Brix Maritime Company Response to EPA's 104(e) Information Request

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REMEDIAL INVESTIGATION WORKPLAN

BRIX MARITIME COMPANY
PORTLAND, OREGON

Prepared for
Brix Maritime Company

Prepared by
Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224

February 2005

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX002649

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BRIX002650

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Table of Contents

1 INTRODUCTION 1

2 BACKGROUND 3
- 2.1 Site Location 3
- 2.2 Site Features 3
- 2.3 Site History 3
- 2.4 UST Operational and Release History 4

3 REMEDIAL INVESTIGATION STATUS 6
- 3.1 Soil 6
- 3.2 Groundwater 8
- 3.3 Storm Water 10
- 3.4 Sediments 11
- 3.5 Transformers 12
- 3.6 Air 12
- 3.7 Beneficial Use 12

4 INVESTIGATION PLAN 13
- 4.1 Ground Water and Storm Water 13
- 4.2 Beneficial Use Evaluation 15
- 4.3 Risk Assessment 15
- 4.4 Source Control Screening Assessment 16

5 MONITORING AND REPORTING SCHEDULE 18
- 5.1 Monitoring Schedule 18
- 5.2 Reporting Schedule 18

List of Tables

1. Summary of Push Probe Locations
2. Summary of Analytical Results for Soil Samples
3. Hydrology Data
4. Total Petroleum Hydrocarbons
5. Volatile Organic Compounds in Groundwater
6. Polycyclic Aromatic Hydrocarbons
7. Lead in Groundwater

List of Figures

1. Site Location Map
2. Underground Storage Tank Area Map
3. Sample Location Map
4. Petroleum Hydrocarbons in Soil
5. Well Location and Potentiometric Surface Map
6. Geologic Profile

BRIX002651

Confidential Business Information

List of Appendices

Appendix A – Groundwater Sampling and Analysis Plan
Appendix B – Health and Safety Plan
Appendix C – Monitoring Well Logs
Appendix D – Facility Stormwater Inspection Letter
Appendix E – Hydrographs and Time-Series Concentration Plots
Appendix F – Portland General Electric Transformer Report

BRIX002652

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1 INTRODUCTION

On behalf of Brix Maritime Company (Brix), Anchor Environmental, LLC (Anchor) is conducting a Remedial Investigation at the Brix Maritime facility (Site) located at 9030 Northwest St. Helens Rd, Portland, Oregon (Figure 1). This work is being done under a May 8, 2002 Voluntary Agreement for Remedial Investigation and Source Control Measures with the Oregon Department of Environmental Quality (DEQ) (Agreement).

Frank Williamson is the owner's representative in charge of this investigation. John Edwards, RG, CEG, is the Anchor Project Manager, and Dana Bayuk, RG, is the DEQ project manager.

Prior to this Remedial Investigation (RI) Anchor conducted extensive facility historical analyses and soil and groundwater grab sample investigations during Preliminary and Expanded Preliminary Assessments. The findings of those investigations were provided to DEQ in the reports; Supplemental Preliminary Assessment Summary Report, October 2000, and Sampling Results Report in Support of The Preliminary Assessment of the Brix Maritime Company Facility, September, 2001, both by Anchor and Hahn & Associates.

To date, the RI investigation has generally followed the May 22, 2002 Pre-RI Assessment Work Plan prepared by Anchor, with some modifications as approved by DEQ. Since May 2002, the RI investigation has supplemented the pre-RI soil assessments by installing a groundwater monitoring network and conducting quarterly sampling. Several meetings have been held with DEQ to discuss RI findings, evaluate proposed monitoring well locations, and plan future investigations.

Anchor has provided the results of RI investigations through eleven quarterly progress Reports as follows.

- Second Quarter 2002, July 12, 2002
- Third Quarter 2002, October 10, 2002
- Fourth Quarter 2002, January 10, 2003
- First Quarter 2003, April 15, 2003
- Second Quarter 2003, July 15, 2003
- Third Quarter 2003, October 15, 2003

- Fourth Quarter 2003, January 15, 2004
- First Quarter 2004, April 15, 2004
- Second Quarter 2004, July 15, 2004
- Third Quarter 2004, October 15, 2004
- Fourth Quarter 2004, January 14, 2005

DEQ requested that this RI Work Plan (Plan) be prepared in a May 12, 2003 letter to Anchor. At that time, five of the seven monitoring wells had been installed at the site. DEQ agreed to postpone preparation of this Plan until monitoring wells MW-6 and MW-7 had been installed and sampled. Anchor and DEQ met on September 5, 2003 to discuss the progress of the RI and the contents of the upcoming Plan. Anchor provided DEQ with a September 30, 2003 letter that summarized the discussions of the September 5 meeting and outlined Anchor's intended content for this Plan.

Brix intends to focus the remainder of this RI on evaluation of the need for source control measures to protect the Willamette River. The future tasks in this Plan are therefore focused on potential pathways to the river, not on potential human health pathways associated with upland facility workers.

Section 2 of this Plan, Background, covers a description of the site location, site features, site history, and UST history. The RI findings to date are summarized in Section 3. The plan for the remainder of the RI is described in Section 4. Section 5 contains the monitoring and reporting schedule.

BRIX002654

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2 BACKGROUND

2.1 Site Location

The Site is located at 9030 NW St. Helens Road, Portland, Oregon, Township 1 North, Range 1 West, Section 11, Tax Lot 800. The Site is bordered to the northeast by the Willamette River, to the southwest by railroad tracks and NW St. Helens Road, to the northwest by a bulk fuel storage facility, and to the southeast by industrial use property (Figure 1).

2.2 Site Features

The Site consists of approximately 3.7 acres with two primary structures: an office building and a maintenance building. A covered "work barge" associated with the property is moored on the Willamette River. The topography at the Site is generally level with elevations of approximately 40 feet above mean sea level (msl) for a majority of the site, sloping down to approximately 10 feet msl at the river edge, along the northeast property boundary. The Site is entirely developed and covered with asphalt, concrete, or buildings, with the exception of a steep riverbank sloping down to the Willamette River that is protected by rip-rap. Two pad-mounted electrical transformers are located on the property east of the storage buildings and south of the office building. The transformer located to the east of the storage buildings is labeled as containing non-regulated levels of polychlorinated biphenyls (PCBs). The transformer located south of the office building is not labeled. Both transformers are in good condition and do not appear to have had any leaks or spills.

2.3 Site History

Information on the history of the Site is included in the Supplemental Preliminary Assessment Summary Report (Anchor 2000). However, some information in the report requires clarification on the ownership and operation of the Site. The property was vacant and undeveloped prior to 1979, at which time Brix Maritime, a Delaware corporation, developed the property for use as a dispatch and coordination office for a tugboat fleet. In 1993, Brix Maritime became a wholly-owned subsidiary of Foss Maritime Company, a Washington corporation. Brix Maritime continues to own and operate the property under a license allowing Brix Maritime to use the Foss name. Foss Maritime Company does not own or operate the property, although the Foss name is

displayed at the Site under the license granted to Brix Maritime[1]. The use of the property has remained the same since site development; it is currently, and has always been, used for tug mooring, maintenance, fueling, and crew rotation.

2.4 UST Operational and Release History

Five USTs are known to have been used at the Site, two of which were decommissioned by removal (USTs #1 and #2) in December 1998. The five USTs were installed in 1979 in a single tank nest located adjacent to the maintenance building (Figure 2). The DEQ Facility Identification Number is #7374. The five USTs included two 20,000-gallon capacity diesel fuel tanks (UST #4 and UST #5), two 6,000-gallon capacity lubrication oil tanks containing 30-weight and 40-weight oil, respectively (UST #1 and UST #3), and one 2,000-gallon capacity gasoline tank (UST #2). All of the tanks and piping were constructed of single-wall steel at the time of installation.

USTs #1, #3, #4, and #5 were piped to the covered maintenance barge to service watercraft. Transfer pipes ran underground from the UST system, daylighted along the riverbank, and ran directly over water to the work barge. UST #2 had been utilized for refueling of company vehicles; all piping to this tank ran underground to a fuel dispenser located adjacent to the west corner of the maintenance building.

In 1998, Ulrich Industrial Coatings decommissioned USTs #1 and #2 by removal and upgraded USTs #3, #4, and #5. During these activities, the fueling lines were re-routed to their current configuration (Figure 2). The UST permitting and decommissioning documentation, as well as the UST upgrade documentation, are attached to the Supplemental Preliminary Assessment as Appendix E and F, respectively (Anchor 2000).

Two releases of petroleum products have been documented at the Site, both relating to the UST system, which were reported under DEQ leaking UST File No. 26-93-0009.

[1] The use of the Foss name under license to Brix has previously caused confusion over the ownership and operation of the Site. The Site is operated by Brix Maritime and record title to the property comprising the Site remains in Brix Maritime's name.

BRIX002656

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In 1993, a lubricating oil release was reported to DEQ relating to a hole discovered in a 30-weight lube oil transfer line next to the UST nest. At that time, soil removal activities were conducted and approximately 60 feet of each of the steel UST product lines were removed and replaced with fiberglass piping (Hahn and Associates, Inc. [HAI] 1993a). Approximately 50 cubic yards of soil were removed during the excavation activities. Subsurface investigations conducted by HAI (HAI 1993b) in the vicinity of the tank nest detected gasoline, diesel, and heavy oil-range petroleum hydrocarbons in soil; however groundwater was not tested at the time. A total of 13 soil borings (B-1 through B-13; Figure 3) were installed at the Site; the results of soil testing relating to the 1993 soil removal and subsurface investigations are detailed in the Supplemental Preliminary Assessment (Anchor 2000)

In 1998, during tank upgrading activities, petroleum-hydrocarbons were encountered in soil potentially due to overfill at either UST No. 4 or No. 5; however, the specific tank was not documented. Soil samples were not collected to confirm the observed findings but the potential release was reported to DEQ.

BRIX002657

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3 REMEDIAL INVESTIGATION STATUS

3.1 Soil

Table 1 is a spreadsheet of all of the soil quality data obtained from borings B-14 through B-30 at the site. The samples from Borings B-2 through B-13 were obtained in 1993 and Borings B-14 through B-30 were completed during the expanded Preliminary Assessment as reported by Anchor, September, 2001. Selected soil samples were also obtained from the monitoring well borings, as described in the RI quarterly reports. Table 2 shows that TPH analyses were run on soil samples from the 1993 borings. Select soil samples from borings B-16 through B-30, and the soil samples collected during monitoring well installation were tested for TPH, PAHs, and lead. The locations of the soil borings are shown on Figure 3 and the locations of the monitoring well borings are shown on Figure 5. The TPH soil data are shown on Figure 4. The September 2001 Preliminary Assessment report contains a description of the nature and extent of soil contamination from petroleum hydrocarbons and related chemicals.

As a preliminary evaluation of potential risk to site occupational workers and future construction/excavation workers, the soil data in Table 2 are screened against the recently promulgated generic risk-based cleanup concentrations (RBCs) issued by the Oregon DEQ in Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites, September 22, 2003. The last column of Table 2 lists the most conservative RBC for the following potential exposure pathways, where appropriate.

- Occupational RBC for vapor intrusion into buildings
- Construction worker RBC for soil ingestion, dermal contact, inhalation
- Occupation RBC for soil ingestion, dermal contact, inhalation

This preliminary risk screen is done to identify if there are any significant soil data gaps with respect to potential upland human health exposure pathways. Review of Table 2 shows that there are only three samples that exceeded the conservative generic RBCs applied to this site. The three samples are highlighted on Table 2.

The soil sample taken at the five-foot depth at boring B-21 had a benzene concentration of 5.2 mg/kg, exceeding the 1.2 mg/kg soil to indoor air generic RBC. Boring B-21 was

located next to the former gasoline dispenser. Benzene was not detected in any of the other 15 samples tested from the site.

Benzo-a-pyrene concentrations of 0.92 and 0.44 mg/kg were detected in deep soil samples from monitoring wells borings MW-5 and MW-6. These concentrations exceed the 0.27 mg/kg generic occupational RBC for soil ingestion, dermal contact, and inhalation. These samples were obtained at depths between 22.5 and 26 feet below ground surface, which are too deep for any possible exposure to site occupational workers. Therefore, there is no complete exposure pathway, making the exceedance of the generic RBC insignificant.

Because the site soils are completely covered with pavement, buildings, or rip-rap slope protection, there is no complete pathway for soil erosion and transport to the Willamette River.

In their February 25 letter and July 26, 2004 e-mail Comments DEQ states that additional soil quality data may be needed to complete the RI and support the source control assessment. In subsequent communications Anchor and DEQ have discussed the need for two additional borings for the purpose of obtaining soil samples. The purpose of these borings will be to obtain soil samples that represent the highest likely concentrations of petroleum constituents as input for calculating site specific RBCs and to support risk screening for source control assessment. In a letter dated February, 2004, DEQ noted two locations where additional soil sampling may be required to more adequately evaluate the site soils according to DEQ's 2003 guidance, Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites. The two areas included: 1. The area of the January 1993 excavation of soil impacted by lube oil (near the location of boring B-28) and 2. The area near the former fuel dispenser (near the location of boring B-7 and B-22). A soil boring will be advanced in both of these locations using a direct push (Geoprobe) sampler. Figure 3 shows the proposed boring locations. Continuous core samples will be obtained at each boring, down to the watertable. The soil samples will be logged in the field. Field screening will be used to identify the sample interval from each boring containing the highest petroleum hydrocarbon concentrations based on visual and olfactory observations. If more than

BRIX002659

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one contaminated zone is identified in each boring, up to 3 samples from each boring will be submitted to the laboratory and screened using NWTPH-HCID. The sample with the highest TPH concentrations from each boring will be analyzed for the site COCs (TPH-Dx, TPH-Gx, VOCs, PAHs, total lead) in addition to volatile petroleum hydrocarbons (VPH) and extractable petroleum hydrocarbons (EPH). The testing results for VPH and EPH will be used to calculate site-specific TPH RBCs for the Brix facility.

