P6C0495-02 Water	**MW105**	**Sampled: 03/09/06 15:45**								
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 83.0%*		*Limits: 80 - 120 %*		"			"	
1,2-DCA-d4		*109%*		*80 - 120 %*		"			"	
Dibromofluoromethane		*104%*		*80 - 120 %*		"			"	

North Creek Analytical - Portland

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
P6C0495-02 Water	**MW105**	**Sampled: 03/09/06 15:45**								
Toluene-d8		*93.0%*			*80 - 120 %*	*1x*			*03/15/06 12:22*	
P6C0495-03RE1 Water	**MW103**	**Sampled: 03/09/06 16:40**								
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	"	"	"	"	"	
Ethylbenzene	"	**0.750**	-----	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	"	**0.780**	-----	0.500	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	2.00	"	"	"	"	"	
n-Propylbenzene	"	**1.31**	-----	0.500	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 89.0%*		*Limits: 80 - 120 %*		"			"	
1,2-DCA-d4		*102%*		*80 - 120 %*		"			"	
Dibromofluoromethane		*99.0%*		*80 - 120 %*		"			"	
Toluene-d8		*88.5%*		*80 - 120 %*		"			"	

North Creek Analytical - Portland

Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
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 - 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
Blank (6030726-BLK1)							Extracted: 03/16/06 13:04							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/16/06 14:43	
Surrogate(s): 4-BFB		*Recovery:*	*91.4%*		*Limits: 50-150%*	"							*03/16/06 14:43*	
LCS (6030726-BS2)							Extracted: 03/16/06 13:04							
Gasoline Range Hydrocarbons	NW TPH-Gx	445	---	80.0	ug/l	1x	--	500	89.0%	(70-130)	--	--	03/16/06 13:21	
Surrogate(s): 4-BFB		*Recovery:*	*101%*		*Limits: 50-150%*	"							*03/16/06 13:21*	
LCS Dup (6030726-BSD2)							Extracted: 03/16/06 13:04							
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	
Surrogate(s): 4-BFB		*Recovery:*	*97.4%*		*Limits: 50-150%*	"							*03/16/06 13:48*	
Duplicate (6030726-DUP1)					QC Source: P6C0468-01		Extracted: 03/16/06 13:04							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	ND	--	--	--	2.51%	(40)	03/16/06 17:55	
Surrogate(s): 4-BFB		*Recovery:*	*91.8%*		*Limits: 50-150%*	"							*03/16/06 17:55*	
Duplicate (6030726-DUP2)					QC Source: P6C0495-03		Extracted: 03/16/06 13:04							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	800	ug/l	10x	ND	--	--	--	2.11%	(40)	03/17/06 01:16	
Surrogate(s): 4-BFB		*Recovery:*	*93.0%*		*Limits: 50-150%*	*1x*							*03/17/06 01:16*	

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
Blank (6030781-BLK1)							Extracted: 03/17/06 13:00							
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	03/17/06 16:44	
Surrogate(s): 4-BFB		*Recovery:*	*92.4%*		*Limits: 50-150%*	"							*03/17/06 16:44*	
LCS (6030781-BS2)							Extracted: 03/17/06 13:00							
Gasoline Range Hydrocarbons	NW TPH-Gx	433	---	80.0	ug/l	1x	--	500	86.6%	(70-130)	--	--	03/17/06 13:04	
Surrogate(s): 4-BFB		*Recovery:*	*97.0%*		*Limits: 50-150%*	"							*03/17/06 13:04*	
LCS Dup (6030781-BSD2)							Extracted: 03/17/06 13:00							
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	
Surrogate(s): 4-BFB		*Recovery:*	*96.2%*		*Limits: 50-150%*	"							*03/17/06 13:32*	
Duplicate (6030781-DUP1)					QC Source: P6C0495-03RE1		Extracted: 03/17/06 13:00							
Gasoline Range Hydrocarbons	NW TPH-Gx	88.9	---	80.0	ug/l	1x	ND	--	--	--	56.6%	(40)	03/17/06 21:48	Q-06
Surrogate(s): 4-BFB		*Recovery:*	*92.0%*		*Limits: 50-150%*	"							*03/17/06 21:48*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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 - 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
Duplicate (6030781-DUP2)					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	
Surrogate(s): 4-BFB		*Recovery: 93.2%*			*Limits: 50-150%*	*1x*							*03/18/06 01:28*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Blank (6030619-BLK1)								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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*86.5%*		*Limits:*	*80-120%*	"						*03/15/06 10:35*	
1,2-DCA-d4			*106%*			*80-120%*	"						"	
Dibromofluoromethane			*102%*			*80-120%*	"						"	
Toluene-d8			*98.5%*			*80-120%*	"						"	
LCS (6030619-BS1)								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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*104%*		*Limits:*	*80-120%*	"						*03/15/06 08:49*	
1,2-DCA-d4			*99.5%*			*80-120%*	"						"	
Dibromofluoromethane			*102%*			*80-120%*	"						"	
Toluene-d8			*102%*			*80-120%*	"						"	
Matrix Spike (6030619-MS1)					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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*99.5%*		*Limits:*	*80-120%*	"						*03/15/06 09:15*	
1,2-DCA-d4			*99.0%*			*80-120%*	"						"	
Dibromofluoromethane			*99.5%*			*80-120%*	"						"	
Toluene-d8			*96.0%*			*80-120%*	"						"	

North Creek Analytical - Portland

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Matrix Spike Dup (6030619-MSD1)				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
Blank (6030685-BLK1)								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

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Crystal Jones For Sarah Rockwell, Project Manager

North Creek Analytical, Inc.
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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
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: 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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*106%*		*Limits:*	*80-120%*	"						*03/16/06 08:50*	
1,2-DCA-d4			*103%*			*80-120%*	"						"	
Dibromofluoromethane			*104%*			*80-120%*	"						"	
Toluene-d8			*102%*			*80-120%*	"						"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*99.5%*		*Limits:*	*80-120%*	"						*03/16/06 09:17*	
1,2-DCA-d4			*100%*			*80-120%*	"						"	
Dibromofluoromethane			*100%*			*80-120%*	"						"	
Toluene-d8			*99.5%*			*80-120%*	"						"	
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%	"	"	
Surrogate(s): 4-BFB		*Recovery:*	*102%*		*Limits:*	*80-120%*	"						*03/16/06 09:44*	
1,2-DCA-d4			*100%*			*80-120%*	"						"	
Dibromofluoromethane			*100%*			*80-120%*	"						"	
Toluene-d8			*100%*			*80-120%*	"						"	

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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CHAIN OF CUSTODY REPORT

Work Order #: PLC0495

NCA CLIENT: AMEC	INVOICE TO:
REPORT TO: Paul Stull	
ADDRESS: 7376 SW Durham Port OR	
PHONE: 503 639 3400 FAX:	P.O. NUMBER:
PROJECT NAME: Fred Meyer Port Orchard (Fuel)	
PROJECT NUMBER: 9-61M-10282-0	
SAMPLED BY: McFarland	

TURNAROUND REQUEST
In Business Days *
Organic & Inorganic Analyses: [X] STD. [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [X] STD. [4] [3] [2] [1] [<1]
[OTHER] Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE: HCl	PRESERVATIVE: HCl	REQUESTED ANALYSES: NWTPH Gx	REQUESTED ANALYSES: 8260	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	T/B	3-9-06 0800	X	X			H2O	2		
2	MW105	3-9-06 1545	X	X			H2O	7		
3	MW103	3-9-06 1640	X	X			H2O	7		
4										
5										
6										
7										
8										
9										
10										

RELEASED BY: [signature]	DATE: 3-13-06	RECEIVED BY: [signature]	DATE: 3/13/06
PRINT NAME: W.J. McFarland FIRM: AMEC	TIME: 0900	PRINT NAME: Bob E FIRM: NCA	TIME: 9:46
RELEASED BY:	DATE:	RECEIVED BY:	DATE: lab 10:20
PRINT NAME: FIRM:	TIME:	PRINT NAME: FIRM:	TIME:

ADDITIONAL REMARKS: 8260 To include: BTEX, MTBE EDC, EDB, Naphthalene, 4 Alkylbenzene suite

TEMP: 23

COC REV 09/04

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

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.

Work Order	Project	ProjectNumber
PPF0446	Fred Meyer Port Orchard	9-61M-10282-0

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Sarah Rockwell

Sarah Rockwell, Project Manager

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ANALYTICAL TESTING CORPORATION

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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Sarah Rockwell

Sarah Rockwell, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
PPF0446-01 (Trip Blank)			**Water**			**Sampled: 06/08/06 07:00**				
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/14/06 23:20	
Surrogate(s): 4-BFB			*90.0%*		*50 - 150 %*	"			"	
PPF0446-02 (MW105)			**Water**			**Sampled: 06/08/06 12:30**				
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/14/06 23:48	
Surrogate(s): 4-BFB			*88.4%*		*50 - 150 %*	"			"	
PPF0446-03 (MW103)			**Water**			**Sampled: 06/08/06 13:30**				
Gasoline Range Hydrocarbons	NW TPH-Gx	584	-----	80.0	ug/l	1x	6060577	06/14/06 12:01	06/15/06 00:16	
Surrogate(s): 4-BFB			*110%*		*50 - 150 %*	"			"	

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TestAmerica
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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
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AMEC- Portland	Project Name: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
PPF0446-02 (MW105)		**Water**			**Sampled: 06/08/06 12:30**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*85.5%*			*80 - 120 %*	"			"	
1,2-DCA-d4		*114%*			*80 - 120 %*	"			"	
Dibromofluoromethane		*106%*			*80 - 120 %*	"			"	
Toluene-d8		*99.0%*			*80 - 120 %*	"			"	
PPF0446-03 (MW103)		**Water**			**Sampled: 06/08/06 13:30**					
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

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPF0446-03 (MW103)		Water			Sampled: 06/08/06 13:30					
Surrogate(s): 4-BFB		*96.5%*			*80 - 120 %*	*1x*			*06/15/06 11:22*	
1,2-DCA-d4		*119%*			*80 - 120 %*	*"*			*"*	
Dibromofluoromethane		*108%*			*80 - 120 %*	*"*			*"*	
Toluene-d8		*99.5%*			*80 - 120 %*	*"*			*"*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
PPF0446-04 (Carbon Vessel #1)			**Other dry**			**Sampled: 06/08/06 14:00**				
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 %*	"			"	
PPF0446-05 (Carbon Vessel #2)			**Other dry**			**Sampled: 06/08/06 14:20**				
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 %*	"			"	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6060577-BLK1)								Extracted: 06/14/06 12:01						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	06/14/06 13:14	
Surrogate(s): 4-BFB		*Recovery: 95.0%*		*Limits: 50-150%*		"							*06/14/06 13:14*	
LCS (6060577-BS1)								Extracted: 06/14/06 12:01						
Gasoline Range Hydrocarbons	NW TPH-Gx	394	---	80.0	ug/l	1x	--	500	78.8%	(70-130)	--	--	06/14/06 12:19	
Surrogate(s): 4-BFB		*Recovery: 102%*		*Limits: 50-150%*		"							*06/14/06 12:19*	
LCS Dup (6060577-BSD1)								Extracted: 06/14/06 12:01						
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	
Surrogate(s): 4-BFB		*Recovery: 102%*		*Limits: 50-150%*		"							*06/14/06 12:46*	
Duplicate (6060577-DUP1)					QC Source: PPF0438-11			Extracted: 06/14/06 12:01						
Gasoline Range Hydrocarbons	NW TPH-Gx	20000	---	4000	ug/l	50x	20600	--	--	--	2.96%	(40)	06/14/06 22:25	
Surrogate(s): 4-BFB		*Recovery: 94.8%*		*Limits: 50-150%*		*1x*							*06/14/06 22:25*	
Duplicate (6060577-DUP2)					QC Source: PPF0447-02			Extracted: 06/14/06 12:01						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	800	ug/l	10x	ND	--	--	--	46.3%	(40)	06/15/06 01:11	Q-06
Surrogate(s): 4-BFB		*Recovery: 89.6%*		*Limits: 50-150%*		*1x*							*06/15/06 01:11*	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6060617-BLK1)								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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*89.5%*		*Limits:*	*80-120%*	"						*06/15/06 10:29*	
1,2-DCA-d4			*117%*			*80-120%*	"						"	
Dibromofluoromethane			*108%*			*80-120%*	"						"	
Toluene-d8			*101%*			*80-120%*	"						"	
LCS (6060617-BS1)								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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*99.0%*		*Limits:*	*80-120%*	"						*06/15/06 08:42*	
1,2-DCA-d4			*119%*			*80-120%*	"						"	
Dibromofluoromethane			*108%*			*80-120%*	"						"	
Toluene-d8			*105%*			*80-120%*	"						"	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Matrix Spike (6060617-MS1)					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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*96.5%*		*Limits:*	*80-120%*	"						*06/15/06 09:08*	
1,2-DCA-d4			*114%*			*80-120%*	"						"	
Dibromofluoromethane			*108%*			*80-120%*	"						"	
Toluene-d8			*104%*			*80-120%*	"						"	
Matrix Spike Dup (6060617-MSD1)					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%	"	"	
Surrogate(s): 4-BFB		*Recovery:*	*97.5%*		*Limits:*	*80-120%*	"						*06/15/06 09:35*	
1,2-DCA-d4			*116%*			*80-120%*	"						"	
Dibromofluoromethane			*108%*			*80-120%*	"						"	
Toluene-d8			*104%*			*80-120%*	"						"	

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6F21065-BLK1)													Extracted: 06/20/06 15:14	
Benzene	EPA 8260B	ND	---	0.0800	mg/l	1x	--	--	--	--	--	--	06/21/06 17:47	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*102%*		*Limits:*	*67-135%*	"						*06/21/06 17:47*	
Toluene-d8			*102%*			*70-130%*	"						"	
4-BFB			*98.8%*			*70-130%*	"						"	
LCS (6F21065-BS1)													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	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*102%*		*Limits:*	*67-135%*	"						*06/21/06 16:19*	
Toluene-d8			*97.2%*			*70-130%*	"						"	
4-BFB			*99.4%*			*70-130%*	"						"	
LCS Dup (6F21065-BSD1)													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	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*100%*		*Limits:*	*67-135%*	"						*06/21/06 16:48*	
Toluene-d8			*98.4%*			*70-130%*	"						"	
4-BFB			*99.2%*			*70-130%*	"						"	

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7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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TestAmerica
ANALYTICAL TESTING CORPORATION

350

CHAIN OF CUSTODY REPORT

Work Order #: PPF0446

CLIENT: AMEC

REPORT TO: Paul Skull
ADDRESS: 7376 SW Durham
Port OR.

PHONE: 503 639 3400 FAX:

PROJECT NAME: Fred Meyer Port Orchard FMPO

PROJECT NUMBER: 94114 10282-C

SAMPLED BY: McFarland

INVOICE TO:

P.O. NUMBER:

TURNAROUND REQUEST (in Business Days *)

Organic & Inorganic Analyses: [X] STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: [X] STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: HCl

REQUESTED ANALYSES: NWTPH-Gx | 8260 BTEX + Site # | NWTPH-Dx

#	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx	8260 BTEX + Site #		NWTPH-Dx	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	NCA WO ID
1	Trip Blank	6-8-06 0700	X				H2O	2		
2	MW105	6-8-06 1230	X	X			H2O	2		
3	MW103	6-8-06 1330	X	X			H2O	2		
4	Carbon Vessel #1	6-8-06 1400				X				
5	Carbon Vessel #2	6-8-06 1420				X				
6										
7										
8										
9										
10										

RELEASED BY: [signature] DATE: 6-9-06
PRINT NAME: W.J. McFarland FIRM: AMEC TIME: 0800

RECEIVED BY: [signature] FIRM: TAP DATE: 6/9/06
PRINT NAME: Bob E. TIME: 10:11

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE: lab
PRINT NAME: FIRM: TIME: 10:30

ADDRESS:

TEMP:

ADDITIONAL REMARKS: * 8260 suite to include BTEX, MTBE, EDC, EDB, Naphthalene + Alkylbenze Suite

COC REV 09/2004

PAGE 1 OF 1

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

RECEIVED
OCT 18 2006
By

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.

Work Order	Project	ProjectNumber
PPI1074	Fred Meyer Port Orchard	9-61M-10282-0

The results in 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

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPI1074-01 (MW105)			**Water**			**Sampled: 09/22/06 11:00**				
Gasoline Range Hydrocarbons	NW TPH-Gx	2340	-----	80.0	ug/l	1x	6091200	09/28/06 11:58	09/28/06 21:04	
Surrogate(s): 4-BFB			*98.6%*		*50 - 150 %*	"			"	
PPI1074-02 (MW103)			**Water**			**Sampled: 09/22/06 12:00**				
Gasoline Range Hydrocarbons	NW TPH-Gx	3850	-----	80.0	ug/l	1x	6091200	09/28/06 11:58	09/28/06 21:31	
Surrogate(s): 4-BFB			*185%*		*50 - 150 %*	"	"		"	*S-09*

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPI1074-03 (TB)		**Water**			**Sampled: 09/22/06 06:00**					
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	"	"	"	"	"	

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Sarah Rockwell, Project Manager

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ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
PPI1074-03 (TB)		**Water**			**Sampled: 09/22/06 06:00**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB			*89.0%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*92.5%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*91.5%*		*80 - 120 %*	"			"	
Toluene-d8			*87.5%*		*80 - 120 %*	"			"	
PPI1074-04 (EB)		**Water**			**Sampled: 09/22/06 11:10**					
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	"	"	"	"	"	

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Sarah Rockwell, Project Manager

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BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC-Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPI1074-04 (EB)		**Water**			**Sampled: 09/22/06 11:10**					
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	"	"	"	"	"	

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPI1074-04 (EB)		**Water**			**Sampled: 09/22/06 11:10**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB			*91.0%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*95.5%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*97.5%*		*80 - 120 %*	"			"	
Toluene-d8			*90.5%*		*80 - 120 %*	"			"	

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPI1074-01 (MW105)		**Water**			**Sampled: 09/22/06 11:00**					
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	"	"	"	"	"	
Benzene	"	**329**	----	1.00	"	"	"	"	"	
Toluene	"	**412**	----	2.50	"	"	"	"	"	
Ethylbenzene	"	**6.55**	----	2.50	"	"	"	"	"	
Xylenes (total)	"	**151**	----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	10.0	"	"	"	"	"	
Naphthalene	"	ND	----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	5.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**6.15**	----	2.50	"	"	"	"	"	
Isopropylbenzene	"	ND	----	10.0	"	"	"	"	"	
n-Propylbenzene	"	ND	----	2.50	"	"	"	"	"	
Surrogate(s): 4-BFB			*99.0%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*98.5%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*102%*		*80 - 120 %*	"			"	
Toluene-d8			*96.0%*		*80 - 120 %*	"			"	
PPI1074-02 (MW103)		**Water**			**Sampled: 09/22/06 12:00**					
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	"	"	"	"	"	
Ethylbenzene	"	**152**	----	5.00	"	"	"	"	"	
Xylenes (total)	"	**710**	----	10.0	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	20.0	"	"	"	"	"	
Naphthalene	"	**75.3**	----	20.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**1150**	----	10.0	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**446**	----	5.00	"	"	"	"	"	
Isopropylbenzene	"	**28.3**	----	20.0	"	"	"	"	"	
n-Propylbenzene	"	**93.1**	----	5.00	"	"	"	"	"	
Surrogate(s): 4-BFB			*106%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*98.5%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*98.5%*		*80 - 120 %*	"			"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6091200-BLK1)								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*	
LCS (6091200-BS1)								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*	
LCS Dup (6091200-BSD1)								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*	
Duplicate (6091200-DUP1)						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*	
Duplicate (6091200-DUP2)						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*	