With the additional soil testing described above and considering all of the soil data represented on Table 2, the soil quality database should adequately characterize soil quality at the site for the purpose of evaluating potential source controls to protect the Willamette River. There may be a potential data gap with respect to the soil benzene pathway to indoor air; however, that pathway does not affect the river source control evaluation that is the focus of this remedial investigation.

3.2 Groundwater

As described in the quarterly reports, a groundwater monitoring network consisting of wells MW-1 through MW-7 has been established during the RI. The monitoring well locations were selected during successive stages of the investigation and each location was reviewed with DEQ, and approved prior to installation. The seven monitoring well locations are shown on Figure 5, a site plan superimposed on an aerial photo base.

Per agreement with DEQ, and based on previous investigations, the goal of the groundwater monitoring program has been the characterization of groundwater perched in the dredge fill sand. The dredge fill was placed on the original ground surface prior to site development. A geologic profile extending from the west side of the site to the Willamette River is shown on Figure 6. That profile shows that the groundwater in the dredge fill sand is perched on the pre-fill ground surface that is composed of silt to sandy silt.

Monthly groundwater depth measurements have been conducted in the monitoring wells during the RI. Those measurements have included river elevation readings conducted at the river staff gauge. The hydrology data are summarized on Table 3. Review of the data shows that the perched groundwater elevation fluctuations are

highly sensitive to seasonal recharge from infiltration of precipitation upgradient of the site. Because the groundwater is perched on the original ground surface, one of the wells (MW-5) dries up seasonally, preventing sampling. This problem was anticipated by DEQ and Anchor, and was discussed during the process of designing the well monitoring system.

Figure 5 includes a potentiometric surface map of the perched groundwater based on groundwater depth measurements made on October 29, 2004. The contour pattern shows that the perched watertable surface mimics the site surface topography, which is normal for shallow perched groundwater. The contours indicate that perched groundwater moves from topographic high areas to low areas and ultimately discharges to the Willamette River. During the period from July 2002 to October 2003, Anchor field staff completed monthly hydrology measurements and conducted visual reconnaissance of the river bank to look for evidence of petroleum hydrocarbon seepage or other discharge from the bank. Anchor staff has continued the river bank reconnaissance evaluations concurrent with subsequent groundwater sampling events. No petroleum hydrocarbon seeps or sheens have been observed to date. Groundwater seeps have been observed at the sand-silt interface during low river levels, at an estimated elevation of 8 feet msl. The observed groundwater seeps were noted downgradient of monitoring well MW-2 and north along the shoreline. No seeps have been observed downgradient of the contaminant source areas.

Eight quarterly groundwater sampling events have been completed at the site. Because the wells were installed in phases, all of the wells, except MW-5, have been sampled at least six times. The latest sampling event was on October 29, 2004. Well MW-5 has only been sampled twice because it is dry most of the year. Due to some groundwater turbidity issues encountered with the first two wells installed, low flow purging and sampling techniques are used at all site wells.

The historic groundwater quality data are compiled in the following tables.

Table 4, TPH
Table 5, VOCs
Table 6, PAHs
Table 7, Lead

The tables include data through the October 2004 sampling event. Petroleum hydrocarbons, VOCs, PAHs, and lead have been detected in groundwater at the site. The plans for future groundwater monitoring are in Section 4 of this Plan.

As approved by DEQ in an email dated January 13, 2005, an additional monitoring well will be installed in the area of the lube oil release (between monitoring wells MW-1 and MW-3). The new monitoring well is planned to be located adjacent to former Boring B-28, as shown on Figure 3. This well will be used to monitor for the presence of free-phase petroleum hydrocarbons. Soil samples obtained from this area during a 1993 investigation had the highest lube oil concentrations detected on site. The newly installed monitoring well will be sampled during the next scheduled monitoring round following installation and will be used to monitor for free-phase petroleum hydrocarbons during future monitoring events.

3.3 Storm Water

A 48-inch storm water/sewer outfall crosses the north end of the facility, as shown on Figure 5. The sewer line collects offsite runoff from NW St. Helens Road and facilities to the southwest, and discharges to the Willamette River in front of the Brix facility. This 48-inch storm water/sewer outfall is believed to belong to the City of Portland; however, correspondence with DEQ indicates that the City of Portland's ownership is in question. Stormwater originating at the Brix facility does not discharge to the 48-inch sewer. This outfall is the largest storm water input to the Willamette River in the immediate site vicinity.

The Brix facility collects and discharges onsite storm water via two outfalls as shown on Figure 5. The employee vehicle north parking lot is served by three storm drain

catchments, connected in series to a six inch diameter pipe outfall to the Willamette. During the April 22, 2004 site walk with DEQ, a Brix representative stated that one or more of the catch basins in the north parking lot is connected to the 48-inch storm water/sewer outfall. Anchor has since conducted dye tests of the stormwater catchment system and determined that the site stormdrain system is not connected to the 48-inch outfall. The dye test findings will be further described in the RI report. The equipment storage area is served by two storm drain catchments connected in series to a six inch diameter outfall located near the south property line.

Brix operational policy is designed to prevent commercial operations, including storage and handling of petroleum fuels and lubricants within the drainage area of the catchments. Facility maintenance and fueling activities are conducted under roofed areas. As a precautionary measure Brix maintains particulate/oil adsorbent filters on each of the five storm drain catchment inlets. These filters are inspected by facility personnel and replaced when necessary. The City of Portland Bureau of Environmental Services inspected the stormwater catchment system on June 29, 2004 and determined that the system is not subject to National Pollutant Discharge Elimination System (NPDES) stormwater regulations. A copy of the City's letter is included as Appendix D.

The limited commercial use of the site storm water catchment areas combined with the facility storm water management practices precludes the need for monitoring of storm water as part of the facility source control evaluation. Therefore storm water monitoring is not planned during this RI.

3.4 Sediments

Anchor evaluated Willamette River sediment quality and described our findings in the September 2001 Sampling Results Report in Support of the Preliminary Assessment. Under the Agreement, this RI is required to evaluate potential upland sources of river sediment contamination, but characterization of the nature and extent of Willamette River sediment contamination is beyond the scope of the Agreement. Sediment characterization is not planned for this RI.

BRIX002663

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3.5 Transformers

In DEQ's February 25, 2004 letter, DEQ requested additional assessment of the transformer that was not labeled "non-PCB", including soil sampling and testing. In addition, DEQ requested a definition of "non-PCB" for the transformer that was labeled. Anchor has communicated with PGE and found that both transformers are owned and maintained by Portland General Electric (PGE). Although one of the transformers is labeled "non-PCB", indicating less than 50 parts per million PCBs. PGE does not have records of PCB testing of either transformer. Both transformers are noted as being purchased by PGE in 1979. A copy of PGE's transformer report is in Appendix F. The actual PCB content of either transformer cannot be determined without de-energizing power to the transformer and interrupting power to the Brix facility.

There is no evidence, such as soil staining or discoloration, to suggest that a release has occurred from either transformer. Anchor does not recommend sampling of the transformer oil or soils around the transformers at this time.

3.6 Air

The Agreement asks for identification and characterization of any unpermitted release of hazardous substances to the air from soil, surface water, or groundwater contamination at the facility. Anchor does not believe that there is a complete air contaminant pathway to the Willamette River from potential upland sources of contamination. Future evaluations of air are not planned as part of this RI.

3.7 Beneficial Use

The Agreement asks for identification of current and reasonably likely future land and water uses in the locality of the facility other than those of the Willamette River. There are no surface water bodies on the site. There is no use of ground water on the site. There are no beneficial uses of water within the locality of the facility, aside from the Willamette River. A discussion of current and future zoning, land use, and beneficial water uses will be included in the RI report.

BRIX002664

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4 INVESTIGATION PLAN

4.1 Ground Water and Storm Water

Quarterly groundwater monitoring will be continued. Anchor has had several discussions with DEQ about which wells should be included in the monitoring program and what target analytes are appropriate.

This proposed monitoring plan is essentially the same as the current plan, except that the sampling frequency for wells MW-2, 6, and 7 will be reduced from quarterly to semi-annually. Following is a summary of the components of the proposed groundwater monitoring program.

- Quarterly hydrology measurements in monitoring wells and river staff gauge
- Quarterly reconnaissance of river bank to look for petroleum hydrocarbon seeps or sheens
- Quarterly sampling of monitoring wells MW-1, MW-3, MW-4, and MW-5 (if sufficient water is present)
- Semiannual (Fall and Spring) sampling of monitoring wells MW-1 through MW-7
- Quarterly groundwater testing for current list of target analytes, including
    - TPH-Gx and TPH-Dx
    - PAHs
    - VOCs
    - Lead
- Seep Sampling. If seeps appear downgradient of contaminant source areas, such as the UST area, Anchor will attempt to obtain a water sample at the seep. To date the seeps have only been seen on the north half of the site shoreline. In those areas the seeps only appear at times of low tide and low river level. The bank is steep at those locations and there are physical safety hazards associated with sampling in those areas. If seeps appear in the southern portion of the site shoreline, Anchor will attempt to sample the seeps as long as the work can be done safely.

In an email dated November 4, 2005, DEQ requested the addition of 7 metals (As, Ba, Cd, Cr, Cu, Mn, and Zn) to the monitoring plan. These metals will be added to the first

BRIX002665

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monitoring event of 2005 only. Anchor will discuss the results of the metals monitoring with DEQ. That discussion will include a recommendation on the need for further metals monitoring. Also during the first monitoring event of 2005, newly installed monitoring well MW-8 will be sampled for the target analyte list above.

Quarterly monitoring will continue until the data base is representative of seasonal ground water quality fluctuations in all seven of the existing monitoring wells. Prior to discontinuing groundwater sampling efforts, Anchor will compile and interpret the available geologic, hydrologic, hydrogeologic, and groundwater chemistry data available for the site. The purpose of the data compilation and review is to:

- Assess the hydrogeologic conceptual site model (HCSM) proposed in May 2002 in the context of currently available information (i.e., does data support perched groundwater interpretation?).
- Evaluate the relationship between:
    - Groundwater elevations in monitoring wells and the Willamette River;
    - Groundwater elevations and the elevation of the top of the fine-grained unit;
    - Seasonal groundwater fluctuations and detected concentrations of petroleum hydrocarbons, COC, and "oil" thickness.
- Identify any potential ongoing sources of groundwater contamination.
- Present an ecological conceptual site model and the potential pathways for site-related contamination to impact the Willamette River.
- Discuss potential data gaps for the Brix facility.

The purpose of reviewing the site information collected to date is to determine whether available data sufficiently characterize impacted soil and groundwater, and potential impacts to the Willamette River, to support the source control screening assessment.

To meet the purpose and facilitate our review of the information, Anchor will provide the following items:

- Geologic cross-sections that graphically depict Anchor's interpretations of the subsurface geology along two transects perpendicular to A-A' (Figure 6);

BRIX002666

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- A structure contour map of the top of the fine-grained unit with the locations of the monitoring wells shown;
- An isopach map of the fine-grained unit for the locations where the thickness of the fine grained unit was identified;
- Monitoring well hydrographs and the elevation of the top of the fine-grained unit;
- Representative equipotential maps for the "dredge fill sand" water-bearing unit, including the locations of observed groundwater seeps;
- Hydrographs of groundwater elevations and the Willamette River;
- Hydrographs and COC time-concentration plots for monitoring wells;
- Comparison of seasonal groundwater level fluctuations to "oil" thickness at monitoring well MW-3;
- A map of estimated seep locations observed during low river level periods,
- Isoconcentration contour maps for selected COC detected in shallow groundwater;
- Diagram of the typical site storm drain construction
- Conceptual site exposure model prepared using DEQ's risk-based decision making guidance for USTs, including consideration of ecological receptors.

4.2 Beneficial Use Evaluation

The RI will include a beneficial use evaluation that meets the requirements of the current Guidance for Conducting Beneficial Water Use Determinations at Environmental Cleanup Sites, DEQ, July 1998.

4.3 Risk Assessment

The RI report will include a Level 1 Scoping Ecological Risk Assessment. This scoping assessment will be done to meet the requirements of the Guidance for Ecological Risk Assessment, Level 1-Scoping, DEQ, November 1998. Level 1 is a conservative qualitative determination of whether there is any reason to believe that ecological receptors and/or exposure pathways are present or potentially present in the locality of the facility. Scoping is intended to identify sites that are obviously devoid of ecological important species or habitats and/or where exposure pathways are obviously complete.

Because the entire upland portion of the Brix site is paved, covered with buildings, or rip-rap, it is certain that the scoping assessment will conclude that there are no complete pathways or threatened or endangered species at risk on this site.

BRIX002667

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The RI report will include a discussion of the City of Portland greenway overlay; a figure depicting the 8 foot Columbia River Datum relative to the site; a figure showing the configuration of the site shoreline at high and low river stages; a written description of the site beach area, and a discussion of the need for sampling exposed riverbank areas to evaluate potential risks to upland ecological receptors.

4.4 Source Control Screening Assessment

The source control screening assessment will be conducted when it is judged that a representative ground water quality data set has been compiled. The ground water quality data from the shoreline monitoring wells will be screened against the appropriate surface water screening criteria for protection of ecological and human health beneficial uses of the Willamette River. Oregon DEQ Level 2 Screening concentrations will be used to evaluate the ecological pathway. EPA 2002 National Recommended Water Quality Criteria will be used to evaluate the human health pathway for consumption of aquatic organisms.

In the July 26, 2004 e-mail Comments, DEQ requested that Anchor submit the compilation and interpretation of available site information to DEQ before the screening assessment is submitted. Anchor will provide DEQ with the hydrogeologic and other information items specified in section 4.1 of this workplan before sending DEQ the screening assessment. The idea is to provide DEQ with the site characterization and screening assessment findings to generate some discussion with DEQ before we prepare the RI report.

The screening assessment will be done to determine if there are groundwater exceedances of the screening criteria that justify further evaluation of the groundwater exposure pathway to the river.

Anchor will provide DEQ with a technical memorandum of the results of the source control screening assessment. If appropriate, a meeting with DEQ can be held to discuss the results of the screening assessment and the overall status of the RI.