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (6100246-BLK1)								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	"	"	--	--	--	--	--	--	"	

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Sarah Rockwell, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (6100246-BLK1)								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%*	"							"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 109%*			*Limits: 80-120%*	"							*10/06/06 10:59*	
1,2-DCA-d4		*98.0%*			*80-120%*	"							"	
Dibromofluoromethane		*104%*			*80-120%*	"							"	
Toluene-d8		*105%*			*80-120%*	"							"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 106%*			*Limits: 80-120%*	"							*10/06/06 11:27*	
1,2-DCA-d4		*92.0%*			*80-120%*	"							"	
Dibromofluoromethane		*98.5%*			*80-120%*	"							"	
Toluene-d8		*95.0%*			*80-120%*	"							"	
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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 106%*			*Limits: 80-120%*	"							*10/06/06 11:55*	
1,2-DCA-d4		*92.0%*			*80-120%*	"							"	
Dibromofluoromethane		*98.0%*			*80-120%*	"							"	
Toluene-d8		*95.5%*			*80-120%*	"							"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

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

AMEC- Portland
7376 SW Durham Road
Portland, OR 97224

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B - Laboratory Q

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Volatile (

QC Batch: 6100246 **Water Preparation Method: EPA 5030B**

QC Batch: 6100246

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)
Blank (6100246-BLK1)									Extracted:	10/06/06
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	"	"	--	--	--	--
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%*	"				
LCS (6100246-BS1)									Extracted:	10/06/06
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)
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%*	"				

Analyte
LCS (6100246-BS1)
Benzene
Chlorobenzene
1,1-Dichloroethene
Toluene
Trichloroethene
Surrogate(s): 4-BFB
1,2-DCA-d4
Dibromofluoromethane
Toluene-d8
Matrix Spike (6100246-MS1)
Benzene
Chlorobenzene
1,1-Dichloroethene
Toluene
Trichloroethene
Surrogate(s): 4-BFB
1,2-DCA-d4
Dibromofluoromethane
Toluene-d8
Matrix Spike Dup (6100246-M
Benzene
Chlorobenzene
1,1-Dichloroethene
Toluene
Trichloroethene
Surrogate(s): 4-BFB
1,2-DCA-d4
Dibromofluoromethane
Toluene-d8

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Sarah Rockwell, Project Manager

TestAmerica - Portland, OR

Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Matrix Spike (6100246-MS1)				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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery:*	*106%*		*Limits:*	*80-120%*	"						*10/06/06 11:27*	
1,2-DCA-d4			*92.0%*			*80-120%*	"						"	
Dibromofluoromethane			*98.5%*			*80-120%*	"						"	
Toluene-d8			*95.0%*			*80-120%*	"						"	
Matrix Spike Dup (6100246-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery:*	*106%*		*Limits:*	*80-120%*	"						*10/06/06 11:55*	
1,2-DCA-d4			*92.0%*			*80-120%*	"						"	
Dibromofluoromethane			*98.0%*			*80-120%*	"						"	
Toluene-d8			*95.5%*			*80-120%*	"						"	

The results in 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

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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 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.

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Sarah Rockwell

Sarah Rockwell, Project Manager

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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 #: PAI1074

CLIENT: AMEC

REPORT TO: PAUL STULL
ADDRESS: 7376 SW Durham Rd
Portland, OR
PHONE 503 639 3400 FAX: 503 620 7292

INVOICE TO

PO NUMBER:

PROJECT NAME: 960M-10282-0

PROJECT NUMBER: Fred Meyer Portland

SAMPLED BY: JASON GARDNER

PRESERVATIVE: HCl →

REQUESTED ANALYSES: NWTPH-Gx 8021 *; 8260 2mL *; VOC1

TURNAROUND REQUEST
In Business Days *
Organic & Inorganic Analyses: 10 | 7 | 5 | 4 | 3 | 2 | 1 | <1 (STD)
Petroleum Hydrocarbon Analyses: 5 (STD) | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Gx 8021 *	8260 2mL *	VOC1	MATRIX (W, S, O)	# OF CONT.	LOCATION-COMMENTS	TA WO ID
1	MW105	9/22/06 1100	X	X		W	5		
2	MW104	1200	X	X		W	5		
3	TB	0600			X	W	2		
4	EB	1110			X	W	2		
5									
6									
7									
8									
9									
10									

RELEASED BY: JASON GARDNER DATE: 9/25/06
PRINT NAME: JASON GARDNER FIRM: AMEC TIME: 1000

RECEIVED BY: Bob F
PRINT NAME: Bob F FIRM: TAL DATE: 9/26/06 TIME: 9:55

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE: lab
PRINT NAME: FIRM: TIME: 11:00

ADDITIONAL REMARKS

TEMP: 7.1

COC REV 03-2006

PAGE OF

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, NAPH, Alkylbenzene.

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ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

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.

Work Order	Project	ProjectNumber
PPL0455	Fred Meyer Port Orchard	9-61M-10282-0

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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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

Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPL0455-01 (Trip Blank)		**Water**			**Sampled: 12/12/06 10:00**					
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 %*	"			"	
PPL0455-02 (MW103-121206)		**Water**			**Sampled: 12/12/06 12:00**					
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 %*	"			"	
PPL0455-03RE1 (MW105-121206)		**Water**			**Sampled: 12/12/06 11:45**					
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*			"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PPL0455-02RE1 (MW103-121206)		**Water**			**Sampled: 12/12/06 12:00**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*93.5%*		*80 - 120 %*	"				"	
1,2-DCA-d4		*88.5%*		*80 - 120 %*	"				"	
Dibromofluoromethane		*88.0%*		*80 - 120 %*	"				"	
Toluene-d8		*109%*		*80 - 120 %*	"				"	
PPL0455-03 (MW105-121206)		**Water**			**Sampled: 12/12/06 11:45**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB		*98.5%*		*80 - 120 %*	*1x*				"	
1,2-DCA-d4		*95.5%*		*80 - 120 %*	"				"	

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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)		Water			Sampled: 12/12/06 11:45					
Dibromofluoromethane		*90.5%*			*80 - 120 %*	*1x*			*12/17/06 21:07*	
Toluene-d8		*112%*			*80 - 120 %*	*"*			*"*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6120541-BLK1)								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*	
LCS (6120541-BS2)								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*	
Duplicate (6120541-DUP1)					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*	
Duplicate (6120541-DUP2)					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*	
Matrix Spike (6120541-MS2)					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*	
Matrix Spike Dup (6120541-MSD2)					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

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Blank (6120609-BLK1)								Extracted: 12/15/06 11:13						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/15/06 13:23	
Surrogate(s): 4-BFB		*Recovery: 99.2%*			*Limits: 50-150%*	"							*12/15/06 13:23*	
LCS (6120609-BS2)								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	
Surrogate(s): 4-BFB		*Recovery: 98.0%*			*Limits: 50-150%*	"							*12/15/06 11:48*	
LCS Dup (6120609-BSD2)								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	
Surrogate(s): 4-BFB		*Recovery: 98.8%*			*Limits: 50-150%*	"							*12/15/06 12:19*	
Duplicate (6120609-DUP1)					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	
Surrogate(s): 4-BFB		*Recovery: 95.2%*			*Limits: 50-150%*	*1x*							*12/15/06 18:39*	
Duplicate (6120609-DUP2)					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	
Surrogate(s): 4-BFB		*Recovery: 97.4%*			*Limits: 50-150%*	*1x*							*12/15/06 19:42*	

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.0%*			*Limits: 80-120%*	"							*12/17/06 12:46*	
1,2-DCA-d4		*94.5%*			*80-120%*	"							"	
Dibromofluoromethane		*92.0%*			*80-120%*	"							"	
Toluene-d8		*114%*			*80-120%*	"							"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.0%*			*Limits: 80-120%*	"							*12/17/06 10:54*	
1,2-DCA-d4		*92.5%*			*80-120%*	"							"	
Dibromofluoromethane		*86.0%*			*80-120%*	"							"	
Toluene-d8		*109%*			*80-120%*	"							"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.0%*			*Limits: 80-120%*	"							*12/17/06 11:22*	
1,2-DCA-d4		*93.0%*			*80-120%*	"							"	
Dibromofluoromethane		*91.5%*			*80-120%*	"							"	
Toluene-d8		*111%*			*80-120%*	"							"	

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Crystal Jones For Sarah Rockwell, Project Manager

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TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
Matrix Spike Dup (6120646-MSD1)					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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 99.0%*			*Limits: 80-120%*	"							*12/17/06 11:50*	
1,2-DCA-d4		*92.0%*			*80-120%*	"							"	
Dibromofluoromethane		*92.5%*			*80-120%*	"							"	
Toluene-d8		*114%*			*80-120%*	"							"	

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
Blank (6120658-BLK1)									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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 94.5%*			*Limits: 80-120%*	"							*12/18/06 13:29*	
1,2-DCA-d4		*93.0%*			*80-120%*	"							"	
Dibromofluoromethane		*88.5%*			*80-120%*	"							"	
Toluene-d8		*110%*			*80-120%*	"							"	

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Crystal Jones For Sarah Rockwell, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
LCS (6120658-BS1)									Extracted: 12/18/06 09:02					
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 102%*			*Limits: 80-120%*	"							*12/18/06 12:33*	
1,2-DCA-d4		*92.0%*			*80-120%*	"							"	
Dibromofluoromethane		*93.5%*			*80-120%*	"							"	
Toluene-d8		*114%*			*80-120%*	"							"	
Matrix Spike (6120658-MS1)					QC Source: PPL0471-01				Extracted: 12/18/06 09:02					
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.0%*			*Limits: 80-120%*	"							*12/18/06 11:37*	
1,2-DCA-d4		*91.0%*			*80-120%*	"							"	
Dibromofluoromethane		*92.0%*			*80-120%*	"							"	
Toluene-d8		*112%*			*80-120%*	"							"	
Matrix Spike Dup (6120658-MSD1)					QC Source: PPL0471-01				Extracted: 12/18/06 09:02					
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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 99.0%*			*Limits: 80-120%*	"							*12/18/06 12:05*	
1,2-DCA-d4		*92.5%*			*80-120%*	"							"	
Dibromofluoromethane		*95.0%*			*80-120%*	"							"	
Toluene-d8		*112%*			*80-120%*	"							"	

TestAmerica - Portland, OR

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Crystal Jones For Sarah Rockwell, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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Crystal Jones For Sarah Rockwell, Project Manager

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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 #: PPL0455

CLIENT: AMEC

REPORT TO: Paul Stull
ADDRESS: 7376 S.W. Durham
Port OR 97224
PHONE: 5036393400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 9-61m-10282-0

SAMPLED BY: McFarland

TURNAROUND REQUEST
in Business Days *
Organic & Inorganic Analyses
X STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses
5 STD. | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE: Hcl | Hcl

REQUESTED ANALYSES: NWTPH Gx | B260

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH Gx	B260	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1 Trip Blank	12/12/06 1000	X		W	1		
2 MW-103-121206	12/12/06 1200	X	X	W	6		
3 MW-105-121206	12/12/06 1145	X	X	W	6		
4							
5							
6							
7							
8							
9							
10							

RELEASED BY: [signature] DATE: 12/13/06
PRINT NAME: W.J. McFarland FIRM: AMEC TIME: 0730

RECEIVED BY: [signature] DATE: 12/13/06
PRINT NAME: Bob C FIRM: TAP TIME: 11:15

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE: lab
PRINT NAME: FIRM: TIME: 11:30

ADDITIONAL REMARKS:
B260 to include BTEX, MTBE, EDC, EDB, Naphthalene + Alkylbenzene suite

COC REV 05/2006

TEMP 3.8

PAGE 1 OF 1

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.

TAT: _____

Non-Conformances?
Circle Y or N
(If Y, see other side)

TEST AMERICA SAMPLE RECEIPT CHECKLIST

Received By: (applies to temp at receipt)
Date: 12/13/06
Time: 11:15
Initials: BH

Logged-in By:
Date: 12/13/06
Initials: SM

Unpacked/Labeled By:
Date: 12/13/06
Initials: BH

Cooler ID: ____ (___ of ___)

Work Order No. PPL0455
Client: Amec
Project: Fred Meyer Port Orchard

Container Type:
1 Cooler
___ Box
___ None/Other _____

COC Seals:
___ Ship. Container ___ Sign By
___ On Bottles ___ Date
✓ None

Packing Material
___ Bubble Bags ___ Styrofoam
___ Foam Packs
___ None/Other Other 10 bags cd

Refrigerant:
X Gel Ice Pack ___ None
___ Loose Ice
___ None/Other _____

Received Via: Bill#
___ Fed Ex ___ Client
___ UPS X NCA Courier
___ DHL ___ Mid Valley
___ Senvoy ___ 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:

		ID			ID
Intact?	Y or N	_____	Metals Preserved?	Y or N or NA	_____
Provided by NCA?	Y or N	_____	Client QAPP Preserved?	Y or N or NA	_____
Correct Type?	Y or N	_____	Adequate Volume? (for tests requested)	Y or N	_____
#Containers match COC?	Y or N	_____	Water VOAs: Headspace?	Y or N or NA	_____
IDs/time/date match COC?	Y or N	_____	Comments:		
Hold Times in hold?	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? Y or N
Has client been contacted regarding non-conformances? Y or N If Y, ____/____ Date Time

PM Initials: _____ Date: _____ Time: _____

(rev 3, 09/12/05)

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ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

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.

Work Order	Project	ProjectNumber
PQC1185	Fred Meyer Port Orchard	9-61M-10282-0

TestAmerica - Portland, OR

Crystal Jones For Sarah Rockwell, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

Gasoline Hydrocarbons per NW TPH-Gx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQC1185-01 (MW103)		**Water**			**Sampled: 03/28/07 15:05**					
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	7040108	04/03/07 12:41	04/03/07 16:58	
Surrogate(s): 4-BFB		*93.0%*			*50 - 150 %*	"			"	
PQC1185-02RE1 (MW105)		**Water**			**Sampled: 03/28/07 15:15**					
Gasoline Range Hydrocarbons	NW TPH-Gx	702	-----	80.0	ug/l	1x	7040164	04/04/07 10:13	04/04/07 15:41	
Surrogate(s): 4-BFB		*95.2%*			*50 - 150 %*	"			"	
PQC1185-03 (Trip Blank)		**Water**			**Sampled: 03/28/07 00:00**					
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	-----	80.0	ug/l	1x	7040108	04/03/07 12:41	04/03/07 16:31	
Surrogate(s): 4-BFB		*95.4%*			*50 - 150 %*	"			"	

Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQC1185-01 (MW103)		**Water**			**Sampled: 03/28/07 15:05**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB			*104%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*92.0%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*95.5%*		*80 - 120 %*	"			"	
Toluene-d8			*106%*		*80 - 120 %*	"			"	
PQC1185-02 (MW105)		**Water**			**Sampled: 03/28/07 15:15**					
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	"	"	"	"	"	
Benzene	"	**161**	-----	0.400	"	"	"	"	"	
Toluene	"	**20.4**	-----	1.00	"	"	"	"	"	
Ethylbenzene	"	ND	-----	1.00	"	"	"	"	"	
Xylenes (total)	"	**34.5**	-----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	4.00	"	"	"	"	"	
Naphthalene	"	ND	-----	4.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**2.48**	-----	2.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**2.48**	-----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	4.00	"	"	"	"	"	
n-Propylbenzene	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): 4-BFB			*99.5%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*87.0%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*90.0%*		*80 - 120 %*	"			"	

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Crystal Jones For Sarah Rockwell, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQC1185-02 (MW105)		**Water**			**Sampled: 03/28/07 15:15**					
Toluene-d8		*102%*			*80 - 120 %*	*1x*			*04/05/07 00:44*	
PQC1185-03 (Trip Blank)		**Water**			**Sampled: 03/28/07 00:00**					
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	"	"	"	"	"	
Surrogate(s): *4-BFB*		*98.0%*			*80 - 120 %*	"			"	
1,2-DCA-d4		*87.0%*			*80 - 120 %*	"			"	
Dibromofluoromethane		*90.0%*			*80 - 120 %*	"			"	
Toluene-d8		*101%*			*80 - 120 %*	"			"	

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AMEC- Portland	Project Name: Fred Meyer Port Orchard	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	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
Blank (7040108-BLK1)								Extracted: 04/03/07 12:41						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	04/03/07 16:04	
Surrogate(s): 4-BFB		*Recovery: 92.0%*			*Limits: 50-150%*	"							*04/03/07 16:04*	
LCS (7040108-BS1)								Extracted: 04/03/07 12:41						
Gasoline Range Hydrocarbons	NW TPH-Gx	373	---	80.0	ug/l	1x	--	500	74.6%	(70-130)	--	--	04/03/07 15:08	
Surrogate(s): 4-BFB		*Recovery: 100%*			*Limits: 50-150%*	"							*04/03/07 15:08*	
LCS Dup (7040108-BSD1)								Extracted: 04/03/07 12:41						
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	
Surrogate(s): 4-BFB		*Recovery: 99.0%*			*Limits: 50-150%*	"							*04/03/07 15:36*	
Duplicate (7040108-DUP1)						QC Source: PQC1197-25		Extracted: 04/03/07 12:41						
Gasoline Range Hydrocarbons	NW TPH-Gx	32700	---	8000	ug/l	100x	31600	--	--	--	3.42%	(35)	04/03/07 22:02	
Surrogate(s): 4-BFB		*Recovery: 94.8%*			*Limits: 50-150%*	*1x*							*04/03/07 22:02*	
Duplicate (7040108-DUP2)						QC Source: PQD0022-02		Extracted: 04/03/07 12:41						
Gasoline Range Hydrocarbons	NW TPH-Gx	12200	---	800	ug/l	10x	11500	--	--	--	5.91%	(35)	04/03/07 23:51	
Surrogate(s): 4-BFB		*Recovery: 105%*			*Limits: 50-150%*	*1x*							*04/03/07 23:51*	

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
Blank (7040164-BLK1)								Extracted: 04/04/07 10:13						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	04/04/07 10:39	
Surrogate(s): 4-BFB		*Recovery: 95.2%*			*Limits: 50-150%*	"							*04/04/07 10:39*	
LCS (7040164-BS2)								Extracted: 04/04/07 10:13						
Gasoline Range Hydrocarbons	NW TPH-Gx	380	---	80.0	ug/l	1x	--	500	76.0%	(70-130)	--	--	04/04/07 11:33	
Surrogate(s): 4-BFB		*Recovery: 98.4%*			*Limits: 50-150%*	"							*04/04/07 11:33*	
LCS Dup (7040164-BSD2)								Extracted: 04/04/07 10:13						
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	
Surrogate(s): 4-BFB		*Recovery: 101%*			*Limits: 50-150%*	"							*04/04/07 12:01*	
Duplicate (7040164-DUP1)						QC Source: PQD0022-04RE1		Extracted: 04/04/07 10:13						
Gasoline Range Hydrocarbons	NW TPH-Gx	13000	---	800	ug/l	10x	12700	--	--	--	2.33%	(35)	04/04/07 16:36	
Surrogate(s): 4-BFB		*Recovery: 105%*			*Limits: 50-150%*	*1x*							*04/04/07 16:36*	