BRIX002668

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BRIX002669

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5 MONITORING AND REPORTING SCHEDULE

5.1 Monitoring Schedule

Anchor will continue monitoring at the Brix facility as outlined in section 4.1 of this report. As discussed with DEQ, the current monitoring plan includes the reduction in frequency of sampling monitoring wells MW-2, MW-6, and MW-7 from quarterly to semiannually. The semiannual sampling events will coincide with the fall and spring quarters. Anchor may recommend additional reduction in frequency and/or analytical parameters after review of the data as outlined in section 4.1.

Anchor plans to conduct the next round of groundwater monitoring at in February 2005.

5.2 Reporting Schedule

Quarterly progress reports will be continued as required under the Agreement.

BRIX002670

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TABLES

BRIX002672

Table 1
Summary of Push Probe Installations - May 2001
Brix Maritime
Portland, Oregon

					Groundwater Data Summary					Soil Data Summary						
										Soil Strata (feet bgs)		Soil Type	Field Screening Results			
Boring Number	Location	Install Date	Total Depth (feet bgs)	Install Method	Depth Encountered (feet bgs)	Screen Interval (feet bgs)	Sample No.	Bottom Sample Depth (feet bgs)	Sample No.	Top	Bottom		Odor	Visual	Sheen Test	Headspace (ppm)
B-14	River bank area	29-May-01	32.0	Push Probe	32.0	28-32	29-108			0.5	1.0	Gravel (GP)	-	-	-	-
								4.0	29-084	1.0	4.0	Sand with trace Silt (SP)	no	no	no	36.5
								8.0	29-085	4.0		Sand (SP)	no	no	no	11.2
								12.0	29-086				no	no	no	24.9
								16.0	29-087				no	no	no	19.2
								20.0	29-088				no	no	no	6.1
								23.0	29-089		23.0		no	no	no	12.0
								28.0	29-090	23.0	32.0	Silty Clay (CL)	no	no	no	3.2
B-15	River bank area	29-May-01	28.0	Push Probe	26.5	24-28	29-104			0.5	2.0	Gravel with some Sand (GP)	-	-	-	-
							29-105	4.0	29-091	2.0	6.0	Sand with Silt (SM)	no	no	no	0.8
								8.0	29-092	6.0		Sand (SP)	no	no	no	1.5
								12.0	29-093				no	no	no	2.0
								16.0	29-094				no	no	no	2.1
								20.0	29-095				no	no	no	1.6
								24.0	29-096		25.0		no	no	no	1.4
								25.0	29-097	25.0		Silty Clay (CL)	no	no	no	2.4
								28.0	29-098		28.0		no	no	no	0.6
B-16	River bank area	29-May-01	28.0	Push Probe	-	24-28	Dry			0.5		Gravely Sand with some Silt	-	-	-	-
								4.0	29-099		6.5		no	no	no	3.2
								8.0	29-201	6.5		Sand (SP)	no	no	no	4.2
								12.0	29-202				no	no	no	6.0
								16.0	29-203				no	no	no	7.7
								20.0	29-204				no	no	no	-
								23.5	29-205				no	no	no	13.2
								24.5	29-206		24.5		no	no	no	13.3
								27.0	29-207	24.5	28.0	Silty Clay (CL)	no	no	no	9.6
B-17	River bank area	29-May-01	28.0	Push Probe	28.0	24-28	29-109			0.5		Gravely Sand with some Silt	-	-	-	-
								4.0	29-215		4.5		yes	no	no	6.9
								8.0	29-216	4.5		Sand (SP)	yes	no	no	6.5
								12.0	29-217				yes	no	no	10.6
								16.0	29-218				yes	no	no	9.2
								20.0	29-219				yes	no	no	13.4
								23.0	29-220		23.0		yes	no	no	123.
								27.0	29-221	23.0	28.0	Silty Clay (CL)	no	no	no	8.8
B-18	Beneath Maintenance Building	29-May-01	28.0	Push Probe	26.5	24-28	29-107			0.5	1.0	Gravel (GP)	-	-	-	-
								4.0	29-208	1.0		Sand (SP)	no	no	no	1.2
								8.0	29-209				yes	no	yes	3.0
								12.0	29-210				yes	no	no	3.5
								16.0	29-211				yes	no	no	5.5
								20.0	29-212				yes	no	no	8.5
								24.0	29-213		24.0		yes	no	no	4.8
								28.0	29-214	24.0	28.0	Silty Clay (CL)	no	no	no	3.1
B-19	West of UST area	24-May-01	28.0	Push Probe	23.0	24-28	24-102			0.5		Sand (SP)	-	-	-	-
								4.0	24-021		5.0		no	no	no	3.3
								7.0	24-022	5.0	7.0	Silty Sand (SM)	no	no	no	5.0
								10.0	24-023	7.0		Sand (SP)	yes	no	no	16.1
								14.0	24-024				yes	no	no	28.1
								15.5	24-025				yes	no	no	23.8
								19.0	24-026				yes	no	no	27.1
								21.5	24-027		21.5		no	no	no	29.5

Confidential Business Information

BRIX002673

Table 1
Summary of Push Probe Installations - May 2001
Brix Maritime
Portland, Oregon

					Groundwater Data Summary					Soil Data Summary						
										Soil Strata (feet bgs)			Field Screening Results			
Boring Number	Location	Install Date	Total Depth (feet bgs)	Install Method	Depth Encountered (feet bgs)	Screen Interval (feet bgs)	Sample No.	Bottom Sample Depth (feet bgs)	Sample No.	Top	Bottom	Soil Type	Odor	Visual	Sheen Test	Headspace (ppm)
										21.5	25.5	Silty Clay (CL)	-	-	-	-
								26.0	24-028	25.5	28.0	Sand (SP)	no	no	no	18.2
B-20	North of UST area	24-May-01	28.0	Push Probe	27.0	24-28	24-103			0.5	1.5	Gravely Sand with some Silt	-	-	-	-
								3.0	24-029	1.5		Sand (SP)	no	no	no	3.1
								7.0	24-030				no	no	no	2.7
								11.0	24-031				no	no	no	3.6
								15.0	24-032				no	no	no	5.4
								19.0	24-033		20.5		no	no	no	6.0
								23.0	24-034	20.5	24.5	Clayey Sand (SC)	no	no	no	4.2
								27.0	24-035	24.5	28.0	Silty Clay (CL)	no	no	no	1.1
B-21	Next to former fuel pump	24-May-01	24.0	Push Probe	-	-	-	3.0	24-001	0.5		Sand (SP)	yes	yes	yes	718.
								5.0	24-002				yes	yes	yes	1,572.
								10.0	24-003				yes	yes	yes	42.6
								14.0	24-004				yes	yes	yes	18.5
								18.0	24-005		21.0		yes	yes	yes	13.7
								23.0	24-006	21.0		Silty Clay (CL)	no	no	no	6.9
								23.0	24-006		24.0		no	no	no	6.9
B-22	West of UST and north of soil removal areas	24-May-01	28.0	Push Probe	-	-	-			0.5	2.0	Silty Sand with trace Gravel (SM)	-	-	-	-
								4.0	24-013	2.0		Sand (SP)	no	no	no	2.0
								7.0	04-014				yes	yes	yes	22.8
								10.0	24-015				yes	yes	yes	8.2
								15.5	24-016				yes	yes	yes	53.3
								19.0	24-017		21.0		yes	yes	yes	67.0
								22.0	24-018	21.0	22.5	Silty Sand with trace Clay and Organics (SM)	no	no	no	7.3
								25.0	24-019	22.5	25.5	Silty Clay (CL)	no	no	no	3.7
								27.0	24-020	25.5	28.0	Sand (SP)	no	no	no	2.5
B-23	Northwest of UST area	24-May-01	28.0	Push Probe	-	-	-	3.0	24-036	0.5		Sand (SP)	no	no	no	1.3
								7.0	24-037				no	no	no	1.9
								11.0	24-038				no	no	no	1.0
								15.0	24-039				no	no	no	0.2
								19.0	24-040				no	no	no	1.6
								23.0	24-041		23.0		no	no	no	1.6
								27.0	24-042	23.0	28.0	Silty Clay (CL)	no	no	no	0.3
B-24	East of UST area	25-May-01	28.0	Push Probe	-	-	-			0.5	2.0	Gravely Sand with some Silt	-	-	-	-
								3.0	25-043	2.0		Sand (SP)	no	no	no	23.8
								7.0	25-044				no	no	no	47.1
								11.0	25-045				no	no	no	42.9
								15.0	25-046				no	no	no	41.8
								19.0	25-047				no	no	no	19.3
								23.5	25-048		23.5		no	no	no	26.1
								27.0	25-049	23.5	28.0	Silty Clay (CL)	no	no	no	15.8
B-25	South of soil removal area	25-May-01	24.0	Push Probe	-	-	-	4.0	25-077	0.5	4.0	Sand (SP)	no	no	no	0.4
								6.0	25-078	4.0	7.0	Silty Sand (SM)	no	no	no	0.6
								10.0	25-079	7.0		Sand (SP)	no	no	yes	0.9
								12.0	25-080				no	no	yes	1.1
								16.0	25-081				no	no	no	0.0
								20.0	25-082				no	no	no	0.7

BRIX002674

Confidential Business Information

Table 1
Summary of Push Probe Installations - May 2001
Brix Maritime
Portland, Oregon

					Groundwater Data Summary			Soil Data Summary								
										Soil Strata (feet bgs)			Field Screening Results			
Boring Number	Location	Install Date	Total Depth (feet bgs)	Install Method	Depth Encountered (feet bgs)	Screen Interval (feet bgs)	Sample No.[1]	Bottom Sample Depth (feet bgs)	Sample No.[1]	Top	Bottom	Soil Type[2]	Odor	Visual	Sheen Test	Headspace (ppm)
								23.0	25-083		23.0		yes	no	no	154.
								-	-	23.0	24.0	Silty Clay (CL)	yes	no	no	-
B-26	South of soil removal area	25-May-01	24.0	Roto-Hammer	-	-	-			0.5	1.0	Gravel (GP)	-	-	-	-
								2.0	25-051	1.0		Sand (SP)	no	no	no	0.6
								4.0	25-052				no	no	no	1.3
								6.0	25-053				no	no	no	2.1
								8.0	25-054				no	no	no	3.9
								10.0	25-055				no	no	no	3.2
								12.0	25-056				no	no	no	3.0
								14.0	25-057				no	no	no	4.2
								16.0	25-058				no	no	no	4.6
								18.0	25-059				yes	no	no	13.4
								20.0	25-060		20.5		yes	no	no	8.5
								22.0	25-061	20.5	23.5	Silty Clay (CL)	no	no	no	0.0
								24.0	25-062	23.5	24.0	Sand (SP)	no	no	no	0.1
B-27	In soil removal area	25-May-01	4.0	ost Hole Digg	-	-	-			0.5	1.5	Gravel (GP)	-	-	-	-
								3.0	25-050	1.5	4.0	Sand (SP)	no	no	no	6.1
B-28	In soil removal area	25-May-01	28.0	Push Probe	-	-	-	4.0	25-069	0.5		Sand (SP)	no	no	no	25.3
								6.0	25-070				yes	yes	yes	28.1
								9.0	25-071				yes	yes	yes	58.8
								12.0	25-072				yes	yes	yes	76.5
								16.0	25-073				yes	yes	yes	79.2
								20.0	25-074				yes	yes	yes	31.2
								23.0	25-075		23.0		yes	yes	yes	43.2
								27.5	25-076	23.0	28.0	Silty Clay (CL)	no	no	no	7.1
B-29	Decommissioned UST area	25-May-01	28.0	Push Probe	-	-	-	7.0	25-063	0.5		Sand (SP)	no	no	no	0.0
								12.0	25-064				no	no	no	4.7
								15.0	25-065				yes	no	no	3.3
								19.0	25-066				yes	no	no	5.8
								23.0	25-067		23.0		yes	no	no	2.9
								27.0	25-068	23.0	28.0	Silty Clay (CL)	no	no	no	1.1
B-30	West of former fuel pump	24-May-01	24.0	Push Probe	-	-	-	2.0	24-007	0.5		Silty Sand with some Gravel (SM)	no	no	no	3.9
								5.0	24-008		5.5		yes	no	no	7.4
								10.0	24-009	5.5		Sand (SP)	yes	no	no	4.6
								14.0	24-010				yes	no	no	4.7
								19.0	24-011		19.0		yes	no	no	4.3
								23.0	24-012	19.0	24.0	Silty Clay (CL)	no	no	no	1.1

Note: bgs = below ground surface
ppm = parts per million

1 = Sample No. prefix is 5074-0105
2 = 0.5 feet of asphalt or concrete was present at the surface of each push probe

BRIX002675

Confidential Business Information

Table 2
Summary of Analytical Results for Soil Samples - Petroleum Constituents
Brix Maritime
Portland, Oregon

Analytical Methods and Parameters	Analytical Results, mg/kg (ppm)																															
Boring Number	B-2			B-3		B-4		B-5		B-6		B-7		B-9		B-10		B-11		B-12		B-13		B-16		B-17		B-18		B-19		B-20		B-21	
Sample Depth (feet bgs)	15.5	20.5	25.5	20.5	25.5	20.5	10.5	20.5	10.5	15.5	10.5	15.5	20.5	20.5	20.5	20.5	15.5	15.5	15.5	20.5	15.5	20.5	12	24.5	12	23	15.5	24	15.5	21.5	23.0	25.0	15.0	23.0
Sample Date	4/15/1993			4/15/1993		4/15/1993	4/15/1993			4/15/1993		04/15/93		04/15/93		04/15/93	04/16/93		04/16/93		04/16/93		05/29/01		05/29/01		05/29/01		05/24/01		05/24/01		05/24/01	
Northwest Methods																																
Gasoline by NW TPH-Gx	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	270	2000	13	ND>20	ND>20	ND>20	ND>20	ND>20		ND>3.704		10.6	ND>0.532	1.14	ND>0.500	ND>0.617	ND>0.641	1370	ND>0.643	ND>0.667		
Diesel by NW TPH-Dx	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	-	ND>50	ND>50	ND>50	ND>50	ND>50	ND>21.7	ND>23.2	ND>21.5	ND>22	ND>21.3	ND>24.7		ND>24.7	ND>26.0	ND>25.7	-	ND>26.7		
Oil by NW TPH-Dx	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	-	ND>100	ND>100	ND>100	ND>100	ND>100	ND>54.3	121	ND>53.8	ND>54.9	ND>53.2	ND>61.7		ND>61.7	ND>64.9	ND>61.7	-	ND>66.7		
Total Lead by EPA 6010																												4.4	-	-		
VOCs by EPA Method 8260B or 8021																																
Benzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-	5.2	ND>0.00272	-		
Toluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-	ND>0.025	ND>0.00272	-		
Ethylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-	23.4	ND>0.00272	-		
Xylenes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00926	-	134.9	ND>0.00815	-		
Naphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1	-	-		
MTBE (methyl tert-butyl ether)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.25	-	-		
EDB (1,2-dibromoethane)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.025	-	-		
EDC (1,2-dichloroethane)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.025	-	-		
Isopropylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.58	-	-		
n-Propylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.1	-	-		
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59.8	-	-		
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.7	-	-		
PAHs by EPA 8270																																
Naphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Acenaphthylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Acenaphthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Fluorene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Phenanthrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
2-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo (a) anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Chrysene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo (b) fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo (k) fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo (a) pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Indeno (1,2,3-cd) pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dibenzo (ah) anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Benzo (ghi) perylene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

Note:

# = reference level not established
bgs = below ground surface
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams/kilogram
- = not analyzed

ND = not detected above detection limit indicated
DAR = Oregon Administrative Rules
PAHs = polynuclear aromatic hydrocarbons
ppm = parts per million
VOCs = volatile organic compounds
Bold and shaded = Concentration in excess of reference level

1 Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, Oregon Department of Environmental Quality, September 22, 2003
a. Occupational RBC for Soil Vapor Intrusion into Buildings
b. Construction Worker RBC for Soil Ingestion, Dermal Contact, and Inhilation
c. Occupational RBC for Soil Ingestion, Dermal Contact, and Inhilation

Confidential Business Information

BRIX002676

Table 2
Summary of Analytical Results for Soil Samples - Petroleum Constituents
Brix Maritime
Portland, Oregon

Analytical Methods and Parameters	Analytical Results - mg/kg (ppm)																													
Boring Number	B-22			B-23		B-24		B-25			B-26			B-27	B-28			B-29		B-30	MW-1	MW-2	MW-3	MW-4	MW-5			MW-6	MW-7	Lowest RBC[1] Occupational Pathway and Construction Worker Pathways
Sample Depth (feet bgs)	7.0	15.5	22.0	23.0	23.5	27.0	6.0	12.0	16.0	6.0	16.0	22.0	5.0	6.0	12.0	23.0	15.0	23.0	5.0	15-16.5	10-11.5	10-11.5	5-6.5	15-16.5	22.5-24	24.5-26	25-26.5			
Sample Date		05/24/01		05/24/01		05/25/01		05/25/01			05/25/01			05/25/01	05/25/01	05/25/01	05/25/01	05/25/01		05/24/01	02/11/03	02/11/03	6/11/02	02/11/03	02/11/03	02/11/03	06/19/03	06/19/03		
Northwest Methods																														
Gasoline by NW TPH-Gx	-	61.3	1.31	ND>0.617	ND>0.649	ND>0.769	ND>0.704	ND>0.595	ND>0.569	ND>0.643	ND>0.694	ND>0.662	0.829	4.24	4.61	ND>0.543	ND>0.617	ND>0.543	-	-	-	-	-	-	-	ND>6.6	ND>7.2	18000	b
Diesel by NW TPH-Dx	ND>23.5	-	62.6	ND>24.7	ND>28.0	ND>30.3	ND>28.2	ND>23.8	460	ND>21.7	ND>27.8	468	550	2340	2070	ND>21.7	ND>24.7	-	380	40	ND>35.0	ND>28	ND>27	96	ND>34	ND>36	28000	b
Oil by NW TPH-Dx	ND>58.8	-	165	ND>61.7	ND>64.9	ND>75.8	ND>70.4	ND>59.5	1360	ND>54.3	ND>69.4	6010	8330	22200	19900	ND>54.3	ND>61.7	-	ND>110	ND>130	ND>140	ND>110	ND>110	390	ND>140	ND>150	40000	b
Total Lead by EPA 6010	-	-	-	-	-	3.28	3.75	-	-	-	-	-	3.03			-	-	5.89	4.2	15.9	21	5.4	4	32.5	16.3	12.8	750	b,c
VOCs by EPA Method 8260B																														
Benzene	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	ND>0.110	ND>0.00098	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072	1.2	a
Toluene	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	ND>0.110	ND>0.0011	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072	39000	b
Ethylbenzene	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	1.	ND>0.00071	ND>0.0068	ND>0.0055	ND>0.0054	2.5	ND>0.0067	ND>0.0072	28000	b
Xylenes	-	-	-	-	-	ND>0.010	ND>0.010	-	-	-	-	ND>0.005	ND>0.010			-	-	ND>0.010	2.04	ND>0.0019	ND>0.0068	ND>0.0055	ND>0.0054	2.733	ND>0.0067	ND>0.0072	19000	b
Naphthalene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	64.	ND>0.0011	ND>0.027	ND>0.022	ND>0.022	4.9	ND>0.027	ND>0.029	710	b
MTBE (methyl tert-butyl ether)	-	-	-	-	-	ND>0.010	ND>0.010	-	-	-	-	ND>0.01	ND>0.010			-	-	ND>0.010	ND>0.110	ND>0.00078	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072	35	a
EDB (1,2-dibromoethane)	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	-	ND>0.005			-	-	ND>0.005	ND>0.420	ND>0.00098	ND>0.027	ND>0.022	ND>0.022	ND>0.030	ND>0.0067	ND>0.0072	0.37	a
EDC (1,2-dichloroethane)	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	-	ND>0.005			-	-	ND>0.005	ND>0.110	ND>0.00063	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072	0.58	a
Isopropylbenzene	-	-	-	-	-	ND>0.005	0.013	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	3	ND>0.00084	ND>0.0068	ND>0.0055	ND>0.0054	7	ND>0.027	ND>0.029	24000	b
n-Propylbenzene	-	-	-	-	-	ND>0.005	0.021	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	18	ND>0.00099	ND>0.027	ND>0.022	ND>0.022	ND>0.030	ND>0.027	ND>0.029	9300	b
1,2,4-Trimethylbenzene	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	59	ND>0.0011	ND>0.027	ND>0.022	ND>0.022	20	ND>0.027	ND>0.029	840	a
1,3,5-Trimethylbenzene	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005			-	-	ND>0.005	ND>7.8	ND>0.0047	ND>0.027	ND>0.022	ND>0.022	ND>0.970	ND>0.027	ND>0.029	140	a
PAHs by EPA 8270																														
Naphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	22	0.028	0.041	ND>0.005	ND>0.0048	1.8	0.083	ND>0.005	710	b
Acenaphthylene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	ND>0.0048	0.011	0.011	ND>0.005	ND>0.0048	0.038	0.039	ND>0.005	#	
Acenaphthene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.052	0.011	ND>0.0071	0.052	ND>0.0048	0.038	0.05	ND>0.005	16000	b
Dibenzofuran	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	0.014	ND>0.005	ND>0.0071	0.011	ND>0.0048	0.017	0.01	ND>0.005	#	
Fluorene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.11	0.01	0.007	0.053	ND>0.0048	0.051	0.04	ND>0.005	12000	b
Phenanthrene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.24	0.15	0.055	0.44	0.009	0.49	0.34	0.013	#	
Anthracene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.059	0.048	0.011	0.054	0.008	0.082	0.088	0.0068	90000	b
2-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	24	0.011	0.008	ND>0.005	ND>0.0048	0.81	0.029	ND>0.005	#	
Fluoranthene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.12	0.22	0.066	0.076	0.029	0.72	0.5	0.086	8900	b
Pyrene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.16	0.41	0.083	0.077	0.063	0.85	0.55	0.076	6700	b
Benzo (a) anthracene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.054	0.12	0.018	0.009	0.016	0.33	0.29	0.063	2.7	c
Chrysene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.08	0.15	0.029	0.014	0.026	0.56	0.36	0.061	270	c
Benzo (b) fluoranthene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.032	0.94	0.023	0.012	0.016	0.83	0.19	0.037	2.7	c
Benzo (k) fluoranthene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.039	0.95	0.02	0.013	0.018	0.85	0.29	0.054	27	c
Benzo (a) pyrene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.036	0.15	0.034	0.014	0.023	0.92	0.44	0.066	0.27	c
Indeno (1,2,3-cd) pyrene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.03	0.12	0.031	0.021	0.023	2	0.33	0.04	2.7	c
Dibenzo (ah) anthracene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	ND>0.0048	0.13	ND>0.0071	ND>0.005	ND>0.0048	0.16	0.068	0.0091	0.27	c
Benzo (ghi) perylene	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050			-	-	ND>0.050	0.041	0.12	0.049	0.022	0.025	2.3	0.36	0.034	#	

Note:

# = reference level not established
bgs = below ground surface
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams/kilogram
- = not analyzed

ND = not detected above detection limit indicated
OAR = Oregon Administrative Rules
PAHs = polynuclear aromatic hydrocarbons
ppm = parts per million
VOCs = volatile organic compounds
Bold and shaded = Concentration is excess of reference level

1 Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, Oregon Department of Environmental Quality, September 22, 2003
a. Occupational RBC for Soil Vapor Intrusion into Buildings
b. Construction Worker RBC for Soil Ingestion, Dermal Contact, and Inhalation
c. Occupational RBC for Soil Ingestion, Dermal Contact, and Inhalation

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Table 3
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.					Site: Brix Maritime	
					Project No. : 990056-01	
Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	DTW (feet)	Water Elevation (Feet NAVD88)	Comments
Monitoring Wells						
MW-1	41.81	34.7-19.7	02/28/03	18.89	22.92	
MW-1	41.81	34.7-19.7	03/31/03	19.43	22.38	
MW-1	41.81	34.7-19.7	04/29/03	19.69	22.12	
MW-1	41.81	34.7-19.7	05/22/03	20.22	21.59	
MW-1	41.81	34.7-19.7	07/07/03	21.08	20.73	
MW-1	41.81	34.7-19.7	07/30/03	21.13	20.68	
MW-1	41.81	34.7-19.7	08/28/03	21.24	20.57	
MW-1	41.81	34.7-19.7	09/30/03	21.15	20.66	
MW-1	41.81	34.7-19.7	10/16/03	21.10	20.71	
MW-1	41.81	34.7-19.7	12/03/03	21.06	20.75	
MW-1	41.81	34.7-19.7	12/26/03	20.46	21.35	
MW-1	41.81	34.7-19.7	01/30/04	19.01	22.80	
MW-1	41.81	34.7-19.7	03/04/04	19.60	22.21	
MW-1	41.81	34.7-19.7	04/29/04	20.91	20.90	
MW-1	41.81	34.7-19.7	05/27/04	21.13	20.68	
MW-1	41.81	34.7-19.7	07/06/04	21.22	20.59	
MW-1	41.81	34.7-19.7	07/26/04	21.28	20.53	
MW-1	41.81	34.7-19.7	10/29/04	21.25	20.56	
MW-2	42.13	32.5-17.5	02/28/03	19.88	22.25	
MW-2	42.13	32.5-17.5	03/31/03	20.36	21.77	
MW-2	42.13	32.5-17.5	04/29/03	20.64	21.49	
MW-2	42.13	32.5-17.5	05/22/03	21.06	21.07	
MW-2	42.13	32.5-17.5	07/07/03	22.17	19.96	
MW-2	42.13	32.5-17.5	07/30/03	22.50	19.63	
MW-2	42.13	32.5-17.5	08/28/03	22.84	19.29	
MW-2	42.13	32.5-17.5	09/30/03	23.07	19.06	
MW-2	42.13	32.5-17.5	10/16/03	23.06	19.07	
MW-2	42.13	32.5-17.5	12/03/03	22.54	19.59	
MW-2	42.13	32.5-17.5	12/26/03	21.58	20.55	
MW-2	42.13	32.5-17.5	01/30/04	20.05	22.08	
MW-2	42.13	32.5-17.5	03/04/04	20.57	21.56	
MW-2	42.13	32.5-17.5	04/29/04	21.89	20.24	
MW-2	42.13	32.5-17.5	05/27/04	22.29	19.84	
MW-2	42.13	32.5-17.5	07/06/04	22.70	19.43	
MW-2	42.13	32.5-17.5	07/26/04	22.85	19.28	
MW-2	42.13	32.5-17.5	10/29/04	22.90	19.23	
MW-3	41.93	32.6-17.6	07/29/02	22.91	19.02	
MW-3	41.93	32.6-17.6	08/22/02	23.50	18.43	Oil detected in well, thickness estimated at 0.02 foot
MW-3	41.93	32.6-17.6	09/30/02	23.37	18.56	Oil detected in well, thickness estimated at 0.02 foot
MW-3	41.93	32.6-17.6	10/30/02	23.68	18.25	DTP = 23.49 (0.19 foot thick)
MW-3	41.93	32.6-17.6	11/27/02	23.30	18.63	DTP = 23.16 (0.14 foot thick)
MW-3	41.93	32.6-17.6	12/30/02	21.99	19.94	Oil noted on probe, product too thin to measure with interface probe
MW-3	41.93	32.6-17.6	02/28/03	19.75	22.18	Oil noted on probe, product too thin to measure with interface probe
MW-3	41.93	32.6-17.6	03/31/03	20.24	21.69	No oil noted on probe
MW-3	41.93	32.6-17.6	04/29/03	20.50	21.43	No oil noted on probe
MW-3	41.93	32.6-17.6	05/22/03	20.94	20.99	No oil noted on probe
MW-3	41.93	32.6-17.6	07/07/03	22.21	19.72	No oil noted on probe
MW-3	41.93	32.6-17.6	07/30/03	22.62	19.31	No oil noted on probe
MW-3	41.93	32.6-17.6	08/28/03	22.95	18.98	Oil noted on probe, product too thin to measure with interface probe
MW-3	41.93	32.6-17.6	09/30/03	23.15	18.78	DTP = 23.04 (0.11 foot thick)
MW-3	41.93	32.6-17.6	10/16/03	22.40	19.53	No oil noted on probe
MW-3	41.93	32.6-17.6	12/03/03	22.21	19.72	Sheen, product too thin to measure
MW-3	41.93	32.6-17.6	12/26/03	21.44	20.49	No oil noted on probe
MW-3	41.93	32.6-17.6	01/30/04	19.80	22.13	No oil noted on probe
MW-3	41.93	32.6-17.6	03/04/04	20.41	21.52	No oil noted on probe
MW-3	41.93	32.6-17.6	04/29/04	21.82	20.11	No oil noted on probe
MW-3	41.93	32.6-17.6	05/27/04	22.25	19.68	No oil noted on probe
MW-3	41.93	32.6-17.6	07/06/04	22.66	19.27	No oil noted on probe
MW-3	41.93	32.6-17.6	07/26/04	22.91	19.02	DTP = 22.89 (0.02 foot thick)
MW-3	41.93	32.6-17.6	10/29/04	22.29	19.64	Oil noted on probe, product too thin to measure with interface probe