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Crystal Jones For Sarah Rockwell, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results

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Crystal Jones For Sarah Rockwell, Project Manager

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7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.0%*			*Limits: 80-120%*	"							*04/04/07 20:15*	
1,2-DCA-d4		*85.0%*			*80-120%*	"							"	
Dibromofluoromethane		*89.0%*			*80-120%*	"							"	
Toluene-d8		*100%*			*80-120%*	"							"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 105%*			*Limits: 80-120%*	"							*04/04/07 18:27*	
1,2-DCA-d4		*89.5%*			*80-120%*	"							"	
Dibromofluoromethane		*97.0%*			*80-120%*	"							"	
Toluene-d8		*107%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	04/13/07 08:57

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
Matrix Spike (7040194-MS1)					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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 102%*			*Limits: 80-120%*	"							*04/04/07 18:54*	
1,2-DCA-d4		*85.5%*			*80-120%*	"							"	
Dibromofluoromethane		*92.5%*			*80-120%*	"							"	
Toluene-d8		*103%*			*80-120%*	"							"	
Matrix Spike Dup (7040194-MSD1)					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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 100%*			*Limits: 80-120%*	"							*04/04/07 19:21*	
1,2-DCA-d4		*84.5%*			*80-120%*	"							"	
Dibromofluoromethane		*91.5%*			*80-120%*	"							"	
Toluene-d8		*102%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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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 #: PQC 1185

CLIENT: AMEC

REPORT TO: PAUL SUMMERS
ADDRESS: 7376 SW DURHAM RD
PORTLAND, OR 97223
PHONE: 503-639-3400 FAX: 503 620 7842

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Durham

PROJECT NUMBER: 9GIM10383-0

SAMPLED BY: JASON GARDNER

PRESERVATIVE

REQUESTED ANALYSES

CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NW TPH-Gx	BTEX by 8021B	VOCs by 8260B	MATRIX (W, S, O)	# OF CONT.	LOCATION / COMMENTS	TA WO ID
1 MW-03	3/28/07 1505	X	X		W	5		
2 MW-05	1515	X	X			5		
3 TRIP BLANK	"	X	X			2		
4								
5								
6								
7								
8								
9								
10								

TURNAROUND REQUEST
In Business Days *
Organic & Inorganic Analyses
10 STD | 7 | 5 | 4 | 3 | 2 | 1 | <1
Petroleum Hydrocarbon Analyses
5 STD | 4 | 3 | 2 | 1 | <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

RELEASED BY:		DATE: 3/28/07	RECEIVED BY:		DATE: 3/29
PRINT NAME: JASON GARDNER	FIRM: AMEC	TIME: 2000	PRINT NAME: PAUL SUMMERS	FIRM: SENSUM	TIME: 1510
RELEASED BY:		DATE: 3/29/07	RECEIVED BY:		DATE: 3/29/07
PRINT NAME: PAUL SUMMERS	FIRM: SENSUM	TIME: 1550	PRINT NAME:	FIRM: TAI	TIME: 1550

ADDITIONAL REMARKS:

TEMP: 4.1

COC REV 05 2006

PAGE OF

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)
Date: 3/29
Time: 1550
Initials: SM

Logged-in By:
Date: 3/30
Initials: SM

Unpacked/Labeled By:
Date: 3/30
initials: SM

Cooler ID: 353 (___ of ___)

Work Order No. PQC1185
Client: AMEC
Project: Fred Meyer

Container Type:
X Cooler
___ Box
___ None/Other ___

COC Seals:
___ Ship. Container ___ Sign By
___ On Bottles ___ Date
X None

Packing Material
___ Bubble Bags ___ Styrofoam
X Foam Packs
X None/Other Other ___

Refrigerant:
X Gel Ice Pack ___ ___ None
___ Loose Ice
___ None/Other ___

Received Via: Bill#
___ Fed Ex ___ Client
___ UPS ___ NCA Courier
___ DHL ___ Mid Valley
X Senvoy ___ TDP
___ GS ___ Other ___

Cooler Temperature (IR): 4.1 °C Plastic (Glass) (circle one) (Frozen filters, Tediars and aqueous Metals exempt)

Temperature Blank? ___ °C or (NA)

Trip Blank? Y or N or (NA)

Sample Containers:		ID			ID
Intact?	(Y) or N		Metals Preserved?	Y or N or (NA)	
Provided by NCA?	(Y) or N		Client QAPP Preserved?	Y or N or (NA)	
Correct Type?	(Y) or N		Adequate Volume? (for tests requested)	(Y) or N	
#Containers match COC?	(Y) or N		Water VOAs: Headspace?	Y or (N) or NA	
IDs/time/date match COC?	(Y) or N		Comments:		
Hold Times in hold?	(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 contacted regarding non-conformances? Y or N
If ___
Date Time

PM Initials: ___ Date: ___ Time: ___

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

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.

Work Order	Project	ProjectNumber
PQF0619	Fred Meyer Port Orchard	9-61M-10282-0

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Sarah Rockwell

Sarah Rockwell, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

Gasoline Hydrocarbons per NW TPH-Gx Method

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQF0619-02 (MW103-061307)		**Water**			**Sampled: 06/13/07 15:40**					
Gasoline Range Hydrocarbons	NW TPH-Gx	**2500**	-----	80.0	ug/l	1x	7060736	06/18/07 10:28	06/19/07 04:00	
Surrogate(s): 4-BFB			*84.4%*		*50 - 150 %*	"			"	
PQF0619-03 (MW105-061307)		**Water**			**Sampled: 06/13/07 15:00**					
Gasoline Range Hydrocarbons	NW TPH-Gx	**647**	-----	160	ug/l	2x	7060736	06/18/07 10:28	06/19/07 04:32	
Surrogate(s): 4-BFB			*95.3%*		*50 - 150 %*	*1x*			"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQF0619-02RE1 (MW103-061307)		**Water**			**Sampled: 06/13/07 15:40**					
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	"	"	"	"	"	
Ethylbenzene	"	**17.5**	-----	1.00	"	"	"	"	"	
Xylenes (total)	"	**53.3**	-----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	4.00	"	"	"	"	"	
Naphthalene	"	**16.0**	-----	4.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**137**	-----	2.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**46.5**	-----	1.00	"	"	"	"	"	
Isopropylbenzene	"	**6.88**	-----	4.00	"	"	"	"	"	
n-Propylbenzene	"	**25.0**	-----	1.00	"	"	"	"	"	
Surrogate(s): *4-BFB*			*102%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*106%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*105%*		*80 - 120 %*	"			"	
Toluene-d8			*102%*		*80 - 120 %*	"			"	
PQF0619-03 (MW105-061307)		**Water**			**Sampled: 06/13/07 15:00**					
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	"	"	"	"	"	
Benzene	"	**176**	-----	0.400	"	"	"	"	"	
Toluene	"	**39.2**	-----	1.00	"	"	"	"	"	
Ethylbenzene	"	**8.94**	-----	1.00	"	"	"	"	"	
Xylenes (total)	"	**65.5**	-----	2.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	4.00	"	"	"	"	"	
Naphthalene	"	ND	-----	4.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**5.40**	-----	2.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**4.94**	-----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	4.00	"	"	"	"	"	
n-Propylbenzene	"	ND	-----	1.00	"	"	"	"	"	
Surrogate(s): *4-BFB*			*115%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*100%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*111%*		*80 - 120 %*	"			"	

TestAmerica - Portland, OR

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Sarah Rockwell

Sarah Rockwell, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

Selected Volatile Organic Compounds (Including BTEX) per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQF0619-03 (MW105-061307)		**Water**			**Sampled: 06/13/07 15:00**					
Toluene-d8		*111%*			*80 - 120 %*	*1x*			*06/19/07 18:33*	

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7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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
Blank (7060736-BLK1)								Extracted: 06/18/07 10:28						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	06/18/07 13:15	
Surrogate(s): 4-BFB		*Recovery: 95.1%*			*Limits: 50-150%*	"							*06/18/07 13:15*	
LCS (7060736-BS1)								Extracted: 06/18/07 10:28						
Gasoline Range Hydrocarbons	NW TPH-Gx	454	---	80.0	ug/l	1x	--	500	90.9%	(70-130)	--	--	06/18/07 12:44	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 50-150%*	"							*06/18/07 12:44*	
Duplicate (7060736-DUP1)					QC Source: PQF0597-01RE1			Extracted: 06/18/07 10:28						
Gasoline Range Hydrocarbons	NW TPH-Gx	809	---	80.0	ug/l	1x	1080	--	--	--	28.6%	(35)	06/18/07 15:50	
Surrogate(s): 4-BFB		*Recovery: 91.1%*			*Limits: 50-150%*	"							*06/18/07 15:50*	
Duplicate (7060736-DUP2)					QC Source: PQF0601-04RE1			Extracted: 06/18/07 10:28						
Gasoline Range Hydrocarbons	NW TPH-Gx	18400	---	1600	ug/l	20x	17100	--	--	--	7.18%	(35)	06/19/07 00:16	
Surrogate(s): 4-BFB		*Recovery: 96.7%*			*Limits: 50-150%*	*1x*							*06/19/07 00:16*	
Matrix Spike (7060736-MS1)					QC Source: PQF0600-02RE1			Extracted: 06/18/07 10:28						
Gasoline Range Hydrocarbons	NW TPH-Gx	78800	---	4000	ug/l	50x	58700	25000	80.4%	(70-130)	--	--	06/18/07 21:06	
Surrogate(s): 4-BFB		*Recovery: 96.1%*			*Limits: 50-150%*	*1x*							*06/18/07 21:06*	
Matrix Spike Dup (7060736-MSD1)					QC Source: PQF0600-02RE1			Extracted: 06/18/07 10:28						
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	
Surrogate(s): 4-BFB		*Recovery: 99.0%*			*Limits: 50-150%*	*1x*							*06/18/07 21:38*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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
Blank (7060768-BLK1)								Extracted: 06/19/07 07:46						
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 116%*			*Limits: 80-120%*	"							*06/19/07 11:21*	
1,2-DCA-d4		*102%*			*80-120%*	"							"	
Dibromofluoromethane		*113%*			*80-120%*	"							"	
Toluene-d8		*110%*			*80-120%*	"							"	
LCS (7060768-BS1)								Extracted: 06/19/07 07:46						
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 111%*			*Limits: 80-120%*	"							*06/19/07 09:33*	
1,2-DCA-d4		*97.0%*			*80-120%*	"							"	
Dibromofluoromethane		*110%*			*80-120%*	"							"	
Toluene-d8		*106%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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
Matrix Spike (7060768-MS1)				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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 117%*			*Limits: 80-120%*	"							*06/19/07 10:00*	
1,2-DCA-d4		*103%*			*80-120%*	"							"	
Dibromofluoromethane		*115%*			*80-120%*	"							"	
Toluene-d8		*114%*			*80-120%*	"							"	
Matrix Spike Dup (7060768-MSD1)				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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 112%*			*Limits: 80-120%*	"							*06/19/07 10:27*	
1,2-DCA-d4		*95.6%*			*80-120%*	"							"	
Dibromofluoromethane		*107%*			*80-120%*	"							"	
Toluene-d8		*112%*			*80-120%*	"							"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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
Blank (7060882-BLK1)								Extracted: 06/21/07 08:20						
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 96.7%*			*Limits: 80-120%*	"							*06/21/07 10:18*	
1,2-DCA-d4		*103%*			*80-120%*	"							"	
Dibromofluoromethane		*101%*			*80-120%*	"							"	
Toluene-d8		*97.6%*			*80-120%*	"							"	
LCS (7060882-BS1)								Extracted: 06/21/07 08:20						
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 80-120%*	"							*06/21/07 08:30*	
1,2-DCA-d4		*108%*			*80-120%*	"							"	
Dibromofluoromethane		*107%*			*80-120%*	"							"	
Toluene-d8		*103%*			*80-120%*	"							"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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
Matrix Spike (7060882-MS1)				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)	--	--	"	
Surrogate(s): *4-BFB*		*Recovery: 97.2%*			*Limits: 80-120%*	"							*06/21/07 08:57*	
1,2-DCA-d4		*102%*			*80-120%*	"							"	
Dibromofluoromethane		*103%*			*80-120%*	"							"	
Toluene-d8		*98.2%*			*80-120%*	"							"	
Matrix Spike Dup (7060882-MSD1)				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%	"	"	
Surrogate(s): *4-BFB*		*Recovery: 106%*			*Limits: 80-120%*	"							*06/21/07 09:24*	
1,2-DCA-d4		*106%*			*80-120%*	"							"	
Dibromofluoromethane		*107%*			*80-120%*	"							"	
Toluene-d8		*105%*			*80-120%*	"							"	

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Sarah Rockwell

Sarah Rockwell, Project Manager

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ANALYTICAL TESTING CORPORATION

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	06/29/07 15:44

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.

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Sarah Rockwell

Sarah Rockwell, Project Manager

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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: AMEC

REPORT TO: Paul Skull

ADDRESS: 7376 SW Durham Port OR

PHONE: 503 639 3400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard

PROJECT NUMBER: 7-61M-10282-0

SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ~~7~~ 5 4 3 2 1 <1

Petroleum Hydrocarbon Analyses: ~~5~~ 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	8260 Suite	HW-Pit Oil	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: [signature] DATE: [illegible]

PRINT NAME: W J. McFarland FIRM: AMEC TIME: [illegible]

RECEIVED BY: [signature] 1025 DATE: 06/15/07

PRINT NAME: ERIK KLIER FIRM: SENVOY TIME: 1330

RELEASED BY: [signature] DATE: 06/15/07

PRINT NAME: ERIK KLIER 1025 FIRM: SENVOY TIME: 1417

RECEIVED BY: Helga Descler DATE: 6/15/07

PRINT NAME: Helga Descler FIRM: TAP TIME: 1420

ADDITIONAL REMARKS: 8260 to include BTEX, MTBE, EDC, EDB, Naphthalene; Alkylbenzene Suite

TEMP: 2.9

COC REV 09/04

PAGE OF

TestAmerica Sample Receipt Checklist

Received by: *(section A)* Date: 6/15/07 Time: 1420 Initials: HSD

Unpacked by: *(section B)* Date: 6/16/07 Initials: HSD

Logged-in by: Date: 6-15 Initials: MM

Work Order No. PQFC619

Client: AMEC

Project: Fred Meyer Fuel Enhancement

Cooler ID(s): 177

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 2.9 °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:_____
X None

Container Type:
___#Cooler(s)
___#Box(s)
___None (___#Other:_____)

Coolant Type:
X Gel Ice
___Loose Ice
___None

Packing Material:
___Bubble Bags
___Styrofoam Cubbies
X None (___Other:_____)

Received from:
___TA Courier
X 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 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:
VOAs Free of Headspace? (Y) N NA
TB on COC? not provided (Y) N NA

Metals:
HNO3 Preserved? 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.)*

Army Corp:

Geiger (ticks/min): ___ ___ ___ ___

Temperatures (IR): _____°C _____°C _____°C _____°C
(left) (middle) (right) (air)

Project Managers:

Comments:_____

*PM Reviewed:*_____ *(Initial/Date)*

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
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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.

Work Order	Project	ProjectNumber
PQH1213	Fred Meyer Port Orchard	9-61M-10282-0

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Crystal Jones For Christina Woodcock, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQH1213-02RE1 (MW105)		**Water**			**Sampled: 08/28/07 09:00**					
Gasoline Range Hydrocarbons	NW TPH-Gx	4300	-----	400	ug/l	5x	7090264	09/07/07 12:30	09/08/07 15:45	
Surrogate(s): 4-BFB			*107%*		*50 - 150 %*	*1x*			"	
PQH1213-03RE1 (MW103)		**Water**			**Sampled: 08/28/07 09:30**					
Gasoline Range Hydrocarbons	NW TPH-Gx	264	-----	80.0	ug/l	1x	7090264	09/07/07 12:30	09/08/07 16:12	
Surrogate(s): 4-BFB			*96.4%*		*50 - 150 %*	"			"	

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	09/21/07 16:35

BTEX Compounds per EPA Method 8260B

TestAmerica - Portland, OR

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQH1213-01 (TB)		**Water**			**Sampled: 08/28/07 07:45**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB			*101%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*104%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*104%*		*80 - 120 %*	"			"	
Toluene-d8			*100%*		*80 - 120 %*	"			"	

Crystal Jones For Christina Woodcock, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PQH1213-02RE1 (MW105)		**Water**			**Sampled: 08/28/07 09:00**					
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	"	"	"	"	"	
Ethylbenzene	"	**44.1**	-----	2.50	"	"	"	"	"	
Xylenes (total)	"	**159**	-----	5.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	10.0	"	"	"	"	"	
Naphthalene	"	**31.9**	-----	10.0	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**383**	-----	5.00	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**109**	-----	2.50	"	"	"	"	"	
n-Butylbenzene	"	ND	-----	25.0	"	"	"	"	"	
sec-Butylbenzene	"	ND	-----	5.00	"	"	"	"	"	
Isopropylbenzene	"	**17.2**	-----	10.0	"	"	"	"	"	
tert-Butylbenzene	"	ND	-----	5.00	"	"	"	"	"	
n-Propylbenzene	"	**62.9**	-----	2.50	"	"	"	"	"	
p-Isopropyltoluene	"	ND	-----	10.0	"	"	"	"	"	
Surrogate(s): 4-BFB			*101%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*95.2%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*96.4%*		*80 - 120 %*	"			"	
Toluene-d8			*96.5%*		*80 - 120 %*	"			"	
PQH1213-03RE1 (MW103)		**Water**			**Sampled: 08/28/07 09:30**					
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	"	"	"	"	"	
Benzene	"	**84.1**	-----	0.200	"	"	"	"	"	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	**6.60**	-----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	2.00	"	"	"	"	"	
Naphthalene	"	ND	-----	2.00	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**1.47**	-----	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			*107%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*99.8%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*99.4%*		*80 - 120 %*	"			"	

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PQH1213-03RE1 (MW103)		**Water**			**Sampled: 08/28/07 09:30**					
Toluene-d8		*99.7%*			*80 - 120 %*	*1x*			*09/09/07 18:10*	