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Table 3
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.					Site: Brix Maritime	
					Project No.: 990056-01	
Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	DTW (feet)	Water Elevation (Feet NAVD88)	Comments
MW-4	23.55	19.1-9.1	07/29/02	11.62	11.93	
MW-4	23.55	19.1-9.1	08/22/02	11.77	11.78	
MW-4	23.55	19.1-9.1	09/30/02	11.94	11.61	
MW-4	23.55	19.1-9.1	10/30/02	12.06	11.49	
MW-4	23.55	19.1-9.1	11/27/02	11.85	11.70	
MW-4	23.55	19.1-9.1	12/30/02	10.24	13.31	
MW-4	23.55	19.1-9.1	02/28/03	4.34	19.21	
MW-4	23.55	19.1-9.1	03/31/03	4.59	18.96	
MW-4	23.55	19.1-9.1	04/29/03	5.46	18.09	
MW-4	23.55	19.1-9.1	05/22/03	8.59	14.96	
MW-4	23.55	19.1-9.1	07/07/03	10.69	12.86	
MW-4	23.55	19.1-9.1	07/30/03	11.03	12.52	
MW-4	23.55	19.1-9.1	08/28/03	11.40	12.15	
MW-4	23.55	19.1-9.1	09/30/03	11.74	11.81	
MW-4	23.55	19.1-9.1	10/16/03	11.40	12.15	
MW-4	23.55	19.1-9.1	12/03/03	10.59	12.96	
MW-4	23.55	19.1-9.1	12/26/03	9.50	14.05	
MW-4	23.55	19.1-9.1	01/30/04	5.41	18.14	
MW-4	23.55	19.1-9.1	03/04/04	9.05	14.50	
MW-4	23.55	19.1-9.1	04/29/04	11.00	12.55	
MW-4	23.55	19.1-9.1	05/27/04	10.89	12.66	
MW-4	23.55	19.1-9.1	07/06/04	11.26	12.29	
MW-4	23.55	19.1-9.1	07/26/04	11.56	11.99	
MW-4	23.55	19.1-9.1	10/29/04	11.06	12.49	
MW-5	41.66	34.6-19.6	02/28/03	19.45	22.21	
MW-5	41.66	34.6-19.6	03/31/03	19.99	21.67	
MW-5	41.66	34.6-19.6	04/29/03	20.25	21.41	
MW-5	41.66	34.6-19.6	05/22/03	20.75	20.91	
MW-5	41.66	34.6-19.6	07/07/03	21.93	19.73	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	07/30/03	22.08	19.58	dry
MW-5	41.66	34.6-19.6	08/28/03	22.08	19.58	dry
MW-5	41.66	34.6-19.6	09/30/03	22.13	19.53	dry
MW-5	41.66	34.6-19.6	10/16/03	22.10	19.56	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	12/03/03	22.13	19.53	dry
MW-5	41.66	34.6-19.6	12/26/03	21.35	20.31	
MW-5	41.66	34.6-19.6	01/30/04	19.59	22.07	
MW-5	41.66	34.6-19.6	03/04/04	20.16	21.50	
MW-5	41.66	34.6-19.6	04/29/04	21.67	19.99	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	05/27/04	21.99	19.67	
MW-5	41.66	34.6-19.6	07/06/04	21.98	19.68	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	07/26/04	dry	<19.60	dry
MW-5	41.66	34.6-19.6	10/29/04	22.00	19.66	Insufficient water to collect sample
MW-6	41.21	31.1-16.1	07/07/03	20.26	20.95	
MW-6	41.21	31.1-16.1	07/30/03	20.57	20.64	
MW-6	41.21	31.1-16.1	08/28/03	21.02	20.19	
MW-6	41.21	31.1-16.1	09/30/03	21.02	20.19	
MW-6	41.21	31.1-16.1	10/16/03	20.93	20.28	
MW-6	41.21	31.1-16.1	12/03/03	21.53	19.68	
MW-6	41.21	31.1-16.1	12/26/03	19.24	21.97	
MW-6	41.21	31.1-16.1	01/30/04	17.70	23.51	
MW-6	41.21	31.1-16.1	03/04/04	18.16	23.05	
MW-6	41.21	31.1-16.1	04/29/04	19.66	21.55	
MW-6	41.21	31.1-16.1	05/27/04	20.17	21.04	
MW-6	41.21	31.1-16.1	07/06/04	20.71	20.50	
MW-6	41.21	31.1-16.1	07/26/04	21.23	19.98	
MW-6	41.21	31.1-16.1	10/29/04	21.48	19.73	

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Table 3
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.						Site: Brix Maritime
						Project No. : 990056-01
Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	DTW (feet)	Water Elevation (Feet NAVD88)	Comments
MW-7	40.95	31.2-16.2	07/07/03	21.21	19.74	
MW-7	40.95	31.2-16.2	07/30/03	21.76	19.19	
MW-7	40.95	31.2-16.2	08/28/03	22.32	18.63	
MW-7	40.95	31.2-16.2	09/30/03	22.67	18.28	
MW-7	40.95	31.2-16.2	10/16/03	22.72	18.23	
MW-7	40.95	31.2-16.2	12/03/03	22.90	18.05	
MW-7	40.95	31.2-16.2	12/26/03	20.32	20.63	
MW-7	40.95	31.2-16.2	01/30/04	18.26	22.69	
MW-7	40.95	31.2-16.2	03/04/04	18.96	21.99	
MW-7	40.95	31.2-16.2	04/29/04	20.49	20.46	
MW-7	40.95	31.2-16.2	05/27/04	21.10	19.85	
MW-7	40.95	31.2-16.2	07/06/04	21.98	18.97	
MW-7	40.95	31.2-16.2	07/26/04	22.40	18.55	
MW-7	40.95	31.2-16.2	10/29/04	22.99	17.96	
River Gauge[1]						
River	4.33	NA	10/30/02	2.75	7.08	
River	4.33	NA	11/27/02	3.1	7.43	
River	4.33	NA	12/30/02	7.5	11.83	
River	4.33	NA	02/28/03	6.1	10.43	
River	4.33	NA	03/31/03	8.0	12.33	
River	4.33	NA	04/29/03	8.0	12.33	
River	4.33	NA	05/22/03	6.5	10.83	
River	4.33	NA	07/07/03	4.0	8.33	
River	4.33	NA	07/30/03	3.5	7.83	
River	4.33	NA	08/28/03	3.3	7.63	
River	4.33	NA	09/30/03	2.1	6.43	
River	4.33	NA	10/16/03	2.2	6.53	
River	4.33	NA	12/03/03	3.5	7.83	
River	4.33	NA	12/26/03	6.7	11.03	
River	4.33	NA	01/30/04	11.0	15.33	
River	4.33	NA	03/04/04	5.0	9.33	
River	4.33	NA	04/29/04	4.0	8.33	
River	4.33	NA	05/27/04	6.6	10.93	
River	4.33	NA	07/06/04	5.5	9.83	
River	4.33	NA	07/26/04	2.75	7.08	
River	4.33	NA	10/29/04	3.75	8.08	

Note: DTW = Depth to Water; DTP = Depth to Product; NA = Not Applicable
1 = The river gauge is marked in 1-foot increments, field measurements are estimated to the closest 0.1 foot.

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Table 4
Total Petroleum Hydrocarbons
Brix Maritime
Portland, Oregon

Location (sample depth in ft bgs)	Matrix	Date Date Sampled	Diesel Range Organics		Residual Range Organics		Gasoline Range Organics	
MW-1	Water	07/07/03	0.27	L	0.5	U	1.3	H
MW-1	Water	10/16/03	0.73	L	0.5	U	8.1	H
MW-1	Water	01/30/04	0.60	L	0.5	U	4.0	H
MW-1	Water	04/29/04	0.71	L	0.5	U	5.8	H
MW-1 Duplicate	Water	04/29/04	0.79	L	0.5	U	5.7	H
MW-1	Water	07/26/04	0.92	L	0.5	U	9.3	Y
MW-1 Duplicate	Water	07/26/04	0.93	L	0.5	U	9.3	Y
MW-1	Water	10/29/04	1.10	L	0.5	U	8.8	Y
MW-2	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-2	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-2	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-2	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-2	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-2	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-3	Water	07/30/02	3.4	Y	1.6	O		
MW-3	Water	07/07/03	1.9	Y	8.5	O	0.05	U
MW-3	Water	10/16/03	0.92	Y	1.8	O	0.059	Y
MW-3	Water	01/30/04	0.79	Y	0.6	O	0.05	U
MW-3	Water	04/29/04	0.7	Y	0.77	O	0.05	U
MW-3	Water	07/26/04	2.5	Y	8.3	O	0.25	U
MW-3	Water	10/29/04	1.2	Y	3.1	O	0.25	U
MW-4	Water	07/29/02	0.26	U	0.52	U		
MW-4	Water	07/07/03	0.25	U	0.52	O	0.05	U
MW-4 Duplicate	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-4	Water	10/16/03	0.25	U	0.5	U	0.65	Y
MW-4 Duplicate	Water	10/16/03	0.25	U	0.5	U	0.66	Y
MW-4	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-4	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-4	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-4	Water	10/29/04	0.73	Z	1.0	Z	0.25	U
MW-4 Duplicate	Water	10/29/04	0.63	Z	0.96	Z	0.25	U
MW-5	Water	01/30/04	0.62	L	0.5	U	1.4	H
MW-5 Duplicate	Water	01/30/04	0.63	L	0.5	U	1.5	H
MW-6	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-6	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-6	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-6	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-6	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-6	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-7	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-7	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-7	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-7	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-7	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-7	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-1 (15-16.5)	Soil	02/11/03	360	L	110	U		
MW-2 (10-11.5)	Soil	02/11/03	40	H	130	U		
MW-4 (10-11.5)	Soil	07/17/02	35	U	140	U		
MW-5 (5-6.5)	Soil	02/11/03	28	U	110	U		
MW-5 (15-16.5)	Soil	02/11/03	27	U	110	U		
MW-5 (22.5-24)	Soil	02/11/03	96	H	390	O		
MW-6 (24.5-26)	Soil	06/19/03	34	U	140	U	6.6	U
MW-7 (25-26.5)	Soil	06/19/03	36	U	150	U	7.2	U

Notes: Water concentrations are in mg/L. Soil concentrations are in mg/kg.
ft bgs = feet below ground surface.
U = Not detected at method reporting limit.
O = The fingerprint resembles oil, but does not match the calibration standard.
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents than the calibration standard.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents than the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard.