Crystal Jones For Christina Woodcock, Project Manager

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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: 7090070 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (7090070-BLK1)								Extracted: 09/04/07 13:50						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/05/07 17:51	
Surrogate(s): 4-BFB		*Recovery: 95.2%*			*Limits: 50-150%*	"							*09/05/07 17:51*	
LCS (7090070-BS1)								Extracted: 09/04/07 13:50						
Gasoline Range Hydrocarbons	NW TPH-Gx	384	---	80.0	ug/l	1x	--	500	76.9%	(70-130)	--	--	09/05/07 16:56	
Surrogate(s): 4-BFB		*Recovery: 89.9%*			*Limits: 50-150%*	"							*09/05/07 16:56*	
LCS Dup (7090070-BSD1)								Extracted: 09/04/07 13:50						
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	
Surrogate(s): 4-BFB		*Recovery: 101%*			*Limits: 50-150%*	"							*09/05/07 17:24*	
Duplicate (7090070-DUP2)					QC Source: PQH1010-02RE1			Extracted: 09/04/07 13:50						
Gasoline Range Hydrocarbons	NW TPH-Gx	13000	---	800	ug/l	10x	13300	--	--	--	2.26%	(35)	09/05/07 23:33	
Surrogate(s): 4-BFB		*Recovery: 113%*			*Limits: 50-150%*	*1x*							*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
Blank (7090264-BLK1)								Extracted: 09/07/07 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/08/07 11:36	B
Surrogate(s): 4-BFB		*Recovery: 93.1%*			*Limits: 50-150%*	"							*09/08/07 11:36*	
LCS (7090264-BS1)								Extracted: 09/07/07 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	393	---	80.0	ug/l	1x	--	500	78.7%	(70-130)	--	--	09/08/07 10:41	
Surrogate(s): 4-BFB		*Recovery: 65.8%*			*Limits: 50-150%*	"							*09/08/07 10:41*	
LCS Dup (7090264-BSD1)								Extracted: 09/07/07 12:30						
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	
Surrogate(s): 4-BFB		*Recovery: 97.0%*			*Limits: 50-150%*	"							*09/08/07 11:09*	
Duplicate (7090264-DUP1)					QC Source: PQH1351-04			Extracted: 09/07/07 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	8710	---	800	ug/l	10x	9120	--	--	--	4.53%	(35)	09/08/07 12:59	
Surrogate(s): 4-BFB		*Recovery: 109%*			*Limits: 50-150%*	*1x*							*09/08/07 12:59*	
Duplicate (7090264-DUP2)					QC Source: PQH1298-07RE1			Extracted: 09/07/07 12:30						
Gasoline Range Hydrocarbons	NW TPH-Gx	10000	---	800	ug/l	10x	9840	--	--	--	1.80%	(35)	09/08/07 13:54	
Surrogate(s): 4-BFB		*Recovery: 136%*			*Limits: 50-150%*	*1x*							*09/08/07 13:54*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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: 7I08002 **Water Preparation Method: 7090264**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Instrument Blank (7I08002-IBL2)								Extracted: 09/08/07 00:00						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/08/07 14:49	
Surrogate(s): 4-BFB		*Recovery: NR*			*Limits: 50-150%*	"							*09/08/07 14:49*	
Instrument Blank (7I08002-IBL4)								Extracted: 09/08/07 00:00						
Gasoline Range Hydrocarbons	NW TPH-Gx	71.9	---	80.0	ug/l	1x	--	--	--	--	--	--	09/09/07 00:01	
Surrogate(s): 4-BFB		*Recovery: NR*			*Limits: 50-150%*	"							*09/09/07 00:01*	
Instrument Blank (7I08002-IBL5)								Extracted: 09/08/07 00:00						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	09/09/07 00:28	
Surrogate(s): 4-BFB		*Recovery: NR*			*Limits: 50-150%*	"							*09/09/07 00:28*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	09/21/07 16:35

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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.3%*			*Limits: 80-120%*	"							*09/08/07 15:36*	
1,2-DCA-d4		*105%*			*80-120%*	"							"	
Dibromofluoromethane		*104%*			*80-120%*	"							"	
Toluene-d8		*98.8%*			*80-120%*	"							"	
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%	"	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.4%*			*Limits: 80-120%*	"							*09/08/07 13:48*	
1,2-DCA-d4		*98.0%*			*80-120%*	"							"	
Dibromofluoromethane		*99.4%*			*80-120%*	"							"	
Toluene-d8		*99.8%*			*80-120%*	"							"	
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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 98.2%*			*Limits: 80-120%*	"							*09/08/07 14:42*	
1,2-DCA-d4		*97.8%*			*80-120%*	"							"	
Dibromofluoromethane		*98.2%*			*80-120%*	"							"	
Toluene-d8		*99.3%*			*80-120%*	"							"	

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BEAVERTON, OR 97008-7132
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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	09/21/07 16:35

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
Blank (7090295-BLK1)									Extracted: 09/08/07 10:48					
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 98.3%*			*Limits: 80-120%*	"							*09/08/07 15:36*	
1,2-DCA-d4		*105%*			*80-120%*	"							"	
Dibromofluoromethane		*104%*			*80-120%*	"							"	
Toluene-d8		*98.8%*			*80-120%*	"							"	
LCS (7090295-BS1)									Extracted: 09/08/07 10:48					
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 97.4%*			*Limits: 80-120%*	"							*09/08/07 13:48*	
1,2-DCA-d4		*98.0%*			*80-120%*	"							"	
Dibromofluoromethane		*99.4%*			*80-120%*	"							"	
Toluene-d8		*99.8%*			*80-120%*	"							"	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	09/21/07 16:35

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
LCS Dup (7090295-BSD1)							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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 98.2%*			*Limits: 80-120%*	"							*09/08/07 14:42*	
1,2-DCA-d4		*97.8%*			*80-120%*	"							"	
Dibromofluoromethane		*98.2%*			*80-120%*	"							"	
Toluene-d8		*99.3%*			*80-120%*	"							"	

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							
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 80-120%*	"							*09/09/07 14:06*	

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Crystal Jones For Christina Woodcock, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	09/21/07 16:35

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					
Surrogate(s): 1,2-DCA-d4		*Recovery: 95.2%*			*Limits: 80-120%*	*1x*							*09/09/07 14:06*	
Dibromofluoromethane		*97.4%*			*80-120%*	"							"	
Toluene-d8		*97.8%*			*80-120%*	"							"	
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 105%*			*Limits: 80-120%*	"							*09/09/07 13:12*	
1,2-DCA-d4		*96.7%*			*80-120%*	"							"	
Dibromofluoromethane		*101%*			*80-120%*	"							"	
Toluene-d8		*103%*			*80-120%*	"							"	
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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 113%*			*Limits: 80-120%*	"							*09/09/07 12:45*	
1,2-DCA-d4		*103%*			*80-120%*	"							"	
Dibromofluoromethane		*108%*			*80-120%*	"							"	
Toluene-d8		*109%*			*80-120%*	"							"	

TestAmerica - Portland, OR

Crystal Jones For Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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Crystal Jones For Christina Woodcock, 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 #: 70H1213

NCA CLIENT: AMEC

REPORT TO: Paul Skull

ADDRESS: 7376 SW Durham Rd Tigard OR

PHONE: 503 639 3400 FAX:

INVOICE TO:

P.O. NUMBER:

PROJECT NAME: Fred Meyer Port Orchard (FMPO)

PROJECT NUMBER: 9 eimmezez

SAMPLED BY: McFarland

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: 5 STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Request less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	TPH 6X	8260	BTEX	NWTPH EDR	Naphthalene	Alkylbenz Suite	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: [signature] DATE: 8/28/07

PRINT NAME: W. J. McFarland FIRM: AMEC TIME: 1300

RECEIVED BY: [signature] DATE: 8-28-07

PRINT NAME: Jeremy Mason FIRM: TAP TIME: 1455

RELEASED BY: DATE: 8/28/07

PRINT NAME: FIRM: TAP TIME: 1515

RECEIVED BY: [signature] DATE: 8/28/07

PRINT NAME: Peggy Siegfried FIRM: TAP TIME: 1515

ADDITIONAL REMARKS:

TEMP: 1.1 0.7

COC REV 09/04

PAGE OF

TestAmerica Sample Receipt Checklist

Received by: (section A) Date: 8/28/07 Time: 1515 Initials: BS

Unpacked by: (section B) Date: 8-29 Initials: MP

Logged-in by: Date: 8/29 Initials: (EB)

Work Order No.: F0H1213

Client: Army

Project: Ordnance

Cooler ID(s): 032, 070

***ESI Clients (see Section C)

Cooler Temperature (IR): 0.7 °C plastic glass NA (oil/air samples, ESI client)

Temperature out of range.
___No Ice
___Ice Melted
___Wiln 4 Hours
___Other:

A

Custody Seals: (#____)

Signature: Y N Dated:_____

X None

Container Type:

1 #Cooler(s)

____#Box(s)

____None (___#Other:_____)

Coolant Type:

X Gel Ice

____Loose Ice

____None

Packing Material:

____Bubble Bags

____Styrofoam Cubbies

X None (___Other:_____)

Received from:

X 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 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:

VOAs Free of Headspace? (Y) N NA

TB on COC? not provided (Y) N NA

Metals:

HNO3 Preserved? 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.)

Army Corp: Geiger (ticks/min): ___ ___ ___ ___

Temperatures (IR): _____ °C _____ °C _____ °C _____ °C

(left) (middle) (right) (air)

Project Managers:

Comments:_____

PM Reviewed:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

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.

Work Order	Project	ProjectNumber
PQK1047	Fred Meyer Port Orchard	9-61M-10282-0

TestAmerica Portland

Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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 M. Woodcock

Christina Woodcock, Project Manager

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ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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

TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
PQK1047-01 (MW 105)		**Water**			**Sampled: 11/28/07 13:45**					
Gasoline Range Hydrocarbons	NW-G, 8021B	**99.4**	-----	80.0	ug/l	1x	7120050	12/03/07 15:38	12/03/07 23:17	
Surrogate(s): 4-BFB (FID)			*95.0%*		*50 - 150 %*	"			"	
4-BFB (PID)			*93.3%*		*70 - 130 %*	"			"	
PQK1047-02 (MW 103)		**Water**			**Sampled: 11/28/07 14:30**					
Gasoline Range Hydrocarbons	NW-G, 8021B	**7130**	-----	400	ug/l	5x	7120050	12/03/07 15:38	12/03/07 23:44	
Surrogate(s): 4-BFB (FID)			*106%*		*50 - 150 %*	*1x*			"	
4-BFB (PID)			*98.0%*		*70 - 130 %*	"			"	
PQK1047-03 (TB)		**Water**			**Sampled: 11/28/07 00:00**					
Gasoline Range Hydrocarbons	NW-G, 8021B	ND	-----	80.0	ug/l	1x	7120050	12/03/07 15:38	12/03/07 22:49	
Surrogate(s): 4-BFB (FID)			*90.8%*		*50 - 150 %*	"			"	
4-BFB (PID)			*89.8%*		*70 - 130 %*	"			"	

TestAmerica Portland

Christina Woodcock, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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	"	"	"	"	"	
Benzene	"	**45.6**	-----	0.200	"	"	"	"	"	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	**4.15**	-----	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	"	"	"	"	"	
Ethylbenzene	"	**32.2**	-----	0.500	"	"	"	"	"	
Xylenes (total)	"	**141**	-----	1.00	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	2.00	"	"	"	"	"	
Naphthalene	"	**39.3**	-----	2.00	"	"	"	"	"	
n-Butylbenzene	"	ND	-----	5.00	"	"	"	"	"	
sec-Butylbenzene	"	ND	-----	1.00	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	2.00	"	"	"	"	"	
tert-Butylbenzene	"	ND	-----	1.00	"	"	"	"	"	
n-Propylbenzene	"	**69.0**	-----	0.500	"	"	"	"	"	
p-Isopropyltoluene	"	**10.8**	-----	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

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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
PQK1047-02RE1 (MW 103)		**Water**			**Sampled: 11/28/07 14:30**					**RL7**
1,2,4-Trimethylbenzene	EPA 8260B	743	-----	5.00	ug/l	5x	7120045	12/03/07 13:47	12/04/07 00:46	
1,3,5-Trimethylbenzene	"	287	-----	2.50	"	"	"	"	"	
Surrogate(s): 4-BFB			*104%*		*80 - 120 %*	*1x*			"	
1,2-DCA-d4			*95.8%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*96.9%*		*80 - 120 %*	"			"	
Toluene-d8			*98.6%*		*80 - 120 %*	"			"	
PQK1047-03 (TB)		**Water**			**Sampled: 11/28/07 00:00**					
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	"	"	"	"	"	
Surrogate(s): 4-BFB			*100%*		*80 - 120 %*	"			"	
1,2-DCA-d4			*101%*		*80 - 120 %*	"			"	
Dibromofluoromethane			*98.6%*		*80 - 120 %*	"			"	
Toluene-d8			*98.7%*		*80 - 120 %*	"			"	

TestAmerica Portland

Christina Woodcock, Project Manager

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THE LEADER IN ENVIRONMENTAL TESTING

PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
ph: (503) 906.9200 fax: (503) 906.9210

AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
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
Blank (7120050-BLK1)								Extracted: 12/03/07 15:38						
Gasoline Range Hydrocarbons	NW-G, 8021B	ND	---	80.0	ug/l	1x	--	--	--	--	--	--	12/03/07 22:22	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.4%*			*Limits: 50-150%*	"							*12/03/07 22:22*	
4-BFB (PID)		*89.4%*			*70-130%*	"							"	
LCS (7120050-BS2)								Extracted: 12/03/07 15:38						
Gasoline Range Hydrocarbons	NW-G, 8021B	427	---	80.0	ug/l	1x	--	500	85.5%	(70-130)	--	--	12/03/07 21:27	
Surrogate(s): 4-BFB (FID)		*Recovery: 97.6%*			*Limits: 50-150%*	"							*12/03/07 21:27*	
LCS Dup (7120050-BSD2)								Extracted: 12/03/07 15:38						
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	
Surrogate(s): 4-BFB (FID)		*Recovery: 99.0%*			*Limits: 50-150%*	"							*12/03/07 21:55*	
4-BFB (PID)		*95.1%*			*70-130%*	"							"	
Duplicate (7120050-DUP1)							QC Source: PQK1047-02	Extracted: 12/03/07 15:38						
Gasoline Range Hydrocarbons	NW-G, 8021B	7070	---	400	ug/l	5x	7130	--	--	--	0.880%	(40)	12/04/07 00:12	
Surrogate(s): 4-BFB (FID)		*Recovery: 105%*			*Limits: 50-150%*	*1x*							*12/04/07 00:12*	

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/12/07 18:15

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
Blank (7120002-BLK1)								Extracted: 12/01/07 09:19						
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 101%*			*Limits: 80-120%*	"							*12/01/07 12:12*	
1,2-DCA-d4		*104%*			*80-120%*	"							"	
Dibromofluoromethane		*102%*			*80-120%*	"							"	
Toluene-d8		*98.1%*			*80-120%*	"							"	
LCS (7120002-BS1)								Extracted: 12/01/07 09:19						MNR1
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)	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 104%*			*Limits: 80-120%*	"							*12/01/07 10:50*	
1,2-DCA-d4		*102%*			*80-120%*	"							"	
Dibromofluoromethane		*102%*			*80-120%*	"							"	
Toluene-d8		*99.4%*			*80-120%*	"							"	

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Christina Woodcock, Project Manager

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PORTLAND, OR 9405 S.W. NIMBUS AVENUE
BEAVERTON, OR 97008-7132
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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	12/12/07 18:15

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
LCS Dup (7120002-BSD1)								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%	"	"	
Surrogate(s): 4-BFB		*Recovery: 101%*			*Limits: 80-120%*	"							*12/01/07 11:17*	
1,2-DCA-d4		*103%*			*80-120%*	"							"	
Dibromofluoromethane		*101%*			*80-120%*	"							"	
Toluene-d8		*97.6%*			*80-120%*	"							"	

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						
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	"	"	--	--	--	--	--	--	"	
Surrogate(s): 4-BFB		*Recovery: 103%*			*Limits: 80-120%*	"							*12/03/07 16:51*	

TestAmerica Portland

Christina Woodcock, Project Manager

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AMEC- Portland	Project Name: **Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number: 9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager: Paul Stull	12/12/07 18:15

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						
Surrogate(s): 1,2-DCA-d4		*Recovery: 98.2%*			*Limits: 80-120%*	*1x*							*12/03/07 16:51*	
Dibromofluoromethane		*101%*			*80-120%*	"							"	
Toluene-d8		*99.7%*			*80-120%*	"							"	
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-BSD1)								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 M. Woodcock

Christina Woodcock, Project Manager

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AMEC- Portland	Project Name:	**Fred Meyer Port Orchard**	
7376 SW Durham Road	Project Number:	9-61M-10282-0	Report Created:
Portland, OR 97224	Project Manager:	Paul Stull	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.

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PQK1047
1271

amec
Earth & Environmental, Inc.
7376 SW Durham Road
Portland, Oregon 97224
Phone Number (503) 639-3400
Fax Number (503) 620-7892

CHAIN OF CUSTODY

PROJECT	PROJECT No.
(PMO) Port orchard Fred Meyer	96IM102820
REPORT TO: Paul Stull	PHONE No.
PROJECT MANAGER " "	PHONE No.
SAMPLER'S NAME (please print) Jason Gardner	PHONE No.
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	MATRIX	PRESERVATIVE	CONTAINERS No.	CONTAINERS VOL.
1. MW105	11/26/07	1345	H2O	HCL/ICE		
2. MW103	"	1430				
3. TB	NA	NA				
4.						
5.						
6.						
7.						
8.						
9.						
10.						

ANALYSIS REQUESTED (circle, check box or write preferred method in box)

8260 Suite **	NWTPH-Gx *	NWTPH-Dx * 8021

TestAmerica Sample Receipt Checklist

Received by: *(section A)* Date: 11/29/07 Time: 16:55 Initials: JI

Unpacked by: *(section B)* Date: 11/29/07 Initials: JI

Logged-in by: Date: 11/29/07 Initials: JI

Work Order No. PQK1047

Client: AMEC

Project: Fred Meyer Port Orchard

Cooler ID(s): _____

Temperature out of range:

___Not enough Ice
___*No Ice*
___*Ice Melted*
___*W/in 4 Hours*
___*Other:*_____

***ESI Clients *(see Section C)*

Cooler Temperature (IR): 2.3 °C plastic (glass) NA *(oil/air samples, ESI client)* Temperature Blank: _____ °C

A

Custody Seals: (#___)

Signature: Y N Dated:_____
X None

Container Type:
1 #Cooler(s)
___#Box(s)
___None (___#Other:_____)

Coolant Type:
X Gel Ice
X Loose Ice
___None

Packing Material:
___Bubble Bags
___Styrofoam Cubbies
X None (___Other:_____)

Received from:
X 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 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, or by phone at 503-718-2323.

Apex Laboratories

Allison Greiner For Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-041508 (A804182-01)			**Matrix: Water**					
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 %*	"	"	"	
MW105-041508 (A804182-02)			**Matrix: Water**					
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 %*	"	"	"	
TB (A804182-03)			**Matrix: Water**					
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 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-041508 (A804182-01)			**Matrix: Water**					
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	"	"	"	"	
Chloroethane	**2.23**	---	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	"	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-041508 (A804182-01)			**Matrix: Water**					
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	"	"	"	"	
Ethylbenzene	**51.8**	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	5.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	**11.4**	---	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	**27.5**	---	5.00	"	"	"	"	
n-Propylbenzene	**33.3**	---	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	**63.5**	---	1.00	"	"	"	"	
Vinyl chloride	ND	---	0.500	"	"	"	"	
m,p-Xylene	**197**	---	1.00	"	"	"	"	
o-Xylene	**54.9**	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-041508 (A804182-01RE1)			**Matrix: Water**					
1,2,4-Trimethylbenzene	453	---	10.0	ug/L	10	04/22/08 16:10	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
MW105-041508 (A804182-02)			**Matrix: Water**					
Acetone	ND	---	20.0	ug/L	1	04/22/08 15:39	EPA 8260B	
Benzene	2.89	---	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	"	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW105-041508 (A804182-02)			**Matrix: Water**					
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	"	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW105-041508 (A804182-02)			**Matrix: Water**					
o-Xylene	ND	---	0.500	ug/L	1	"	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
MW105-041508 (A804182-02RE1)			**Matrix: Water**					
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	04/22/08 16:42	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	
TB (A804182-03)			**Matrix: Water**					
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	"	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
TB (A804182-03)			**Matrix: Water**					
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	"	"	"	"	

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Allison Greiner For Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
TB (A804182-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 91 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8040246 - EPA 5030B							**Water**					
Blank (8040246-BLK1)							**Analyzed: 04/22/08 11:49**					
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*122 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*94 %*		*50-150 %*			*"*				
LCS (8040246-BS2)							**Analyzed: 04/22/08 11:16**					
NWTPH-Gx												
Gasoline Range Organics	0.465	---	0.0800	mg/L	1	0.500	---	93	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery:*	*125 %*	*Limits:*	*50-150 %*		*Dilution:*	*1x*				
1,4-Difluorobenzene (Sur)			*94 %*		*50-150 %*			*"*				

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Portland, OR 97224	Project Manager: Paul Stull	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
EPA 5030B							
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
EPA 5030B							
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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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.

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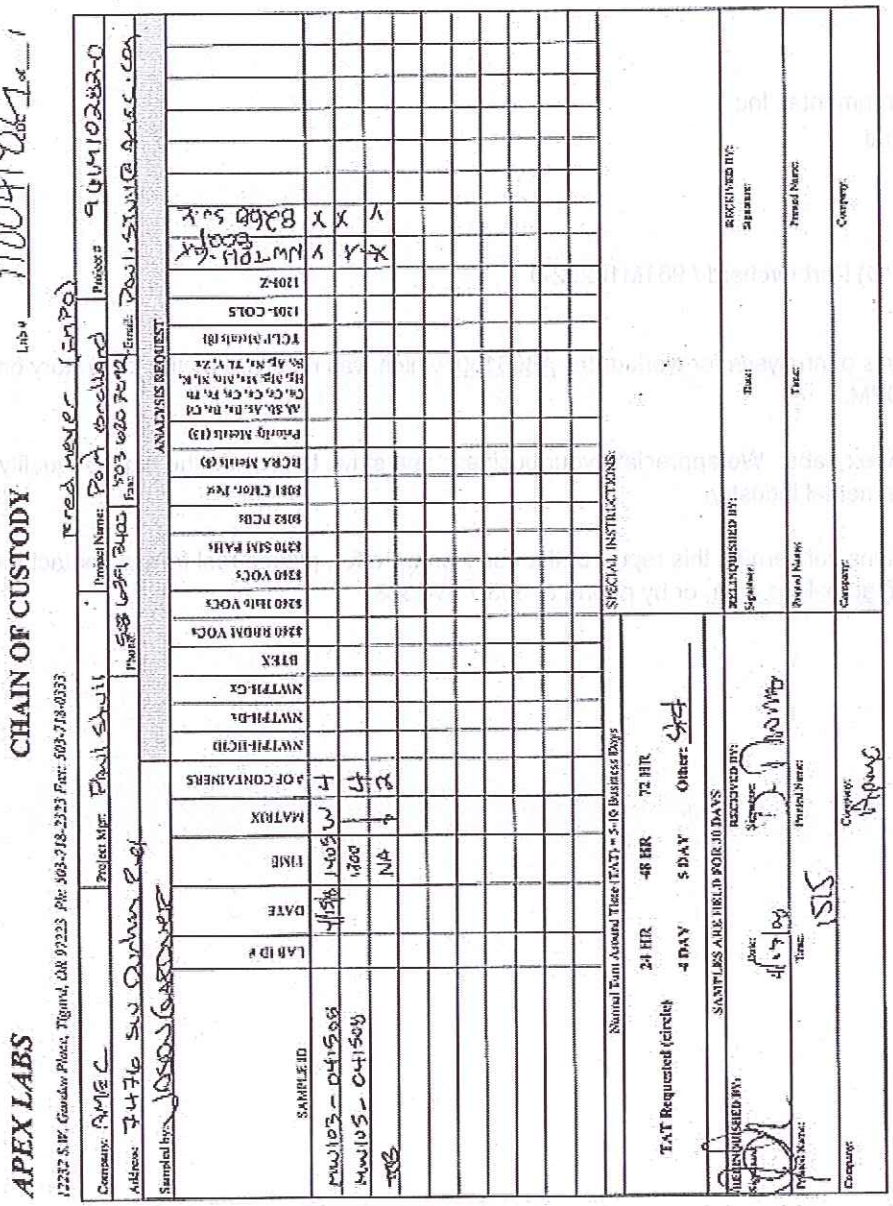
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	05/23/08 09:35



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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, or by phone at 503-718-2323.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-061908 (A806180-01RE1)			**Matrix: Water**					
Gasoline Range Organics	**10.6**	---	0.800	mg/L	10	06/24/08 13:38	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 101 %*	*Limits: 50-150 %*	1	"	"	
1,4-Difluorobenzene (Sur)			*99 %*	*Limits: 50-150 %*	"	"	"	
MW105-061908 (A806180-02)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	06/23/08 21:02	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 94 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*96 %*	*Limits: 50-150 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-061908 (A806180-01)			**Matrix: Water**					
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	"	"	"	"	
sec-Butylbenzene	**6.76**	---	1.00	"	"	"	"	
tert-Butylbenzene	ND	---	0.500	"	"	"	"	
Carbon tetrachloride	ND	---	0.500	"	"	"	"	
Chlorobenzene	ND	---	0.500	"	"	"	"	
Chloroethane	**3.37**	---	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	"	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-061908 (A806180-01)			**Matrix: Water**					
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	"	"	"	"	
Ethylbenzene	**91.1**	---	0.500	"	"	"	"	
Hexachlorobutadiene	ND	---	2.00	"	"	"	"	
2-Hexanone	ND	---	10.0	"	"	"	"	
Isopropylbenzene	**20.9**	---	0.500	"	"	"	"	
4-Isopropyltoluene	**26.0**	---	0.500	"	"	"	"	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	2.00	"	"	"	"	
Methylene chloride	ND	---	5.00	"	"	"	"	
Naphthalene	**41.3**	---	5.00	"	"	"	"	
n-Propylbenzene	**81.1**	---	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	"	"	"	"	
m,p-Xylene	**323**	---	1.00	"	"	"	"	
o-Xylene	**48.0**	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)		*Recovery: 94 %*	*Limits: 80-120 %*	"	"	"	"	
1,4-Difluorobenzene (Surr)		*97 %*	*Limits: 80-120 %*	"	"	"	"	
Toluene-d8 (Surr)		*96 %*	*Limits: 80-120 %*	"	"	"	"	
4-Bromofluorobenzene (Surr)		*97 %*	*Limits: 80-120 %*	"	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-061908 (A806180-01RE1)			**Matrix: Water**					
1,2,4-Trimethylbenzene	**783**	---	10.0	ug/L	10	06/24/08 13:38	EPA 8260B	
1,3,5-Trimethylbenzene	**272**	---	10.0	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
MW105-061908 (A806180-02RE1)			**Matrix: Water**					
Acetone	ND	---	20.0	ug/L	1	06/24/08 17:10	EPA 8260B	
Benzene	**3.44**	---	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	"	"	"	"	

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Portland, OR 97224	Project Manager: Paul Stull	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
MW105-061908 (A806180-02RE1)			**Matrix: Water**					
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	"	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW105-061908 (A806180-02RE1)			**Matrix: Water**					
Vinyl chloride	ND	---	0.500	ug/L	1	"	EPA 8260B	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	0.540	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 106 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*110 %*	*Limits: 80-120 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 %*			*"*					

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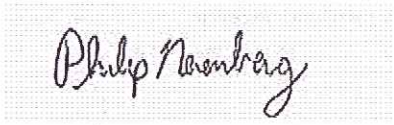

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060207 - EPA 5030B							Water					
Blank (8060207-BLK1)						Analyzed: 06/23/08 12:25						
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060207 - EPA 5030B							**Water**					
Blank (8060207-BLK1)						**Analyzed: 06/23/08 12:25**						
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 %*	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060207 - EPA 5030B							**Water**					
LCS (8060207-BS1)						**Analyzed: 06/23/08 11:25**						
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060207 - EPA 5030B							**Water**					
LCS (8060207-BS1)						**Analyzed: 06/23/08 11:25**						
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 %*	"	

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Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							Water					
Blank (8060228-BLK1)						Analyzed: 06/24/08 11:05						
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							**Water**					
Blank (8060228-BLK1)						**Analyzed: 06/24/08 11:05**						
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 %*	"	

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							**Water**					
LCS (8060228-BS1)						**Analyzed: 06/24/08 10:00**						
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							**Water**					
LCS (8060228-BS1)						Analyzed: 06/24/08 10:00						
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 %*	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							Water					
Matrix Spike (8060228-MS1)			Source: A806180-02RE1			Analyzed: 06/24/08 17:40						
EPA 8260B												
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

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8060228 - EPA 5030B							**Water**					
Matrix Spike (8060228-MS1)			**Source: A806180-02RE1**			**Analyzed: 06/24/08 17:40**						
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	"	---	---	

Surr: Dibromofluoromethane (Surr)	*Recovery: 103 %*	*Limits: 80-120 %*	*Dilution: 1x*
1,4-Difluorobenzene (Surr)	*99 %*	*80-120 %*	*"*
Toluene-d8 (Surr)	*97 %*	*80-120 %*	*"*
4-Bromofluorobenzene (Surr)	*98 %*	*80-120 %*	*"*

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch: 8060207							
A806180-02	Water	NWTPH-Gx	06/19/08 11:55	06/23/08 10:42	5mL/5mL	5mL/5mL	1.00
Batch: 8060228							
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
Batch: 8060207							
A806180-01	Water	EPA 8260B	06/19/08 11:10	06/23/08 10:42	5mL/5mL	5mL/5mL	1.00
Batch: 8060228							
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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 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.

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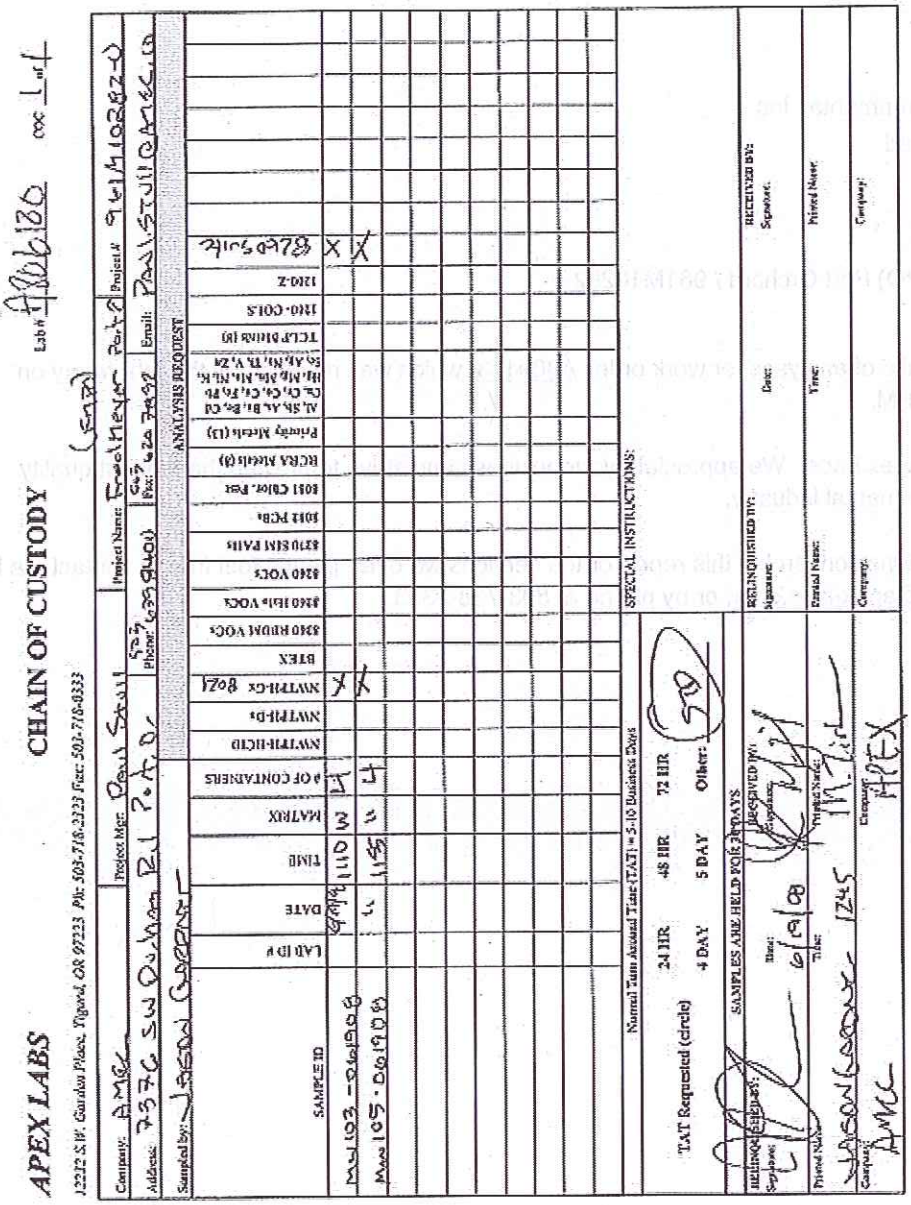
7376 SW Durham Road	**Project Number:** 961M10282-0	**Reported:**
Portland, OR 97224	**Project Manager:** Paul Stull	07/07/08 17:22



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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, or by phone at 503-718-2323.

Apex Laboratories

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Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	10/15/08 16:57

ANALYTICAL SAMPLE RESULTS

Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-091608 (A809173-01)			**Matrix: Water**					
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 %*	"	"	"	
MW105-091608 (A809173-02)			**Matrix: Water**					
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 %*	"	"	"	
AS9-091608 (A809173-03)			**Matrix: Water**					
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 %*	"	"	"	
AS5-091608 (A809173-04)			**Matrix: Water**					
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 %*	"	"	"	
AS10-091608 (A809173-05)			**Matrix: Water**					
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 %*	"	"	"	
EB-091608 (A809173-06)			**Matrix: Water**					
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 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-091608 (A809173-01RE1)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
MW105-091608 (A809173-02)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW105-091608 (A809173-02)			**Matrix: Water**					
Surrogate: 4-Bromofluorobenzene (Surr)			*Recovery: 114 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
AS9-091608 (A809173-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	
AS5-091608 (A809173-04)			**Matrix: Water**					
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	"	"	"	"	

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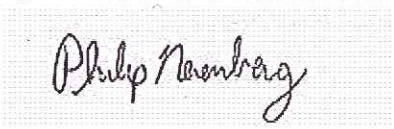

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	10/15/08 16:57

ANALYTICAL SAMPLE RESULTS

RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
AS5-091608 (A809173-04)			**Matrix: Water**					
1,2-Dichloroethane (EDC)	ND	---	0.500	ug/L	1	"	EPA 8260B	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 107 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*108 %*	*Limits: 80-120 %*	"	"	"	
AS10-091608 (A809173-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 106 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	
EB-091608 (A809173-06)			**Matrix: Water**					
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	"	"	"	"	

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Portland, OR 97224	Project Manager: Paul Stull	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
EB-091608 (A809173-06)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 107 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	

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Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
MW103-091608 (A809173-01)			**Matrix: Water**					**A-02**
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	"	"	"	"	
MW105-091608 (A809173-02)			**Matrix: Water**					**A-02**
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	"	"	"	"	
AS9-091608 (A809173-03)			**Matrix: Water**					**A-02**
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	"	"	"	"	
AS5-091608 (A809173-04)			**Matrix: Water**					**A-02**
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	"	"	"	"	
AS10-091608 (A809173-05)			**Matrix: Water**					**A-02**
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	"	"	"	"	
EB-091608 (A809173-06)			**Matrix: Water**					**A-02**
n-Butylbenzene	ND	---	1.00	ug/L	1	09/26/08 03:22	EPA 8260B	
sec-Butylbenzene	ND	---	10.0	"	"	"	"	

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Portland, OR 97224	Project Manager: Paul Stull	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
EB-091608 (A809173-06)			**Matrix: Water**					**A-02**
tert-Butylbenzene	ND	---	0.500	ug/L	1	"	EPA 8260B	
4-Isopropyltoluene	ND	---	1.00	"	"	"	"	

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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 8090307 - EPA 5030B							Water					
Blank (8090307-BLK1)							Analyzed: 09/25/08 20:50					
NWTPH-Gx												
Gasoline Range Organics	ND	---	0.0800	mg/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*96 %*	*50-150 %*			*"*					
LCS (8090307-BS2)							Analyzed: 09/25/08 20:20					
NWTPH-Gx												
Gasoline Range Organics	0.585	---	0.0800	mg/L	1	0.500	---	117	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 100 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*94 %*	*50-150 %*			*"*					

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Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8090307 - EPA 5030B							Water					
Blank (8090307-BLK1)						Analyzed: 09/25/08 20:50						
EPA 8260B												
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						
EPA 8260B												
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 %*			*"*				

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8090307 - EPA 5030B								Water				
LCS (8090307-BS1)							Analyzed: 09/25/08 19:50					
Surr: 4-Bromofluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*			*Dilution: 1x*					

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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
Batch 8090313 - EPA 5030B							**Water**					
Blank (8090313-BLK1)						**Analyzed: 09/26/08 11:58**						
EPA 8260B												
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**						
EPA 8260B												
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 %*		"					

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7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8090313 - EPA 5030B							**Water**					
LCS (8090313-BS1)						**Analyzed: 09/26/08 10:57**						
Surr: 4-Bromofluorobenzene (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*		*Dilution: 1x*						

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Portland, OR 97224	Project Manager: Paul Stull	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
Batch 8090307 - EPA 5030B							Water					
Blank (8090307-BLK1)						Analyzed: 09/25/08 20:50						
EPA 8260B												
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	10.0	"	"	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	"	"	---	---	---	---	---	---	
LCS (8090307-BS1)						Analyzed: 09/25/08 19:50						
EPA 8260B												
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	"	---	---	

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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
Batch: 8090307							
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
Batch: 8090307							
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
Batch: 8090313							
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
Batch: 8090307							
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

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Portland, OR 97224	Project Manager: Paul Stull	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 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.