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Table 5
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Methyl tert-Butyl Ether	Carbon Disulfide	Methylene Chloride	trans-1,2-dichloroethene	1,1-Dichloroethane	2-Butanone	2,2-Dichloropropane	cis-1,2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-1	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/16/03	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-1	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	04/29/04	1 U	1 U	1 U	1 U	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-1 Dup	Water	04/29/04	1 U	1 U	1 U	1 U	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-1	Water	07/26/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-1 Dup	Water	07/26/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-1	Water	10/29/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-2	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/30/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/29/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/15/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 (15-16.5)	Soil	02/11/03	110 U	110 U	110 U	110 U	110 U	110 U	4200 U	110 U	110 U	11 U	420 U	110 U	110 U	4200 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U
MW-2 (10-11.5)	Soil	02/11/03	0.87 U	1.3 U	0.77 U	0.99 U	0.97 U	0.91 U	13 U	0.86 U	0.79 U	1.9 U	1.2 U	0.91 U	0.97 U	11 U	1 U	1.1 U	0.71 U	0.65 U	0.71 U	0.91 U	0.74 U
MW-4 (10-11.5)	Soil	07/17/02	6.8 UJ	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	70	6.8 U	6.8 U	6.8 U	14 U	6.8 U	6.8 U	27 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U
MW-5 (5-6.5)	Soil	02/11/03	5.5 UJ	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	55 U	5.5 U	5.5 U	5.5 U	11 U	5.5 U	5.5 U	22 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
MW-5 (15-16.5)	Soil	02/11/03	5.4 UJ	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	54 U	5.4 U	5.4 U	5.4 U	11 U	5.4 U	5.4 U	22 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
MW-5 (22.5-24)	Soil	02/11/03	7.5 UJ	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	85	7.5 U	7.5 U	7.5 U	15 U	7.5 U	7.5 U	30 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U	7.5 U
MW-6 (24.5-26)	Soil	06/19/03	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	67 U	6.7 U	6.7 U	6.7 U	14 U	6.7 U	6.7 U	27 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U
MW-7 (25-26.5)	Soil	06/19/03	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	67 U	7.2 U	7.2 U	7.2 U	15 U	7.2 U	7.2 U	29 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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Table 5
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-1	Water	02/28/03	0.5 U	5.7	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.71	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	37	50	12	0.5 U	0.5 U
MW-1	Water	07/07/03	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	1.1	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	11	18	2	0.5 U	0.5 U
MW-1	Water	10/16/03	2.5 U	32 D	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	13 D	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	270 D	360 D	110 D	2.5 U	2.5 U
MW-1	Water	01/30/04	0.5 U	4.1	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.96	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	78 D	120	31	0.5 U	0.5 U
MW-1	Water	04/29/04	1 U	5.3 D	1 U	1 U	1 U	1 U	40 U	1 U	2.1 D	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	120 D	160 D	46 D	1 U	1 U
MW-1 Dup	Water	04/29/04	1 U	4.7 D	1 U	1 U	1 U	1 U	40 U	1 U	1.9 D	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	110 D	150 D	42 D	1 U	1 U
MW-1	Water	07/26/04	1.3 U	4.0 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	93 D	120 D	29 D	1.3 U	1.3 U
MW-1 Dup	Water	07/26/04	1.3 U	3.9 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	89 D	110 D	28 D	1.3 U	1.3 U
MW-1	Water	10/29/04	1.3 U	4.0 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	82 D	100 D	12 D	1.3 U	1.3 U
MW-2	Water	02/28/03	0.5 U	0.50 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/07/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/16/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.86	0.5 U	0.5 U	0.5 U
MW-2	Water	01/30/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	04/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/26/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/30/02	0.5 U	0.73	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	14	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.51	3.5	2	0.5 U	0.5 U
MW-3	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.63	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.2	1.2	0.5 U	0.5 U
MW-3	Water	07/07/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.8	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.2	1.1	0.5 U	0.5 U
MW-3	Water	10/16/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	1.9	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.51	2.5	1.5	0.5 U	0.5 U
MW-3	Water	01/30/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.63	0.73	0.5 U	0.5 U
MW-3	Water	04/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.20	1.1	0.5 U	0.5 U
MW-3	Water	07/26/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.98	0.98	0.5 U	0.5 U
MW-3	Water	10/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.10	1.0	0.5 U	0.5 U
MW-4	Water	07/29/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/28/03	0.5 U	0.76	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	2.3	1.4	1.2	0.5 U	0.5 U
MW-4	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.93	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.94	0.5 U	0.5 U	0.5 U
MW-4	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U
MW-4	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	15	12	0.97	0.5 U	0.5 U
MW-5 Dup	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	16	14	1.10	0.5 U	0.5 U
MW-5	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	2.0	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.74	0.5 U	0.5 U	0.5 U
MW-6	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.82	0.5 U	0.5 U	0.5 U
MW-7	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1 (15-16.5)	Soil	02/11/03	110 U	110 U	110 U	110 UJ	110 U	110 U	4200 U	110 UJ	110 U	110 U	110 U	4200 U	110 U	110 U	110 UJ	420 U	110 U	110 U	1000	1600	440	110 U	110 U
MW-2 (10-11.5)	Soil	02/11/03	0.83 U	0.98 U	0.35 U	0.89 UJ	0.66 U	0.89 U	7.6 U	0.94 UJ	1.1 U	0.74 U	0.86 U	6.8 U	0.65 U	0.39 U	0.74 UJ	0.98 U	0.87 U	0.63 U	0.71 U	1.9 U	0.86 U	0.91 U	0.81 U
MW-4 (10-11.5)	Soil	07/17/02	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	27 U	6.8 U	6.8 U	6.8 U	6.8 U	27 U	6.8 U	6.8 U	6.8 U	27 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U	6.8 U
MW-5 (5-6.5)	Soil	02/11/03	5.5 U	5.5 U	5.5 U	5.5 UJ	5.5 U	5.5 U	22 U	5.5 UJ	5.5 U	5.5 U	5.5 U	22 U	5.5 U	5.5 U	5.5 UJ	22 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U
MW-5 (15-16.5)	Soil	02/11/03	5.4 U	5.4 U	5.4 U	5.4 UJ	5.4 U	5.4 U	22 U	5.4 UJ	5.4 U	5.4 U	5.4 U	22 U	5.4 U	5.4 U	5.4 UJ	22 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U	5.4 U
MW-5 (22.5-24)	Soil	02/11/03	7.5 U	7.5 U	7.5 U	7.5 UJ	7.5 U	7.5 U	30 U	7.5 UJ	7.5 U	7.5 U	7.5 U	30 U	7.5 U	7.5 U	7.5 UJ	30 U	7.5 U	7.5 U	2500	2700	33	7.5 U	7.5 U
MW-6 (24.5-26)	Soil	06/19/03	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	27 U	6.7 U	6.7 U	6.7 U	6.7 U	27 U	6.7 U	6.7 U	6.7 U	27 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U	6.7 U
MW-7 (25-26.5)	Soil	06/19/03	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	29 U	7.2 U	7.2 U	7.2 U	7.2 U	29 U	7.2 U	7.2 U	7.2 U	29 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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Table 5
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-1	Water	02/28/03	19	0.5 U	0.5 U	0.5 U	65 D	2 U	2 U	26	2 U	140 D	10	0.5 U	2 U	0.5 U	21	0.5 U	0.5 U	2 U	2 U	31	2 U
MW-1	Water	07/07/03	31	0.5 U	0.5 U	0.5 U	64 D	2 U	2 U	9.3	2 U	46	8.2	0.5 U	2 U	0.5 U	14	0.5 U	0.5 U	2 U	2 U	22	2 U
MW-1	Water	10/16/03	75 D	2.5 U	2.5 U	10 U	250 D	10 U	10 U	280 D	10 U	1200 D	28 D	2.5 U	10 U	2.5 U	150 Ui	2.5 U	10 U	10 U	10 U	460 D	10 U
MW-1	Water	01/30/04	36	0.5 U	0.5 U	0.5 U	140 D	2 U	2 U	100 D	2 U	510 D	17	0.5 U	2 U	0.5 U	46	0.5 U	0.5 U	2 U	2 U	210 D	2 U
MW-1	Water	04/29/04	54 D	1 U	1 U	1 U	150 D	4 U	4 U	150 D	4 U	590 D	20 D	1 U	4 U	1 U	43 D	1 U	1 U	4 U	4 U	250 D	4 U
MW-1 Dup	Water	04/29/04	52 D	1 U	1 U	1 U	150 D	4 U	4 U	140 D	4 U	570 D	18 D	1 U	4 U	1 U	39 D	1 U	1 U	4 U	4 U	260 D	4 U
MW-1	Water	07/26/04	47 D	1.3 U	1.3 U	1.3 U	160 D	5 U	5 U	130 D	5 U	610 D	18 D	1.3 U	5 U	1.3 U	40 D	1.3 U	1.3 U	5 U	5 U	270 JD	5 U
MW-1 Dup	Water	07/26/04	46 D	1.3 U	1.3 U	1.3 U	160 D	5 U	5 U	120 D	5 U	640 D	18 D	1.3 U	5 U	1.3 U	40 D	1.3 U	1.3 U	5 U	5 U	280 JD	5 U
MW-1	Water	10/29/04	45 D	1.3 U	1.3 U	1.3 U	140 D	5 U	5 U	110 D	5 U	560 D	16 D	1.3 U	5 U	1.3 U	39 D	1.3 U	1.3 U	5 U	5 U	230 D	5 U
MW-2	Water	02/28/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/30/02	0.5 U	0.5 U	0.5 U	0.5 U	2.2	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	02/28/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	07/29/02	2 U	0.5 U	0.5 U	0.5 U	2.3	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	02/28/03	29	0.5 U	0.5 U	0.5 U	35	2 U	2 U	2.2	2 U	3.8	2 U	0.5 U	2 U	0.5 U	3.1	0.5 U	0.5 U	2 U	2 U	45	2 U
MW-4	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	10/16/03	7.1	0.5 U	0.5 U	0.5 U	5.5	2 U	2 U	2 U	2 U	2 U	4.4	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	10/16/03	7.5	0.5 U	0.5 U	0.5 U	6.3	2 U	2 U	2 U	2 U	2 U	4.8	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-5	Water	02/28/03	24	0.5 U	0.5 U	0.5 U	110 D	2 U	2 U	26	2 U	75 D	27	0.5 U	2 U	0.5 U	87 D	0.5 U	0.5 U	2 U	2 U	23	2 U
MW-5 Dup	Water	02/28/03	25	0.5 U	0.5 U	0.5 U	110 D	2 U	2 U	30	2 U	99 D	30	0.5 U	2.3	0.5 U	110 D	0.5 U	0.5 U	2 U	2 U	25	2 U
MW-5	Water	01/30/04	9.7	0.5 U	0.5 U	0.5 U	49	2 U	2 U	2 U	2 U	2 U	38	0.5 U	2 U	0.5 U	82 D	0.5 U	0.5 U	2 U	2 U	2.9	2 U
MW-5 Dup	Water	01/30/04	11	0.5 U	0.5 U	0.5 U	56	2 U	2 U	2 U	2 U	2 U	39	0.5 U	2 U	0.5 U	84 D	0.5 U	0.5 U	2 U	2 U	3.4	2 U
MW-6	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-1 (15-16.5)	Soil	02/11/03	3000	110 U	110 U	420 U	18000	420 U	420 U	7800 U	420 U	59000	7300 U	110 U	1800	110 U	29000	110 U	420 U	420 U	420 U	64000	420 U
MW-2 (10-11.5)	Soil	02/11/03	0.84 U	0.91 U	0.76 U	1 U	0.89 U	0.91 U	0.92 U	4.7 U	0.92 U	1.1 U	0.92 U	0.88 U	0.89 U	1.1 U	0.93 U	0.81 U	1.1 U	0.95 U	1.2 U	1.1 U	0.93 U
MW-4 (10-11.5)	Soil	07/17/02	6.8 U	6.8 U	6.8 U	6.8 U	27 U	27 U	27 U	27 U	27 U	27 U	27 U	6.8 U	27 U	6.8 U	27 U	6.8 U	6.8 U	27 U	27 U	27 U	27 U
MW-5 (5-6.5)	Soil	02/11/03	5.5 U	5.5 U	5.5 U	5.5 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	5.5 U	22 U	5.5 U	22 U	5.5 U	5.5 U	22 U	22 U	22 U	22 U
MW-5 (15-16.5)	Soil	02/11/03	5.4 U	5.4 U	5.4 U	5.4 U	22 U	22 U	22 U	22 U	22 U	22 U	22 U	5.4 U	22 U	5.4 U	22 U	5.4 U	5.4 U	22 U	22 U	22 U	22 U
MW-5 (22.5-24)	Soil	02/11/03	7000	7.5 U	7.5 U	7.5 U	30 U	65 U	30 U	970 U	30 U	20000	180	7.5 U	33	7.5 U	2500 U	7.5 U	7.5 U	30 U	30 U	4900	30 U
MW-6 (24.5-26)	Soil	06/19/03	27 U	6.7 U	6.7 U	6.7 U	27 U	65 U	27 U	27 U	27 U	27 U	27 U	6.7 U	27 U	6.7 U	27 U	6.7 U	6.7 U	27 U	27 U	27 U	27 U
MW-7 (25-26.5)	Soil	06/19/03	29 U	7.2 U	7.2 U	7.2 U	29 U	65 U	29 U	29 U	29 U	29 U	29 U	7.2 U	29 U	7.2 U	29 U	7.2 U	7.2 U	29 U	29 U	29 U	29 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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TABLE 6
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-1		MW-1		MW-1		MW-1		MW-1 Dup		MW-1		MW-1 Dup		MW-1		MW-2		MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	02/28/03		07/07/03		10/16/03		01/30/04		04/29/04		04/29/04		07/26/04		07/26/04		10/29/04		02/28/03		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04	
LPAHs	**LPAHs**																													
Naphthalene	23	D	23	D	160	D	110	D	170	D	150	D	170	D	170	D	160	D	0.082		0.02	U	0.023		0.037		0.023		0.18		0.026	
Acenaphthylene	0.19		0.02	U	0.02	U	0.15	UB	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U	0.023		0.02	U	0.022	U	0.110	UB	0.020	U	0.13		0.021	
Acenaphthene	0.43		0.38		0.34		0.17		0.30		0.23		0.34		0.33		0.33		0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	0.024		0.020	U
Dibenzofuran	0.12		0.067		0.085		0.032		0.062		0.057		0.073		0.074		0.085		0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	0.019	U	0.020	U
Fluorene	0.36		0.27		0.24		0.11		0.19		0.14		0.23		0.24		0.23		0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	0.023		0.020	U
Phenanthrene	1.8		0.56		0.42		0.16		0.34		0.27		0.36		0.36		0.32		0.15		0.02	U	0.031		0.020	U	0.020	U	0.31		0.026	
Anthracene	0.53		0.11		0.065		0.073		0.079		0.057		0.068		0.067		0.070		0.032		0.02	U	0.022	U	0.034		0.036		0.11		0.032	
2-Methylnaphthalene	9.0		7.9		42.0	D	40.0	D	46.0	D	40.0	D	51.0	D	49.0	D	42.0	D	0.02	U	0.02	U	0.022	U	0.022		0.020	U	0.03		0.020	U
Total LPAH	35.43		32.29		203.15		150.55		216.97		190.75		222.07		220.07		203.04		0.29				0.05		0.09		0.06		0.81		0.11	
HPAHs	**HPAHs**																													
Fluoranthene	4.3		0.5		0.3		0.39		0.33		0.24		0.31		0.33		0.21		0.29		0.02	U	0.070		0.022		0.02	U	0.62		0.084	
Pyrene	13	D	1.2		0.9		1.6		0.76		0.57		0.80		0.85		0.60		0.42		0.02	U	0.091		0.020		0.02	U	0.87		0.090	
Benz(a)anthracene	2.1		0.22		0.16		0.20		0.12		0.084		0.13		0.130		0.130		0.11		0.02	U	0.023		0.020		0.02	U	0.31		0.043	
Chrysene	2.7		0.27		0.24		0.24		0.16		0.11		0.15		0.15		0.15		0.17		0.02	U	0.042		0.02	U	0.02	U	0.48		0.060	
Benzo(b)fluoranthene	1.4		0.088		0.073		0.047		0.049		0.029		0.044		0.041		0.084		0.14		0.02	U	0.036		0.020		0.02	U	0.48		0.080	
Benzo(k)fluoranthene	1.1		0.098		0.096		0.053		0.061		0.036		0.047		0.043		0.082		0.13		0.02	U	0.035		0.023		0.02	U	0.42		0.061	
Benzo(a)pyrene	2.0		0.11		0.097		0.064		0.066		0.038		0.056		0.052		0.110		0.19		0.02	U	0.022	U	0.035		0.02	U	0.73		0.10	
Indeno(1,2,3-cd)pyrene	1.5		0.023		0.036		0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.044		0.20		0.02	U	0.073		0.022		0.02	U	0.88		0.14	
Dibenz(a,h)anthracene	0.17		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U	0.02	U	0.02	U	0.022	U	0.020	U	0.02	U	0.10	J	0.02	U
Benzo(g,h,i)perylene	1.5		0.028		0.043		0.02	U	0.021		0.20	U	0.019	U	0.019	U	0.055		0.22		0.02	U	0.090		0.020		0.02	U	1.10		0.18	
Total HPAHs	29.77		2.53		1.98		2.59		1.57		1.11		1.54		1.60		1.47		1.87				0.46		0.18				5.99		0.84	

NOTE: µg/L = micrograms per liter or parts per billion.
B = detected in method blank at sigificant concentration.
J = estimated concentration.
U = not detected at or above the indicated method reporting limit.