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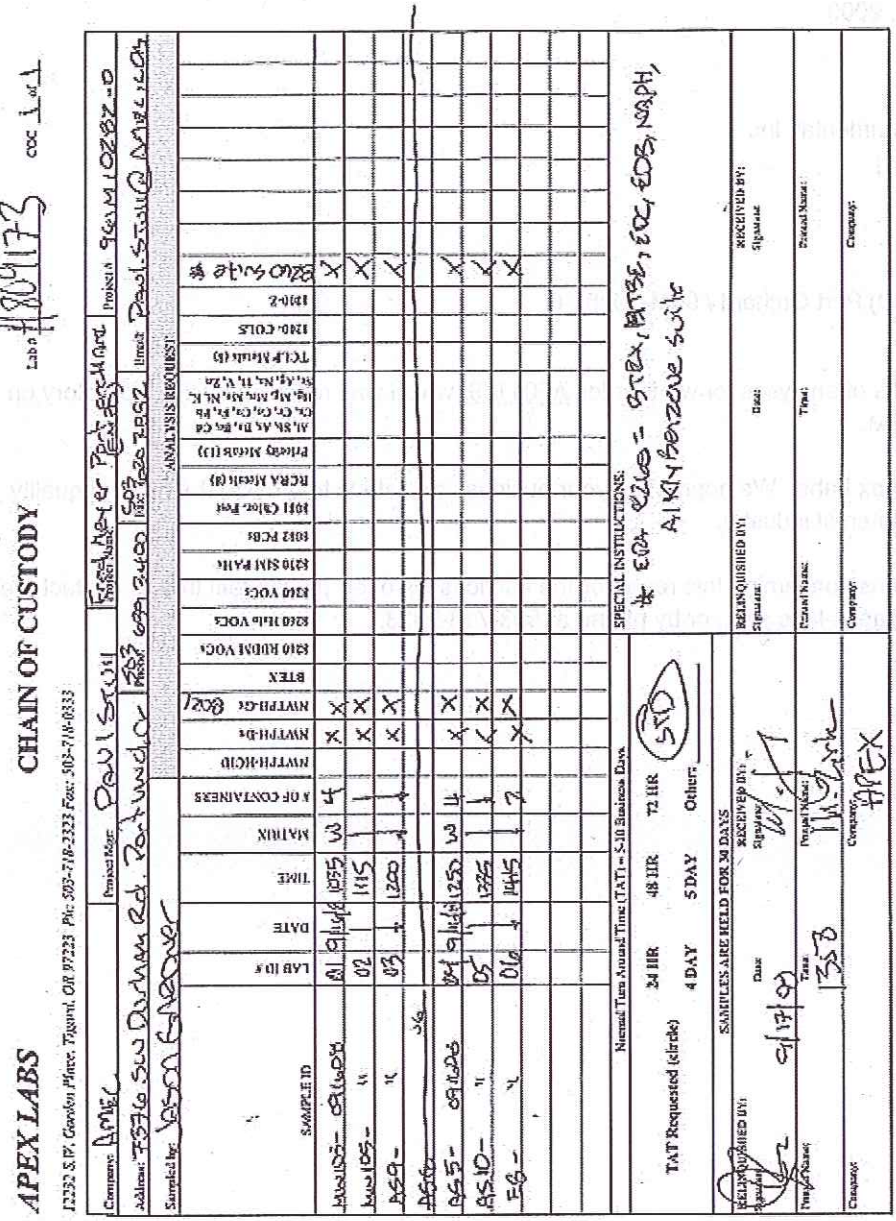
Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	10/15/08 16:57



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Philip Nerenberg, Lab Director

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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, or by phone at 503-718-2323.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

Gasoline Range (C6-C10) Hydrocarbons by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-012409 (A901169-01)			**Matrix: Water**					
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 %*	"	"	"	
MW104A-012409 (A901169-02)			**Matrix: Water**					
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 %*	"	"	"	
MW105-012409 (A901169-03)			**Matrix: Water**					
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 %*	"	"	"	
MW106A-012409 (A901169-04)			**Matrix: Water**					
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 %*	"	"	"	
MW107A-012409 (A901169-05)			**Matrix: Water**					
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 %*	"	"	"	
MW108A-012409 (A901169-06)			**Matrix: Water**					
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 %*	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-012409 (A901169-01)			**Matrix: Water**					
Benzene	ND	---	0.250	ug/L	1	01/27/09 19:07	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	**0.620**	---	0.500	"	"	"	"	
Xylenes, total	**4.36**	---	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	**8.11**	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	**3.24**	---	1.00	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 107 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*111 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
MW104A-012409 (A901169-02)			**Matrix: Water**					
Benzene	**1.51**	---	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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 109 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*94 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
MW105-012409 (A901169-03)			**Matrix: Water**					
Benzene	ND	---	0.250	ug/L	1	01/27/09 20:37	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW105-012409 (A901169-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
MW106A-012409 (A901169-04)			**Matrix: Water**					
Benzene	ND	---	2.50	ug/L	10	01/27/09 21:07	EPA 8260B	
Toluene	ND	---	10.0	"	"	"	"	
Ethylbenzene	**251**	---	5.00	"	"	"	"	
Xylenes, total	**938**	---	15.0	"	"	"	"	
Naphthalene	ND	---	50.0	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	10.0	"	"	"	"	
Isopropylbenzene	**22.4**	---	5.00	"	"	"	"	
n-Propylbenzene	**84.1**	---	5.00	"	"	"	"	
1,2,4-Trimethylbenzene	**246**	---	10.0	"	"	"	"	
1,3,5-Trimethylbenzene	**193**	---	10.0	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	---	5.00	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	---	5.00	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 109 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*114 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
MW107A-012409 (A901169-05)			**Matrix: Water**					
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	"	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

RBCA Compounds (BTEX+) by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW107A-012409 (A901169-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*113 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
MW108A-012409 (A901169-06)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*111 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-012409 (A901169-01)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 107 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*111 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
MW104A-012409 (A901169-02)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 109 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*94 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
MW105-012409 (A901169-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*112 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
MW106A-012409 (A901169-04)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 109 %*	*Limits: 80-120 %*	1	"	"	
1,4-Difluorobenzene (Surr)			*114 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
MW107A-012409 (A901169-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/10/09 14:47

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW107A-012409 (A901169-05)			**Matrix: Water**					
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 113 %*	*Limits: 80-120 %*	1	"	EPA 8260B	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
MW108A-012409 (A901169-06)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*111 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							Water					
Blank (9010277-BLK1)						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 %*			"					
LCS (9010277-BS2)						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 %*			"					
Duplicate (9010277-DUP2)			**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 %*			"					

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
Blank (9010277-BLK1)						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05						
EPA 8260B												
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: 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 %*		"					
LCS (9010277-BS1)						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:04						
EPA 8260B												
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	"	---	---	
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 %*		"					

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							Water					
Duplicate (9010277-DUP2)			Source: A901169-01			Prepared: 01/27/09 12:20	Analyzed: 01/27/09 19:37					
EPA 8260B												
Benzene	ND	---	0.250	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	0.660	---	0.500	"	"	---	0.620	---	---	6	30%	
Xylenes, total	4.73	---	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	10.1	---	1.00	"	"	---	8.11	---	---	22	30%	
1,3,5-Trimethylbenzene	3.98	---	1.00	"	"	---	3.24	---	---	20	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	"	"	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.500	"	"	---	ND	---	---	---	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 %*		"					
Matrix Spike (9010277-MS1)			Source: A901169-06			Prepared: 01/27/09 12:20	Analyzed: 01/28/09 00:08					
EPA 8260B												
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	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 107 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*111 %*		*80-120 %*		"					
Toluene-d8 (Surr)			*96 %*		*80-120 %*		"					

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							Water					
Matrix Spike (9010277-MS1)			Source: A901169-06			Prepared: 01/27/09 12:20		Analyzed: 01/28/09 00:08				
Surr: 4-Bromofluorobenzene (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*		*Dilution: 1x*						

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							Water					
Blank (9010277-BLK1)						Prepared: 01/27/09 12:20 Analyzed: 01/27/09 15:05						
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							Water					
Blank (9010277-BLK1)						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 %*	"

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7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
LCS (9010277-BS1)					Prepared: 01/27/09 12:20 Analyzed: 01/27/09 14:04							
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
LCS (9010277-BS1)						Prepared: 01/27/09 12:20		Analyzed: 01/27/09 14:04				
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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
Duplicate (9010277-DUP2)			**Source: A901169-01**			**Prepared: 01/27/09 12:20**	**Analyzed: 01/27/09 19:37**					
EPA 8260B												
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)	14.4	---	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%	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
Duplicate (9010277-DUP2)			**Source: A901169-01**			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	0.660	---	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	10.1	---	1.00	"	"	---	8.11	---	---	22	30%	
1,3,5-Trimethylbenzene	3.98	---	1.00	"	"	---	3.24	---	---	20	30%	
Vinyl chloride	ND	---	0.500	"	"	---	ND	---	---	---	30%	
m,p-Xylene	3.82	---	1.00	"	"	---	3.55	---	---	7	30%	
o-Xylene	0.910	---	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 %*	*"*

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
Matrix Spike (9010277-MS1)			**Source: A901169-06**			**Prepared: 01/27/09 12:20**		**Analyzed: 01/28/09 00:08**				
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9010277 - EPA 5030B							**Water**					
Matrix Spike (9010277-MS1)			**Source: A901169-06**			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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch: 9010277							
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
Batch: 9010277							
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
Batch: 9010277							
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

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 96M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 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.

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7376 SW Durham Road	Project Number: 96M-10282-0	**Reported:**
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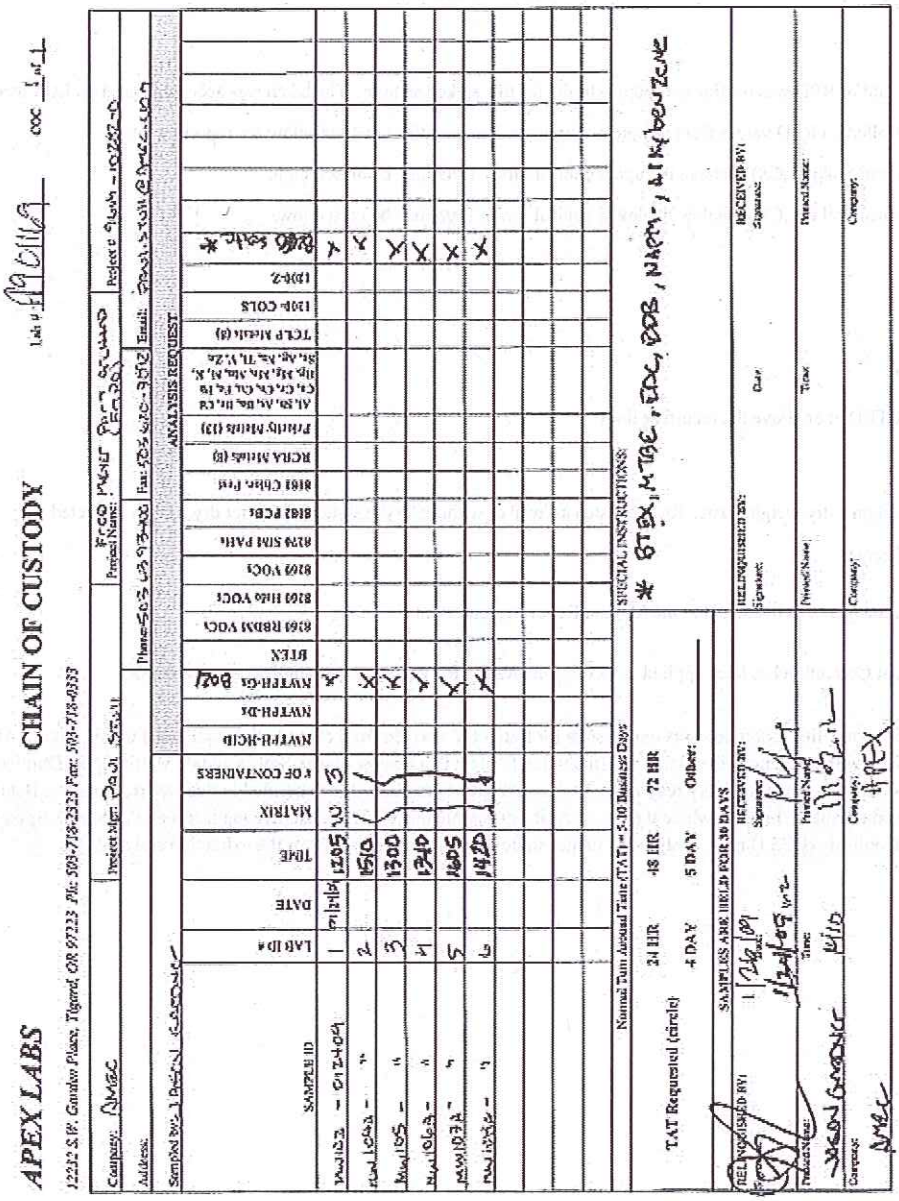

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Tuesday, April 14, 2009

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, or by phone at 503-718-2323.

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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.

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Trip Blank (A903220-01)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 11:40	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 124 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*105 %*	*Limits: 50-150 %*	"	"	"	
EB-032809 (A903220-02)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 12:11	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 121 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*104 %*	*Limits: 50-150 %*	"	"	"	
MW103-032809 (A903220-03)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/30/09 20:24	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 127 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*106 %*	*Limits: 50-150 %*	"	"	"	
MW109-032809 (A903220-04)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/30/09 20:54	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 124 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
MW105-032809 (A903220-05)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 12:58	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 123 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*107 %*	*Limits: 50-150 %*	"	"	"	
MW110-032809 (A903220-06)			**Matrix: Water**					
Gasoline Range Organics	**0.162**	---	0.0800	mg/L	1	03/31/09 13:59	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 124 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*105 %*	*Limits: 50-150 %*	"	"	"	
MW111-032809 (A903220-07)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 15:31	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 121 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*106 %*	*Limits: 50-150 %*	"	"	"	
MW108A-032809 (A903220-08)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.0800	mg/L	1	03/31/09 16:02	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 123 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*106 %*	*Limits: 50-150 %*	"	"	"	

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Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	04/14/09 15:09

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-032809 (A903220-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	04/14/09 15:09

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW109-032809 (A903220-04)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	

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Portland, OR 97224	Project Manager: Paul Stull	04/14/09 15:09

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW105-032809 (A903220-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*108 %*	*Limits: 80-120 %*	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW110-032809 (A903220-06)			**Matrix: Water**					
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	"	"	"	"	
Ethylbenzene	**1.26**	---	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	**1.25**	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	**1.21**	---	1.00	"	"	"	"	
m,p-Xylene	**4.57**	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*106 %*	*Limits: 80-120 %*	"	"	"	

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Portland, OR 97224	Project Manager: Paul Stull	04/14/09 15:09

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW111-032809 (A903220-07)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*91 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	

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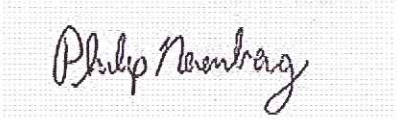

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	04/14/09 15:09

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW108A-032809 (A903220-08)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*92 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*109 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030311 - EPA 5030B							**Water**					
Blank (9030311-BLK1)					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 %*		"					
LCS (9030311-BS2)					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 %*		"					
Batch 9030323 - EPA 5030B							**Water**					
Blank (9030323-BLK1)					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 %*		"					
LCS (9030323-BS2)					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 %*		"					
Duplicate (9030323-DUP1)					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 %*		"					

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Philip Nerenberg

Philip Nerenberg, Lab Director

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030311 - EPA 5030B							**Water**					
Blank (9030311-BLK1)					Prepared: 03/30/09 09:33 Analyzed: 03/30/09 11:43							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030311 - EPA 5030B							**Water**					
Blank (9030311-BLK1)					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 %*	"

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030311 - EPA 5030B							**Water**					
LCS (9030311-BS1)					Prepared: 03/30/09 09:33 Analyzed: 03/30/09 10:42							
EPA 8260B												
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	"	---	---	

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Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030311 - EPA 5030B							**Water**					
LCS (9030311-BS1)					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 %*	*"*

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
Blank (9030323-BLK1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 11:10							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
Blank (9030323-BLK1)					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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
LCS (9030323-BS1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 10:09							
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
LCS (9030323-BS1)					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 %*			"				

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							Water					
Duplicate (9030323-DUP1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28							
QC Source Sample: MW105-032809 (A903220-05)												
EPA 8260B												
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%	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
Duplicate (9030323-DUP1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28							
QC Source Sample: MW105-032809 (A903220-05)												
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)			*Recovery: 95 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*96 %*		*80-120 %*		*"*					

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Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							**Water**					
Duplicate (9030323-DUP1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 13:28							
QC Source Sample: MW105-032809 (A903220-05)												
Surr: Toluene-d8 (Surr)			*Recovery: 92 %*		*Limits: 80-120 %*			*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*106 %*		*80-120 %*			*"*				
Matrix Spike (9030323-MS1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30							
QC Source Sample: MW110-032809 (A903220-06)												
EPA 8260B												
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

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							Water					
Matrix Spike (9030323-MS1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30							
QC Source Sample: MW110-032809 (A903220-06)												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9030323 - EPA 5030B							Water					
Matrix Spike (9030323-MS1)					Prepared: 03/31/09 08:49 Analyzed: 03/31/09 14:30							
QC Source Sample: MW110-032809 (A903220-06)												
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	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 94 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*94 %*		*80-120 %*		"					
Toluene-d8 (Surr)			*92 %*		*80-120 %*		"					
4-Bromofluorobenzene (Surr)			*108 %*		*80-120 %*		"					

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch: 9030311							
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
Batch: 9030323							
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
Batch: 9030311							
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
Batch: 9030323							
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

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7376 SW Durham Road	Project Number: 961M-10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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.

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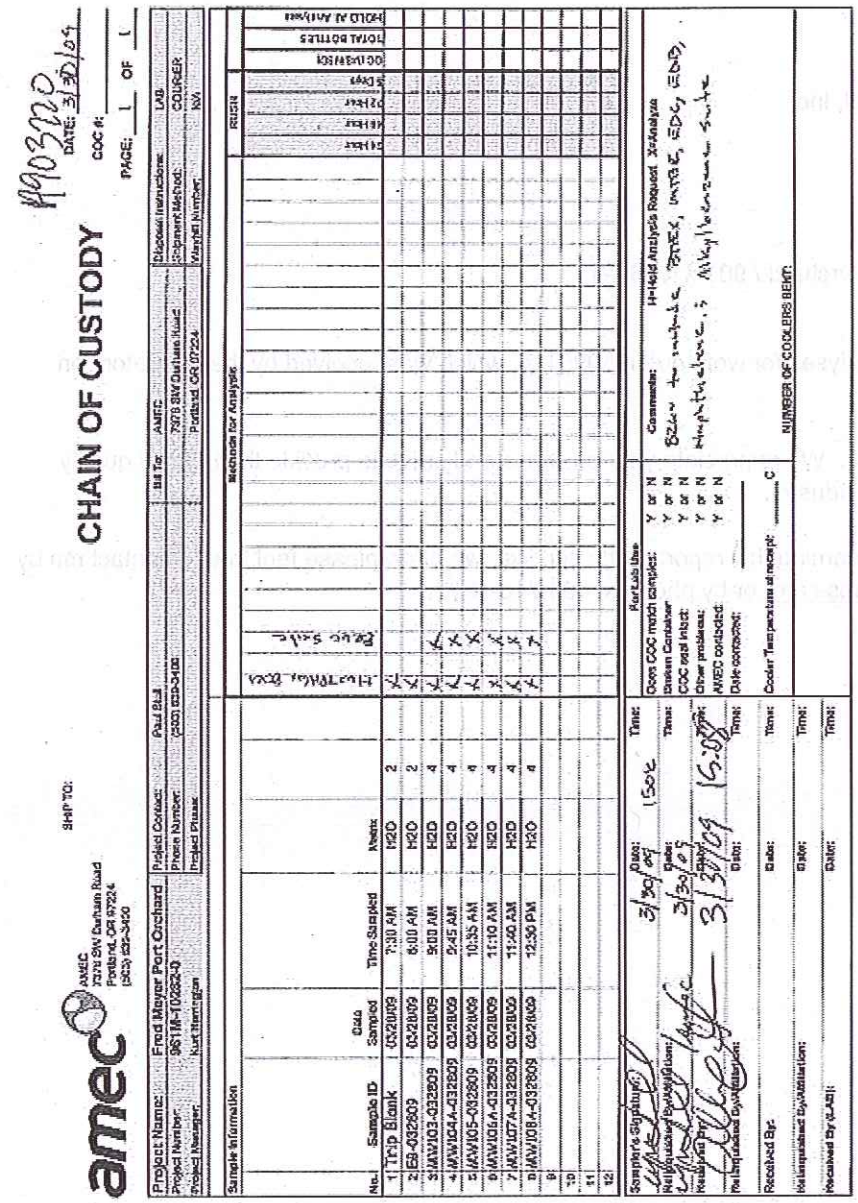
7376 SW Durham Road	**Project Number:** 961M-10282-0	**Reported:**
Portland, OR 97224	**Project Manager:** Paul Stull	04/14/09 15:09



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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, or by phone at 503-718-2323.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-061109 (A906134-01RE1)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 03:24	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
MW109-061109 (A906134-02)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 03:55	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 102 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*111 %*	*Limits: 50-150 %*	"	"	"	
MW105-061109 (A906134-03)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 04:57	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 101 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*109 %*	*Limits: 50-150 %*	"	"	"	
MW110-061109 (A906134-04RE1)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 05:27	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*111 %*	*Limits: 50-150 %*	"	"	"	
MW111-061109 (A906134-05)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 05:58	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	
MW108-061109 (A906134-06)			**Matrix: Water**					
Gasoline Range Organics	ND	---	0.100	mg/L	1	06/24/09 06:29	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 103 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*110 %*	*Limits: 50-150 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-061109 (A906134-01)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW109-061109 (A906134-02)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW105-061109 (A906134-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*93 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*96 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW110-061109 (A906134-04)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 108 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW111-061109 (A906134-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 110 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	

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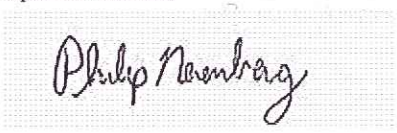

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	07/01/09 02:44

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW108-061109 (A906134-06)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 111 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 901M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 9060327 - EPA 5030B							**Water**					
Blank (9060327-BLK1)					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 %*			"				
LCS (9060327-BS2)					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 %*			"				
Duplicate (9060327-DUP1)					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 %*			"				

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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 9060300 - EPA 5030B							**Water**					
Blank (9060300-BLK1)					Prepared: 06/22/09 13:01 Analyzed: 06/22/09 15:11							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B							**Water**					
Blank (9060300-BLK1)					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 %*	*"*

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B							**Water**					
LCS (9060300-BS1)					Prepared: 06/22/09 13:01		Analyzed: 06/22/09 14:09					
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B							**Water**					
LCS (9060300-BS1)					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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B							**Water**					
Matrix Spike (9060300-MS1)					Prepared: 06/22/09 13:01		Analyzed: 06/23/09 04:05					
QC Source Sample: MW110-061109 (A906134-04)												
EPA 8260B												
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	"	---	---	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B							**Water**					
Matrix Spike (9060300-MS1)					Prepared: 06/22/09 13:01		Analyzed: 06/23/09 04:05					
QC Source Sample: MW110-061109 (A906134-04)												
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)			*Recovery: 107 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*101 %*		*80-120 %*		"					

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 9060300 - EPA 5030B								Water				
Matrix Spike (9060300-MS1)					Prepared: 06/22/09 13:01		Analyzed: 06/23/09 04:05					
QC Source Sample: MW110-061109 (A906134-04)												
Surr: Toluene-d8 (Surr)			*Recovery: 99 %*		*Limits: 80-120 %*		*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*95 %*		*80-120 %*		"					

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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**					
Blank (9060327-BLK1)					Prepared: 06/23/09 15:23 Analyzed: 06/24/09 00:18							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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**					
Blank (9060327-BLK1)					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 %*	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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**					
LCS (9060327-BS1)					Prepared: 06/23/09 15:23 Analyzed: 06/23/09 23:16							
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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**					
LCS (9060327-BS1)					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 %*	"	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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)												
EPA 8260B												
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%	

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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)												
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)			*Recovery: 113 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*102 %*		*80-120 %*		"					

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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 %*		*"*							

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Portland, OR 97224	Project Manager: Paul Stull	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
Batch: 9060327							
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
Batch: 9060300							
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
Batch: 9060327							
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

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7376 SW Durham Road	Project Number: 901M10282-0	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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.

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7376 SW Durham Road	Project Number: 901M10282-0	**Reported:**
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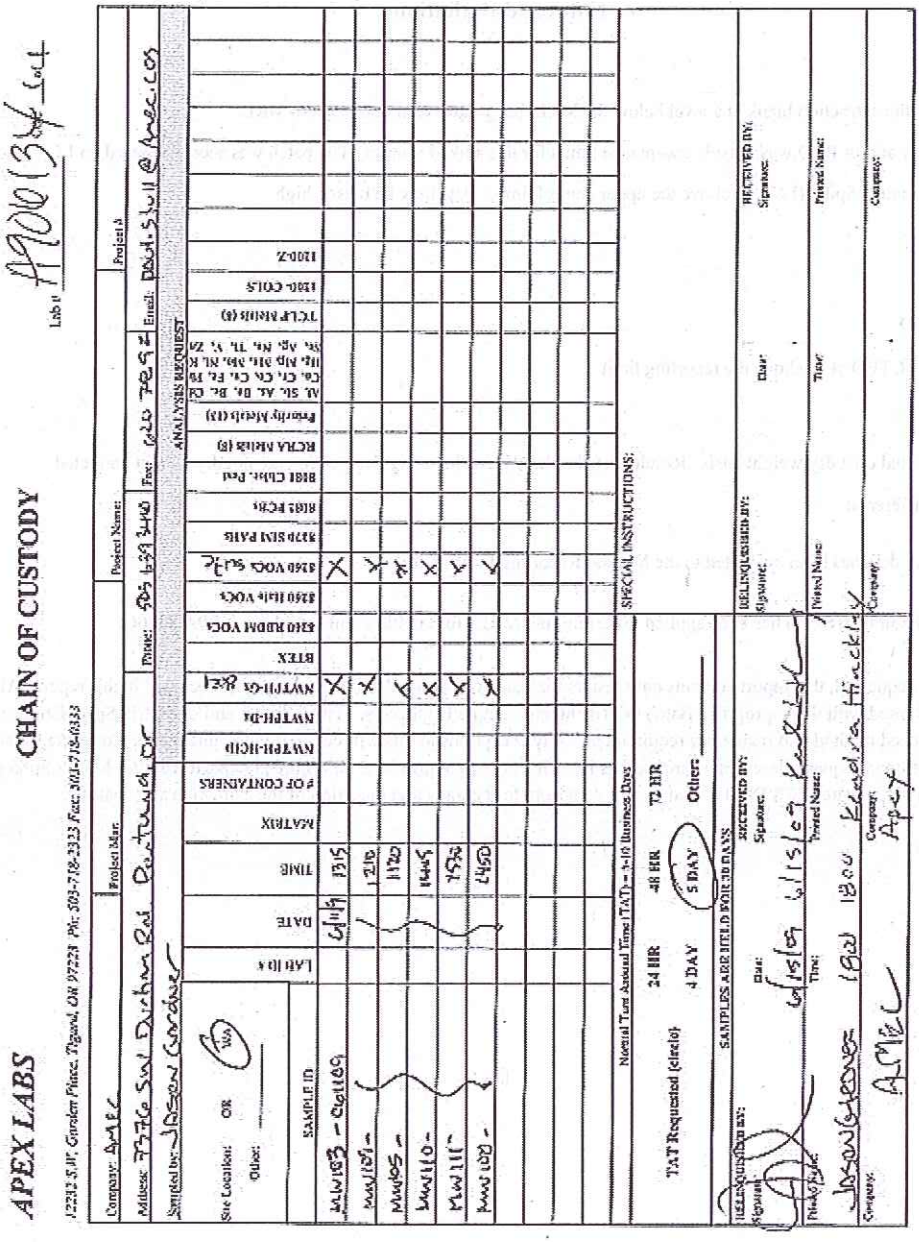

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Monday, October 5, 2009

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, or by phone at 503-718-2323.

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
MW103-091009 (A909090-01)			**Matrix: Water**					
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 %*	"	"	"	
MW109-091009 (A909090-02)			**Matrix: Water**					
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 %*	"	"	"	
MW105-091009 (A909090-03)			**Matrix: Water**					
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 %*	"	"	"	
MW110-091009 (A909090-04)			**Matrix: Water**					
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 %*	"	"	"	
MW111-091009 (A909090-05)			**Matrix: Water**					
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 %*	"	"	"	
MW108A-091009 (A909090-06)			**Matrix: Water**					
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 %*	"	"	"	
TB (A909090-07)			**Matrix: Water**					
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 %*	"	"	"	

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Philip Nerenberg

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-091009 (A909090-01)			**Matrix: Water**					
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	"	"	"	"	
Ethylbenzene	**0.700**	---	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	**0.940**	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	**3.12**	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	**2.36**	---	1.00	"	"	"	"	
m,p-Xylene	ND	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	

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Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW109-091009 (A909090-02)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 90 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW105-091009 (A909090-03)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*95 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW110-091009 (A909090-04)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	

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Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW111-091009 (A909090-05)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	

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Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW108A-091009 (A909090-06)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*98 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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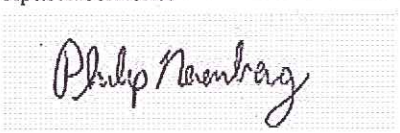

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
TB (A909090-07)			**Matrix: Water**					
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 104 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							Water					
Blank (9090179-BLK1)					Prepared: 09/15/09 08:10		Analyzed: 09/15/09 11:28					
NWTPH-Gx												
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 %*			"					
LCS (9090179-BS2)					Prepared: 09/15/09 08:10		Analyzed: 09/15/09 10:57					
NWTPH-Gx												
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 %*			"					
Duplicate (9090179-DUP1)					Prepared: 09/15/09 08:10		Analyzed: 09/15/09 13:32					
QC Source Sample: MW103-091009 (A909090-01)												
NWTPH-Gx												
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 %*			"					

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							Water					
Blank (9090179-BLK1)					Prepared: 09/15/09 08:10 Analyzed: 09/15/09 11:28							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							**Water**					
Blank (9090179-BLK1)					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 %*	"

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							**Water**					
LCS (9090179-BS1)					Prepared: 09/15/09 08:10 Analyzed: 09/15/09 10:27							
EPA 8260B												
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	"	---	---	

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							**Water**					
LCS (9090179-BS1)					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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							Water					
Duplicate (9090179-DUP1)					Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32							
QC Source Sample: MW103-091009 (A909090-01)												
EPA 8260B												
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%	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B							Water					
Duplicate (9090179-DUP1)					Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32							
QC Source Sample: MW103-091009 (A909090-01)												
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	**0.670**	---	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	**1.12**	---	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	**2.98**	---	1.00	"	"	---	3.12	---	---	5	30%	
1,3,5-Trimethylbenzene	**2.57**	---	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) *Recovery: 100 %* *Limits: 80-120 %* *Dilution: 1x*

1,4-Difluorobenzene (Surr) *97 %* *80-120 %* "

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Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch 9090179 - EPA 5030B												**Water**
Duplicate (9090179-DUP1)						Prepared: 09/15/09 08:10 Analyzed: 09/15/09 13:32						
QC Source Sample: MW103-091009 (A909090-01)												
Surr: Toluene-d8 (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*		*Dilution: 1x*						
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*		"						

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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
Batch: 9090179							
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
Batch: 9090179							
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

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7376 SW Durham Road	Project Number: 961M10282-0	Reported:
Portland, OR 97224	Project Manager: Kurt Harrington	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.

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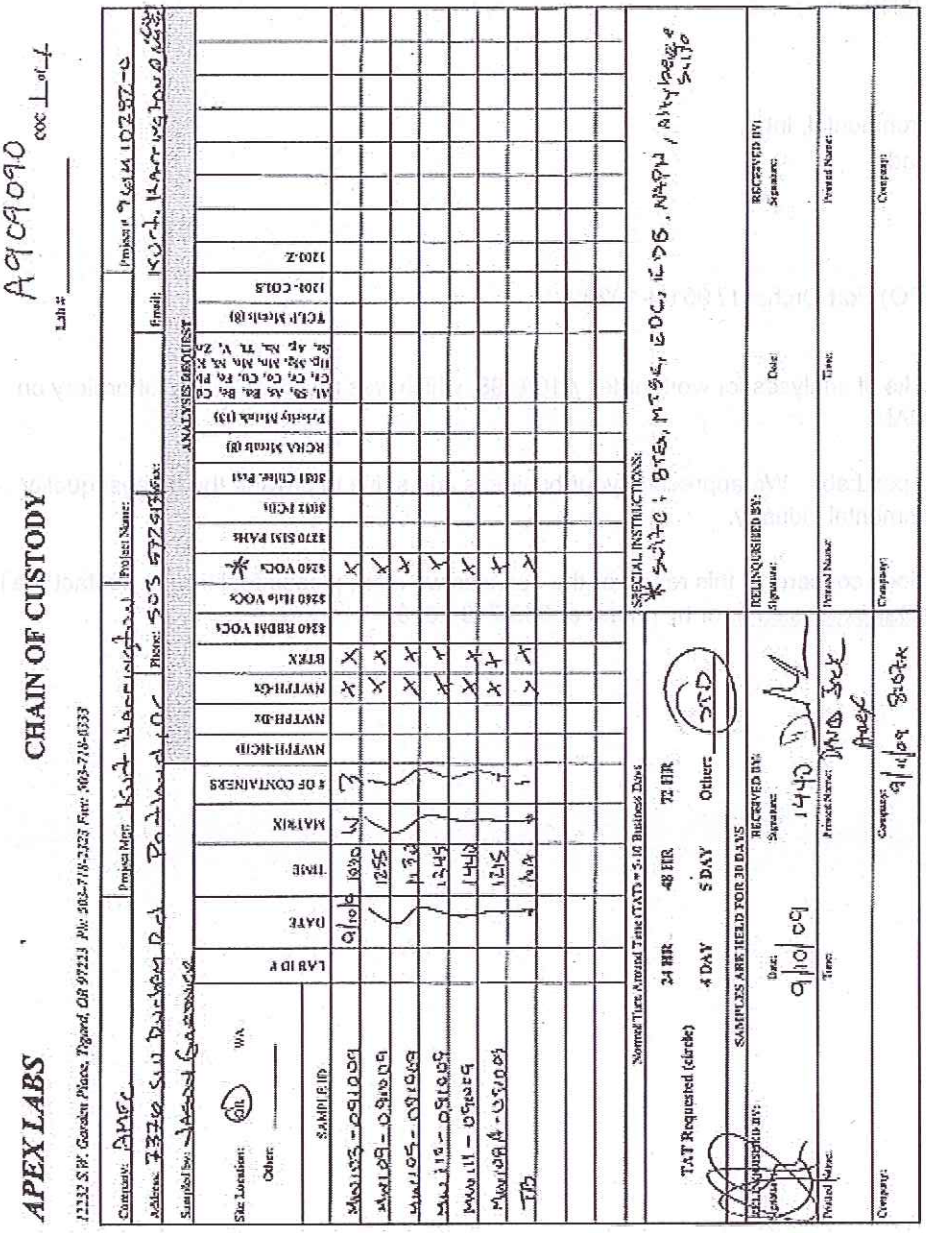
7376 SW Durham Road	Project Number: 961M10282-0	**Reported:**
Portland, OR 97224	Project Manager: Kurt Harrington	10/05/09 16:01



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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, or by phone at 503-718-2323.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene to Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-012210 (A10A198-02)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	**1.32**	---	0.0800	mg/L	1	01/31/10 17:30	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 107 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*100 %*	*Limits: 50-150 %*	"	"	"	
MW105-012210 (A10A198-03)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 17:58	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 106 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*104 %*	*Limits: 50-150 %*	"	"	"	
MW108A-012210 (A10A198-04)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 18:26	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 112 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW109-012210 (A10A198-05)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 18:53	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 111 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW110-012210 (A10A198-06)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	**0.687**	---	0.0800	mg/L	1	01/31/10 19:21	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 114 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*102 %*	*Limits: 50-150 %*	"	"	"	
MW111-012210 (A10A198-07)			**Matrix: Water**		**Batch: 1001363**			
Gasoline Range Organics	ND	---	0.0800	mg/L	1	01/31/10 20:16	NWTPH-Gx	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 113 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*100 %*	*Limits: 50-150 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW103-012210 (A10A198-02)			**Matrix: Water**		**Batch: 1001363**			
Benzene	ND	---	0.250	ug/L	1	01/31/10 17:30	EPA 8260B	
n-Butylbenzene	**4.51**	---	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	**7.35**	---	0.500	"	"	"	"	
Isopropylbenzene	**1.73**	---	0.500	"	"	"	"	
4-Isopropyltoluene	**2.72**	---	1.00	"	"	"	"	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	"	"	"	"	
Naphthalene	ND	---	5.00	"	"	"	"	
n-Propylbenzene	**4.27**	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	**75.6**	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	**10.6**	---	1.00	"	"	"	"	
m,p-Xylene	**17.9**	---	1.00	"	"	"	"	
o-Xylene	**2.96**	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW105-012210 (A10A198-03)			**Matrix: Water**		**Batch: 1001363**			
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*108 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW108A-012210 (A10A198-04)			**Matrix: Water**		**Batch: 1001363**			
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*104 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*105 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW109-012210 (A10A198-05)			**Matrix: Water**		**Batch: 1001363**			
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 103 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*99 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*110 %*	*Limits: 80-120 %*	"	"	"	

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7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW110-012210 (A10A198-06)			**Matrix: Water**		**Batch: 1001363**			
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	"	"	"	"	
Ethylbenzene	**1.04**	---	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	**0.950**	---	0.500	"	"	"	"	
Toluene	ND	---	0.500	"	"	"	"	
1,2,4-Trimethylbenzene	**4.79**	---	1.00	"	"	"	"	
1,3,5-Trimethylbenzene	**6.59**	---	1.00	"	"	"	"	
m,p-Xylene	**2.34**	---	1.00	"	"	"	"	
o-Xylene	ND	---	0.500	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*100 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	02/12/10 12:50

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW111-012210 (A10A198-07)			**Matrix: Water**		**Batch: 1001363**			
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	"	"	"	"	
Surrogate: Dibromofluoromethane (Surr)			*Recovery: 99 %*	*Limits: 80-120 %*	"	"	"	
1,4-Difluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*97 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*107 %*	*Limits: 80-120 %*	"	"	"	

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Amec Earth and Environmental, Inc	Project: **Fred Meyer (FMPO) Port Orchard**	
7376 SW Durham Road	Project Number: 961M-10282	**Reported:**
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
Blank (1001363-BLK1)					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 %*		"					
LCS (1001363-BS2)					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 %*		"					
Duplicate (1001363-DUP1)					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 %*		"					

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7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							Water					
Blank (1001363-BLK1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 14:15							
EPA 8260B												
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	"	"	---	---	---	---	---	---	

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7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
Blank (1001363-BLK1)					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)	0.540	---	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

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
LCS (1001363-BS1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 13:19							
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
LCS (1001363-BS1)					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 %*	"

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
Duplicate (1001363-DUP1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49							
QC Source Sample: MW110-012210 (A10A198-06)												
EPA 8260B												
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%	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							Water					
Duplicate (1001363-DUP1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49							
QC Source Sample: MW110-012210 (A10A198-06)												
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) — *Recovery: 102 %* *Limits: 80-120 %* *Dilution: 1x*

1,4-Difluorobenzene (Surr) — *102 %* *80-120 %* "

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							Water					
Duplicate (1001363-DUP1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 19:49							
QC Source Sample: MW110-012210 (A10A198-06)												
Surr: Toluene-d8 (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			"				
Matrix Spike (1001363-MS1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44							
QC Source Sample: MW111-012210 (A10A198-07)												
EPA 8260B												
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	"	---	---	

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Amec Earth and Environmental, Inc	Project: Fred Meyer (FMPO) Port Orchard	
7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
Matrix Spike (1001363-MS1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44							
QC Source Sample: MW111-012210 (A10A198-07)												
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	"	---	---	

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7376 SW Durham Road	Project Number: 961M-10282	Reported:
Portland, OR 97224	Project Manager: Paul Stull	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
Batch 1001363 - EPA 5030B							**Water**					
Matrix Spike (1001363-MS1)					Prepared: 01/31/10 12:00 Analyzed: 01/31/10 20:44							
QC Source Sample: MW111-012210 (A10A198-07)												
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	"	---	---	
Surr: Dibromofluoromethane (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*		*Dilution: 1x*					
1,4-Difluorobenzene (Surr)			*104 %*		*80-120 %*		"					
Toluene-d8 (Surr)			*99 %*		*80-120 %*		"					
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*		"					

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Portland, OR 97224	Project Manager: Paul Stull	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
Batch: 1001363							
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
Batch: 1001363							
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

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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 ½ 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.