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TABLE 6
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-4	MW-4	MW-4	MW-4 Dup	MW-4	MW-4 Dup	MW-4	MW-4	MW-4	MW-4	MW-4 Dup
Matrix	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Date Sampled	07/30/02	02/28/03	07/07/03	10/16/03	01/30/04	04/29/04	07/26/04	10/29/04	07/29/02	02/28/03	07/07/03	07/07/03	10/16/03	10/16/03	01/30/04	04/29/04	07/26/04	10/29/04	10/29/04
LPAHs										**LPAHs**									
Naphthalene	0.36	0.75	0.34	0.34	0.11	0.35	0.28 D	0.040	0.039	18 D	0.16	0.12	0.11	0.12	0.074	0.093	0.024	0.054	0.047
Acenaphthylene	0.02 U	0.22	0.02 U	0.02 U	0.14 UB	0.02 U	0.38 D	0.038	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.053 UB	0.02 U	0.019 U	0.027	0.023
Acenaphthene	0.26	1.3	0.16	0.21	0.04	0.13	0.89 D	0.088	0.51	0.60	0.11	0.11	0.36	0.40	0.16	0.061	0.096	0.860	1.100
Dibenzofuran	0.025	0.11	0.02 U	0.021	0.020 U	0.035	0.19 U	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020
Fluorene	0.09	1.0	0.1	0.11	0.037	0.082	0.84 D	0.039	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Phenanthrene	0.11	2.9	0.2	0.14	0.06	0.12	2.3 D	0.02 U	0.043	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.880 Ui	1.100 Ui
Anthracene	0.02 U	0.55	0.039	0.022	0.032	0.034	0.96 D	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.024	0.030
2-Methylnaphthalene	0.28	1.8	0.34	0.31	0.15	0.34	1.20 D	0.024	0.02 U	0.80	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Total LPAH	1.13	8.63	1.18	1.13	0.43	1.09	6.85	0.25	0.59	19.40	0.27	0.23	0.47	0.52	0.23	0.15	0.12	0.97	1.22
HPAHs										**HPAHs**									
Fluoranthene	0.056	4.9	0.22	0.077	0.075	0.080	5.8 D	0.050	0.033	0.024	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020	0.020 U
Pyrene	0.058	7.6 D	0.22	0.082	0.090	0.079	7.2 D	0.057	0.046	0.055	0.021	0.02 U	0.02	0.024	0.02 U	0.02 U	0.019 U	0.038	0.029
Benz(a)anthracene	0.02 U	2.1 D	0.06	0.02 U	0.022	0.02 U	2.3 D	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Chrysene	0.02 U	2.3 D	0.071	0.02 U	0.023	0.02 U	2.6 D	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Benzo(b)fluoranthene	0.022	1.8 D	0.038	0.02 U	0.02 U	0.02 U	1.90 U	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Benzo(k)fluoranthene	0.02 U	1.7 D	0.065	0.02 U	0.02 U	0.02 U	1.90 U	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Benzo(a)pyrene	0.02 U	2.3 D	0.053	0.02 U	0.036	0.02 U	3.0 D	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Indeno(1,2,3-cd)pyrene	0.02 U	1.5 D	0.041	0.02 U	0.02	0.02 U	1.90 U	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Dibenz(a,h)anthracene	0.02 U	0.20 U	0.20 U	0.02 U	0.02 U	0.02 U	1.90 U	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Benzo(g,h,i)perylene	0.02 U	1.9 D	0.039	0.02 U	0.02 U	0.02 U	1.90 D	0.020 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.019 U	0.020 U	0.020 U
Total HPAHs	0.14	26.10	0.80	0.16	0.27	0.16	22.80	0.11	0.08	0.08	0.021			0.024				0.06	0.03

BRIX002686

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TABLE 6
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-5		MW-5 dup		MW-5		MW-5 dup		MW-6		MW-6		MW-6		MW-6		MW-6		MW-7		MW-7		MW-7		MW-7		MW-7		MW-7	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	02/28/03		02/28/03		01/30/04		01/30/04		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04	
LPAHs																	LPAHs														
Naphthalene	19	D	17	D	2.9		2.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.093		0.019	U	0.083	
Acenaphthylene	0.10		0.40		0.02	U	0.02	U	0.02	U	0.02	U	0.042		0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
Acenaphthene	1.3		1.3		0.6		0.5		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
Dibenzofuran	0.2		0.19		0.081		0.057		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
Fluorene	1.2		1.3		0.48		0.32		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
Phenanthrene	2.3		3.1		1.1		0.8		0.02	U	0.02	U	0.025		0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
Anthracene	0.55		0.93		0.34		0.24		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U
2-Methylnaphthalene	31	D	31	D	1.5		1.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.04		0.019	U	0.041	
Total LPAH	55.64		55.22		7.02		5.02						0.07														0.13				0.08
HPAHs																	HPAHs														
Fluoranthene	3.1	J	6.5	J	1.5		1.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Pyrene	4.3	J	9.1	J	1.8		1.4		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.023		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benz(a)anthracene	0.72	J	2.80	J	0.18		0.14		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Chrysene	0.96	J	3.4	J	0.22		0.17		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(b)fluoranthene	0.44	J	2.2	J	0.046		0.035		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(k)fluoranthene	0.42	J	1.9	J	0.046		0.041		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(a)pyrene	0.65	J	3.6	J	0.061		0.050		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Indeno(1,2,3-cd)pyrene	0.49	J	2.5	J	0.03		0.022		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Dibenz(a,h)anthracene	0.044	J	0.27	J	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(g,h,i)perylene	0.52	J	2.7	J	0.029		0.024		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Total HPAHs	11.64		34.97		3.91		3.00												0.02												

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TABLE 6
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-1 (15-16.5)		MW-2 (10-11.5)		MW-4 (10-11.5)		MW-5 (5-6.5)		MW-5 (15-16.5)		MW-5 (22.5-24)		MW-6 (24.5-26)		MW-7 (25.0-26.5)	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Units	µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg		µg/kg	
Date Sampled	02/11/03		02/11/03		07/17/02		02/11/03		02/11/03		02/11/03		06/19/03		06/19/03	
LPAHs									LPAHs							
Naphthalene	22000	D	26		41		5	U	4.8	U	1800	D	83		5	U
Acenaphthylene	4.8	U	11		11		5	U	4.8	U	38		39		5	U
Acenaphthene	52		11		7.1	U	52		4.8	U	38		50		5	U
Dibenzofuran	14		5	U	7.1	U	11		4.8	U	17		10		5	U
Fluorene	110		10		7.3		53		4.8	U	51		40		5	U
Phenanthrene	240		150		55		440		9.2		490		340		13	
Anthracene	59		48		11		54		5.5		82		88		7	
2-Methylnaphthalene	24000	D	11.0		8.4		5.0	U	4.8	U	910		29		5	U
Total LPAH	46475		267.0		133.7		610.0		14.7		3426		679		50	
HPAHs									HPAHs							
Fluoranthene	120		220		66		78		29		720		500		86	
Pyrene	160		410		83		77		63		850		550		76	
Benz(a)anthracene	54		120		18		9		16		330		290		63	
Chrysene	60		150		29		14		26		560		360		61	
Benzo(b)fluoranthene	32		94		23		12		16		830		190		37	
Benzo(k)fluoranthene	39		95		20		13		18		650		280		54	
Benzo(a)pyrene	36		150		34		14		23		920		440		66	
Indeno(1,2,3-cd)pyrene	30		120		33		21		23		2000	D	330		40	
Dibenz(a,h)anthracene	4.8	U	13		7.1	U	5.0	U	4.8	U	150		56		9	
Benzo(g,h,i)perylene	41		120		49		22		25		2300	D	360		34	
Total HPAHs	577		1492		355		260		239		9310		3356		526	

NOTE: µg/L = micrograms per liter or parts per billion.
µg/kg = micrograms per kilogram or parts per billion.
J = estimated concentration.
U = not detected at or above the indicated method reporting limit.

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Table 7
Lead in Groundwater
Brix Maritime
Portland, Oregon

Location	Matrix	Date Sampled	Total Lead (ppb)		Dissolved Lead (ppb)	
MW-1	Water	02/28/03	288		0.03	
MW-1	Water	07/07/03	1.34		0.05	
MW-1	Water	10/16/03	1.41		0.06	
MW-1	Water	01/30/04	0.05		0.02	U
MW-1	Water	04/29/04	0.11		0.02	U
MW-1 Duplicate	Water	04/29/04	0.11		0.04	
MW-1	Water	07/26/04	2.35		2.12	
MW-1 Duplicate	Water	07/26/04	1.81		1.93	
MW-1	Water	10/29/04	0.27		0.03	
MW-2	Water	02/28/03	57.6		0.04	
MW-2	Water	07/07/03	0.04		0.05	
MW-2	Water	10/16/03	25.9		0.58	
MW-2	Water	01/13/04	0.03		0.02	U
MW-2	Water	04/29/04	0.02	U	0.02	
MW-2	Water	07/26/04	13		3.39	
MW-2	Water	10/29/04	31.9		0.11	
MW-3	Water	07/30/02	0.88		0.13	
MW-3	Water	02/28/03	65.9		0.05	
MW-3	Water	07/07/03	0.36		0.08	
MW-3	Water	10/16/03	0.22		0.05	
MW-3	Water	01/13/04	0.1		0.05	
MW-3	Water	04/29/04	0.05		0.02	
MW-3	Water	07/26/04	0.13		1.00	
MW-3	Water	10/29/04	0.05		0.06	
MW-4	Water	07/29/02	0.36		0.02	U
MW-4	Water	02/28/03	0.70		0.02	U
MW-4	Water	07/07/03	0.78	J	0.02	
MW-4 Duplicate	Water	07/07/03	0.18	J	0.03	
MW-4	Water	10/16/03	0.46		0.03	
MW-4 Duplicate	Water	10/16/03	0.54		0.02	U
MW-4	Water	01/13/04	0.08		0.03	
MW-4	Water	04/29/04	0.47		0.09	
MW-4	Water	07/26/04	0.04		0.03	
MW-4	Water	10/29/04	0.16		0.02	U
MW-4 Duplicate	Water	10/29/04	0.16		0.02	U
MW-5	Water	02/28/03	131		0.06	
MW-5 Duplicate	Water	02/28/03	116		0.03	
MW-5	Water	01/13/04	0.06		0.02	
MW-5 Duplicate	Water	01/13/04	0.08		0.02	
MW-6	Water	07/07/03	0.1		0.02	U
MW-6	Water	10/16/03	0.03		0.07	
MW-6	Water	01/13/04	0.09		0.02	U
MW-6	Water	04/29/04	0.08		0.03	
MW-6	Water	07/26/04	0.51		0.10	
MW-6	Water	10/29/04	0.26		0.03	
MW-7	Water	07/07/03	0.17		0.02	U
MW-7	Water	10/16/03	0.02	U	0.03	
MW-7	Water	01/13/04	0.1		0.02	U
MW-7	Water	04/29/04	0.02	U	0.02	
MW-7	Water	07/26/04	0.18		0.04	
MW-7	Water	10/29/04	0.04		0.03	

Note: U = not detected at method reporting limit. ppb = parts per billion. J = estimated
Water concentrations are in µg/L.