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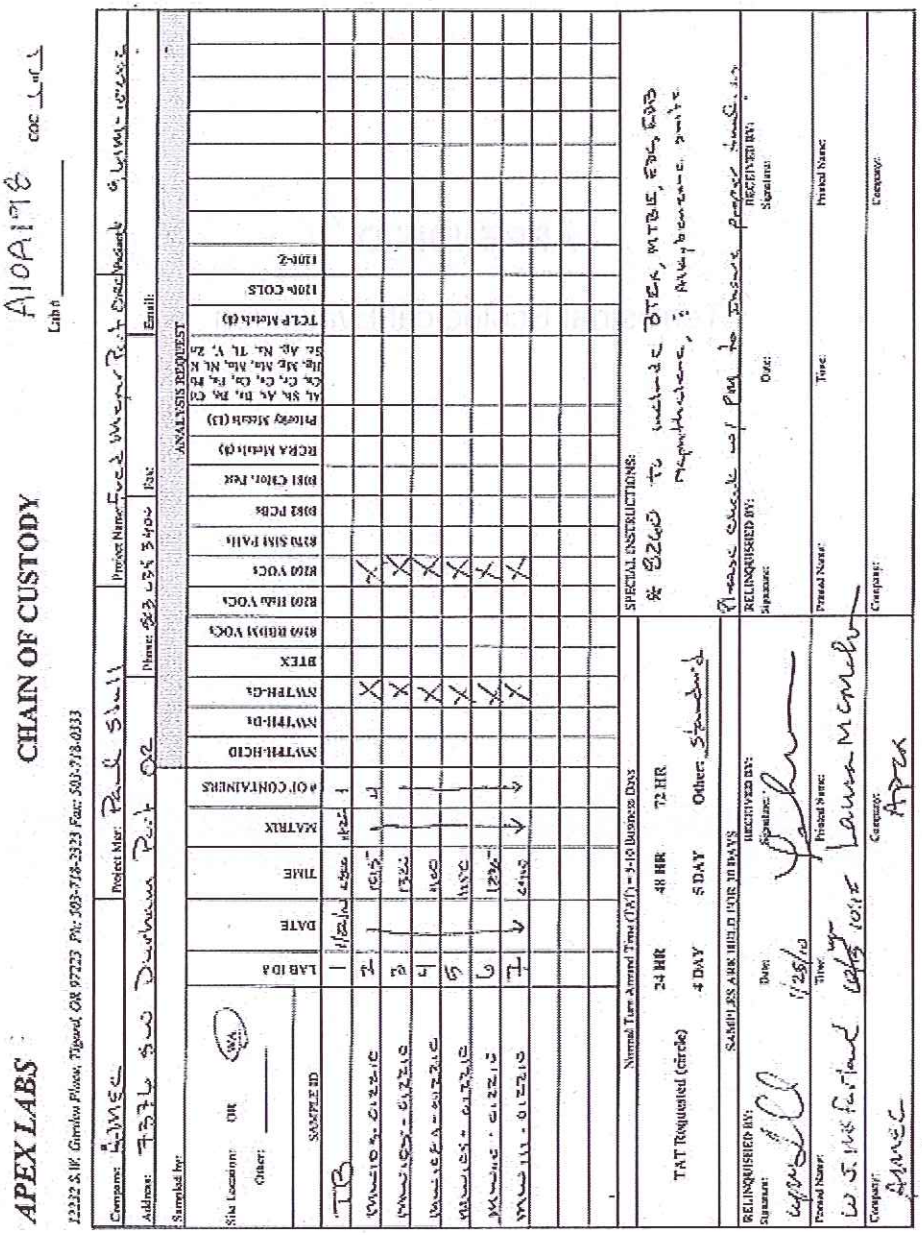
7376 SW Durham Road	**Project Number:** 961M-10282	**Reported:**
Portland, OR 97224	**Project Manager:** Paul Stull	02/12/10 12:50



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APPENDIX D

Terrestrial Ecological Evaluation

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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, stripped 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 mytois (*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 (exluding Canada Geese) (*Anatidae*), trumpeter swan (*Cygnus buccinators*), 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 then 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 then 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 then 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) undeveloped land 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
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 industrial or commercial 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.

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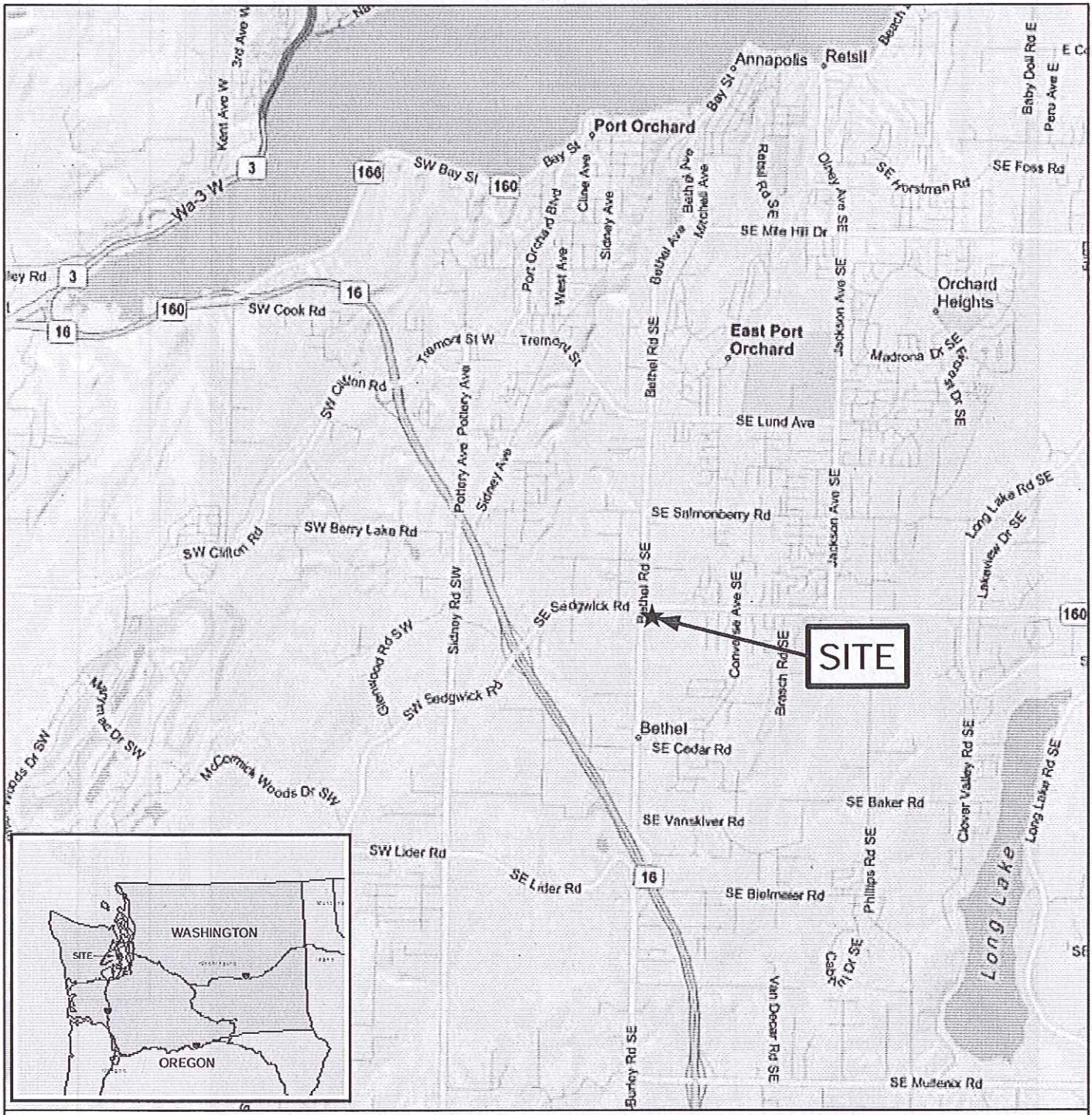
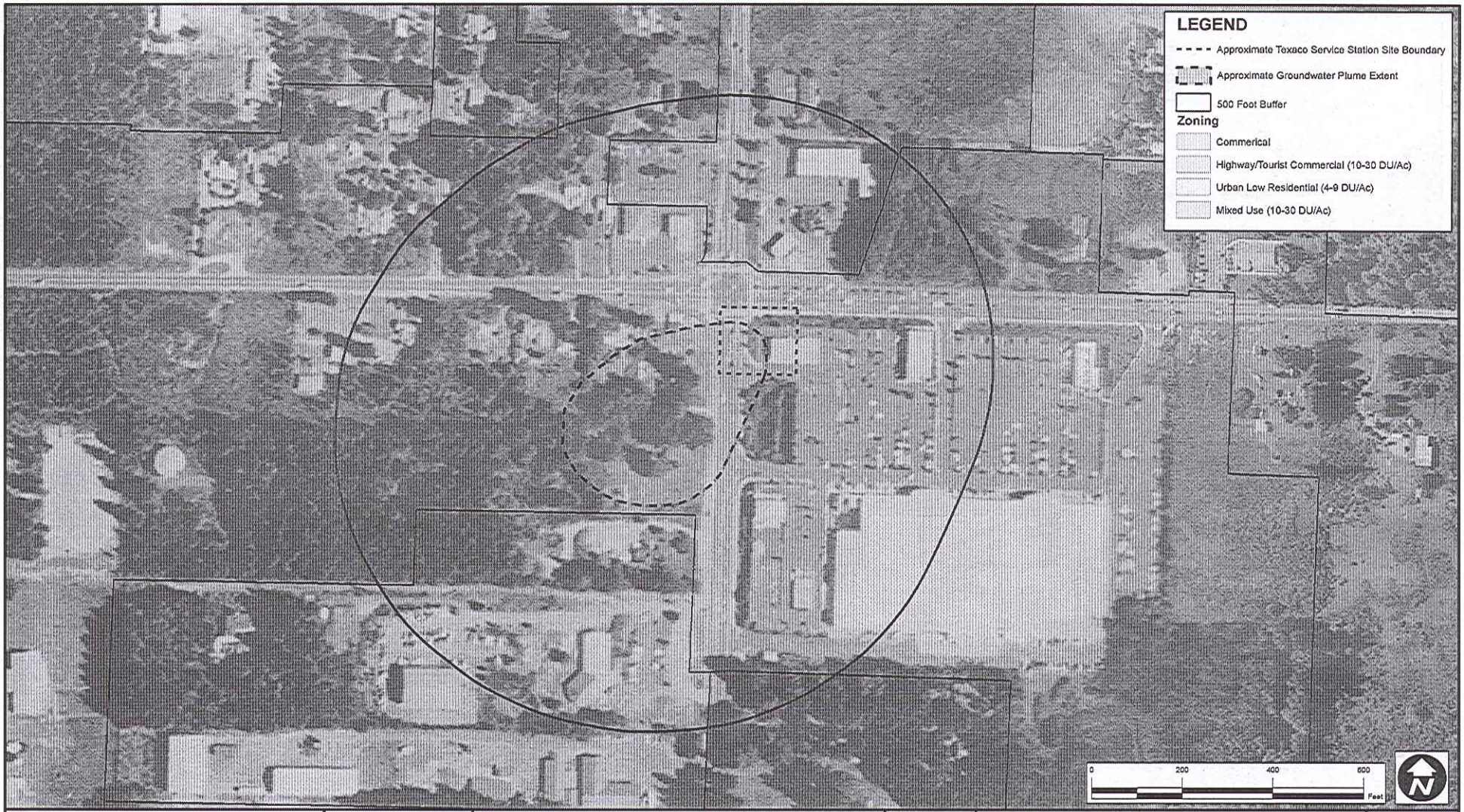
APPENDIX D FIGURES



AMEC Earth & Environmental 7376 SW Durham Road Portland, OR, U.S.A. 97224	amec		CLIENT: FRED MEYER STORES, INC.
TITLE: SITE VICINITY MAP		DWN BY: PM	DATUM: NAD83	DATE: APRIL 2010
PROJECT: PORT ORCHARD		CHK'D 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

K:\10000\10200\10282\dwg\Terrestrial Ecology Risk\Figure D1 - Site Vicinity Map.mxd



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

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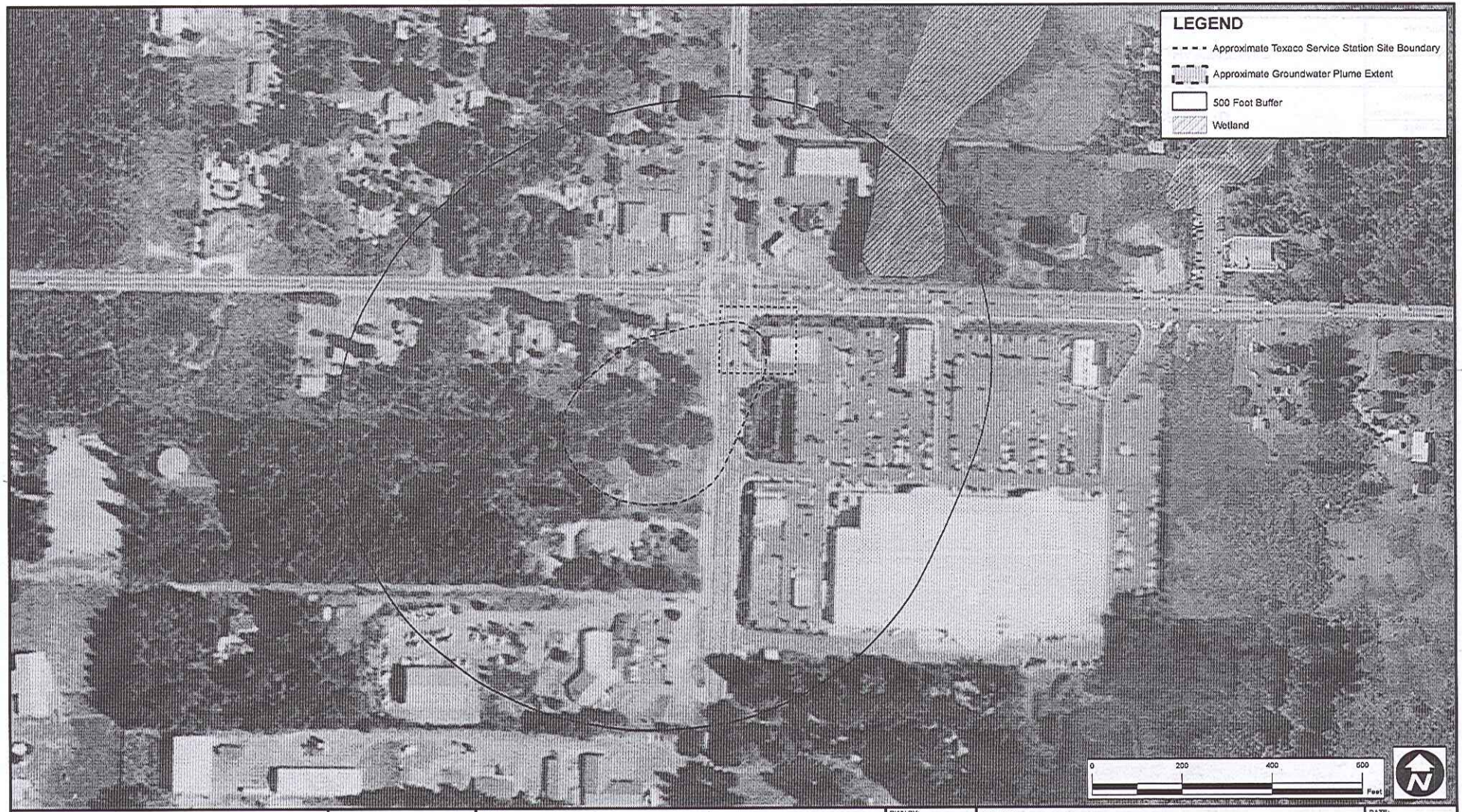
DWN BY:	PM/MH
CHK'D BY:	EH/KH
DATUM:	NAD83
PROJECTION:	WA SP N. Ft.
SCALE:	1 inch = 200 feet

PROJECT: PORT ORCHARD

TITLE: ZONING MAP

DATE:	APRIL 2010
PROJECT NO.:	9-61M-10282-0
REV. NO.:	1
FIGURE NO.:	FIGURE D2

K:\10000\10200\10282\dwg\Terrestrial Ecology Risk\Figure D2 - Zoning Map.mxd



Source: Wetland data downloaded from http://www.kitsapgov.com/gis/metadata/ on April 20, 2010

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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

K:\10000\10200\10282\dwg\Terrestrial Ecology Risk\Figure D3 - Wetland Map.mxd

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 on April 20, 2010

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DWN BY:	PM/MH
CHK'D BY:	EH/KH
DATUM:	NAD83
PROJECTION:	WA SP N. Ft.
SCALE:	1 inch = 2,000 feet

PROJECT: PORT ORCHARD

TITLE: ECOLOGICAL HABITAT MAP

DATE:	APRIL 2010
PROJECT NO.:	9-61M-10282-0
REV. NO.:	1
FIGURE NO.:	FIGURE D4

K:\10000\10200\10282\dwg\Terrestrial Ecology Risk\Figure D4 - Ecological Habitat Map.mxd