BRIX002689

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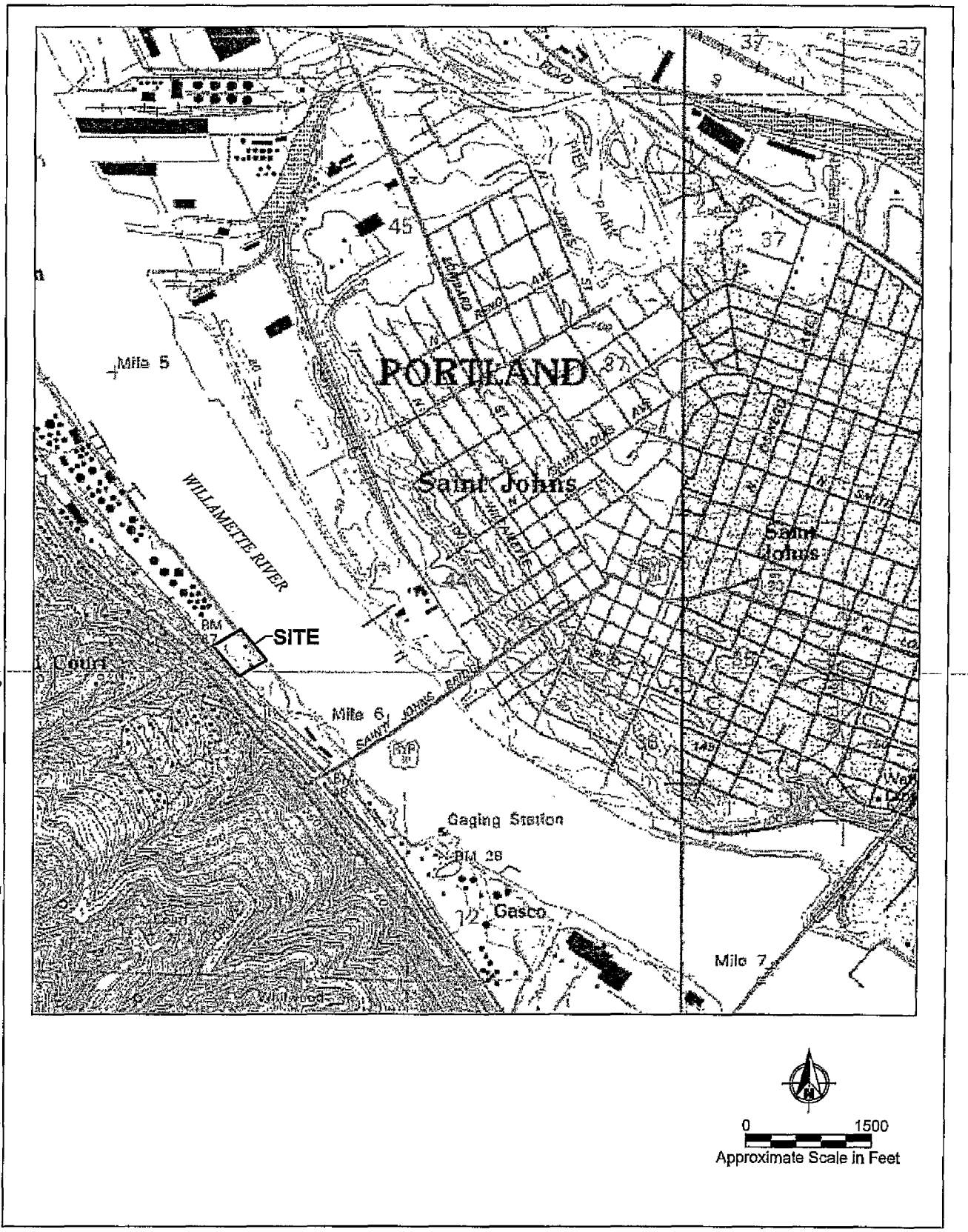
Figures

Confidential Business Information

FIGURES

BRIX002691



Apr 01, 2003 4:09pm cdavidson I:\CAD\Jobs\990056-Brix_Maritime\990056019990056 01-03.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Site Location Map
Brix Maritime
Portland, Oregon

BRIX002692

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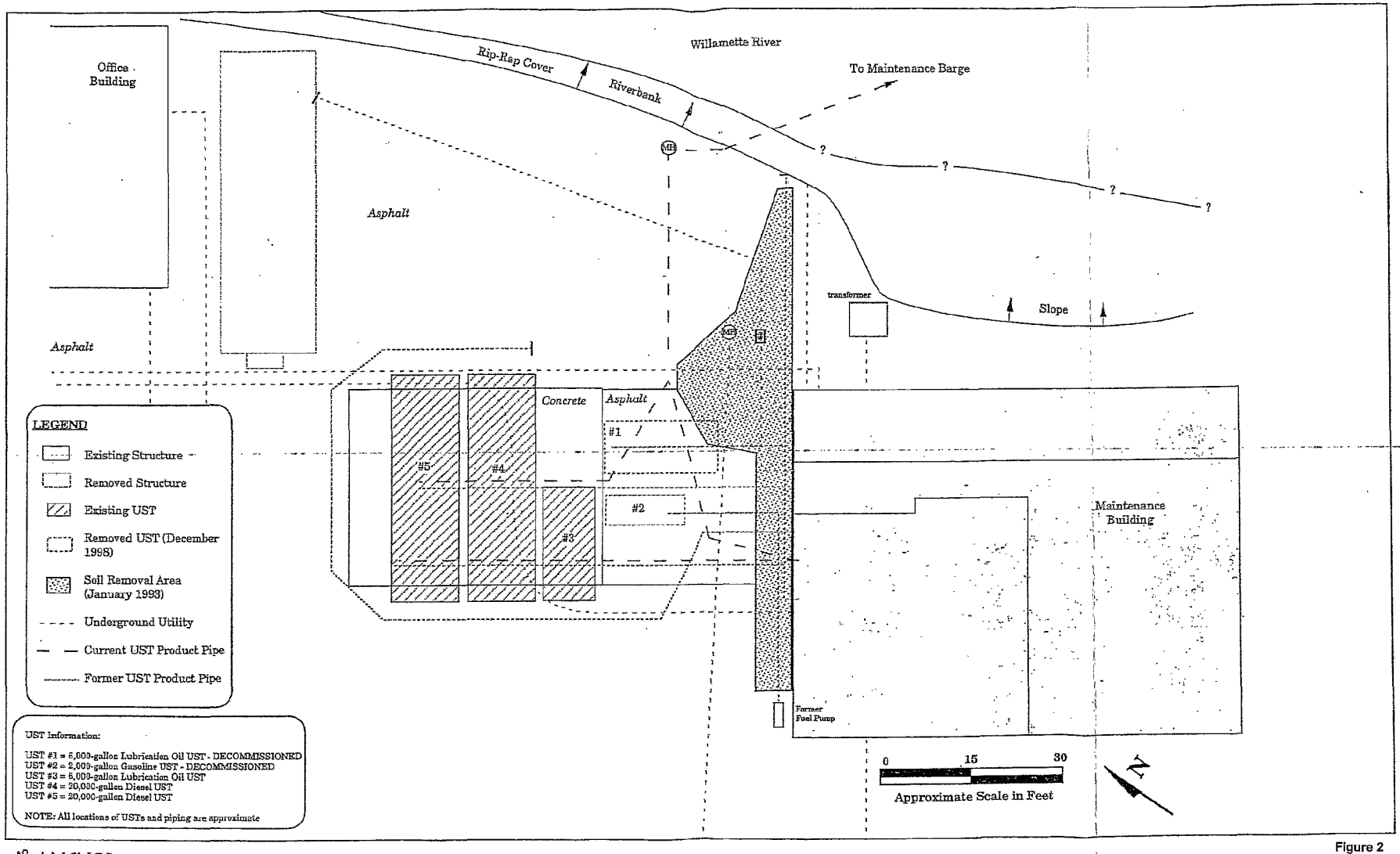

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Underground Storage Tank Area Map

BRIX002693

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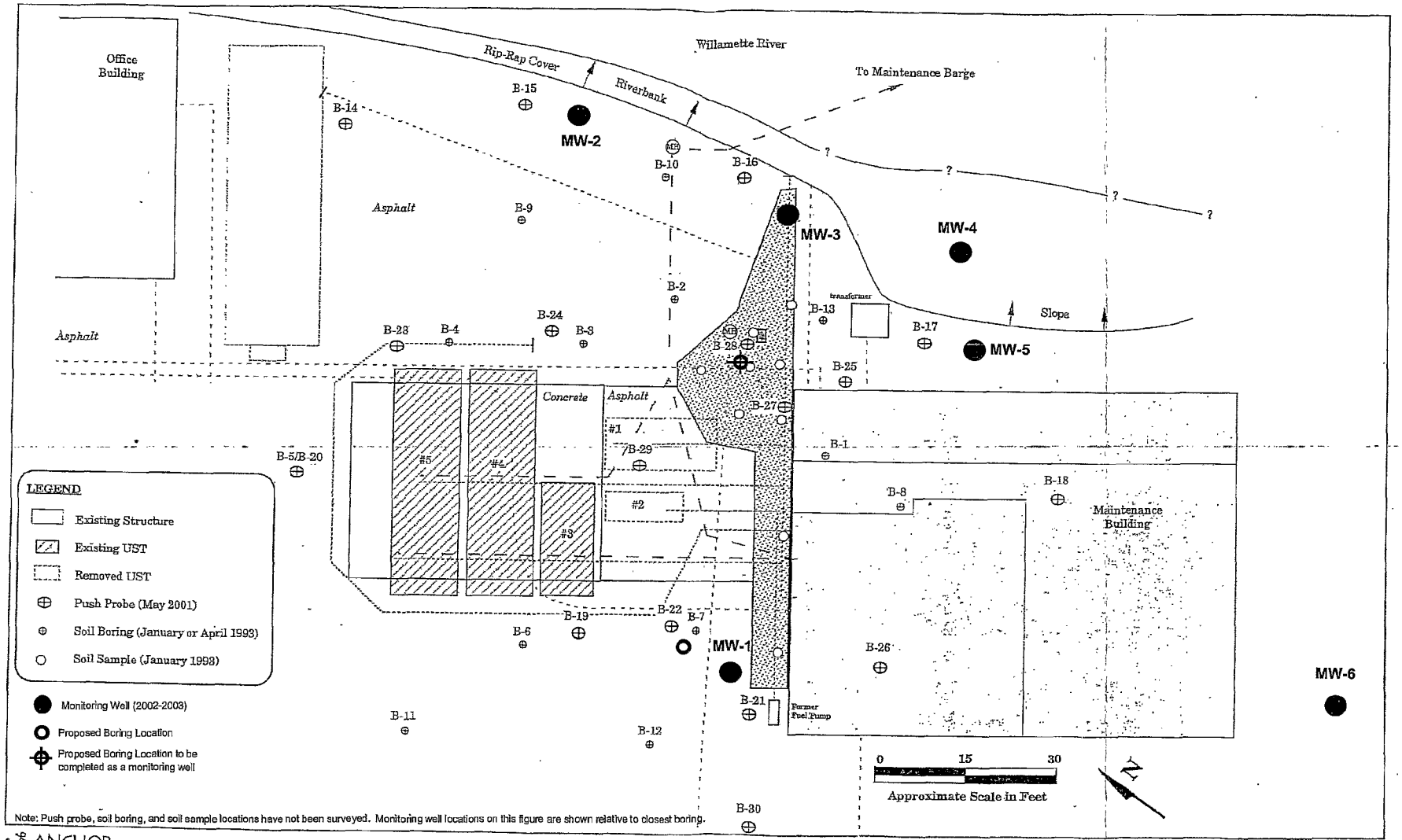

Note: Push probe, soil boring, and soil sample locations have not been surveyed. Monitoring well locations on this figure are shown relative to closest boring.

ANCHOR ENVIRONMENTAL, INC.

Figure 3
Sample Location Map

BRIX002694

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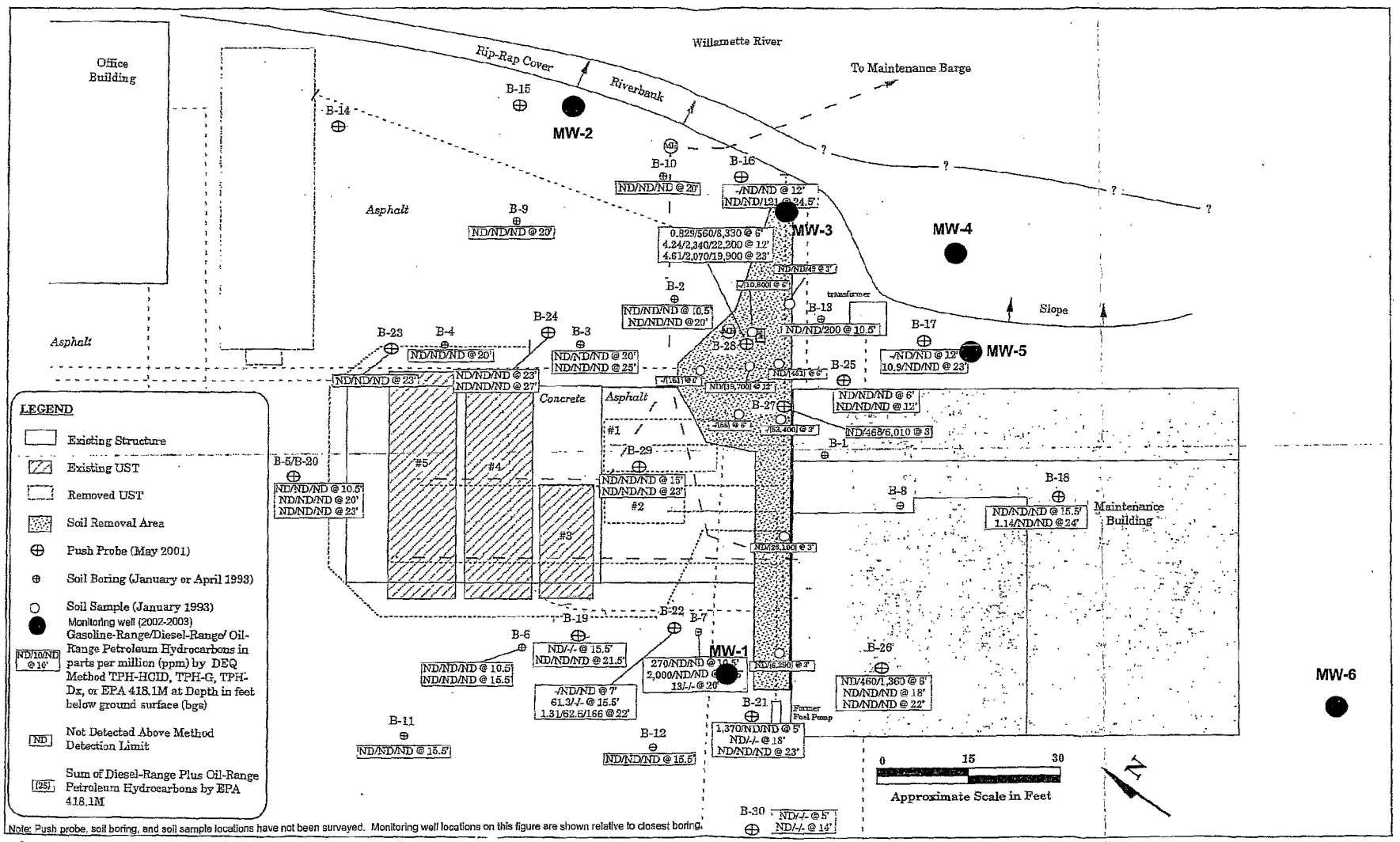

Note: Push probe, soil boring, and soil sample locations have not been surveyed. Monitoring well locations on this figure are shown relative to closest boring.

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 4
Petroleum Hydrocarbons in Soil

BRIX002695

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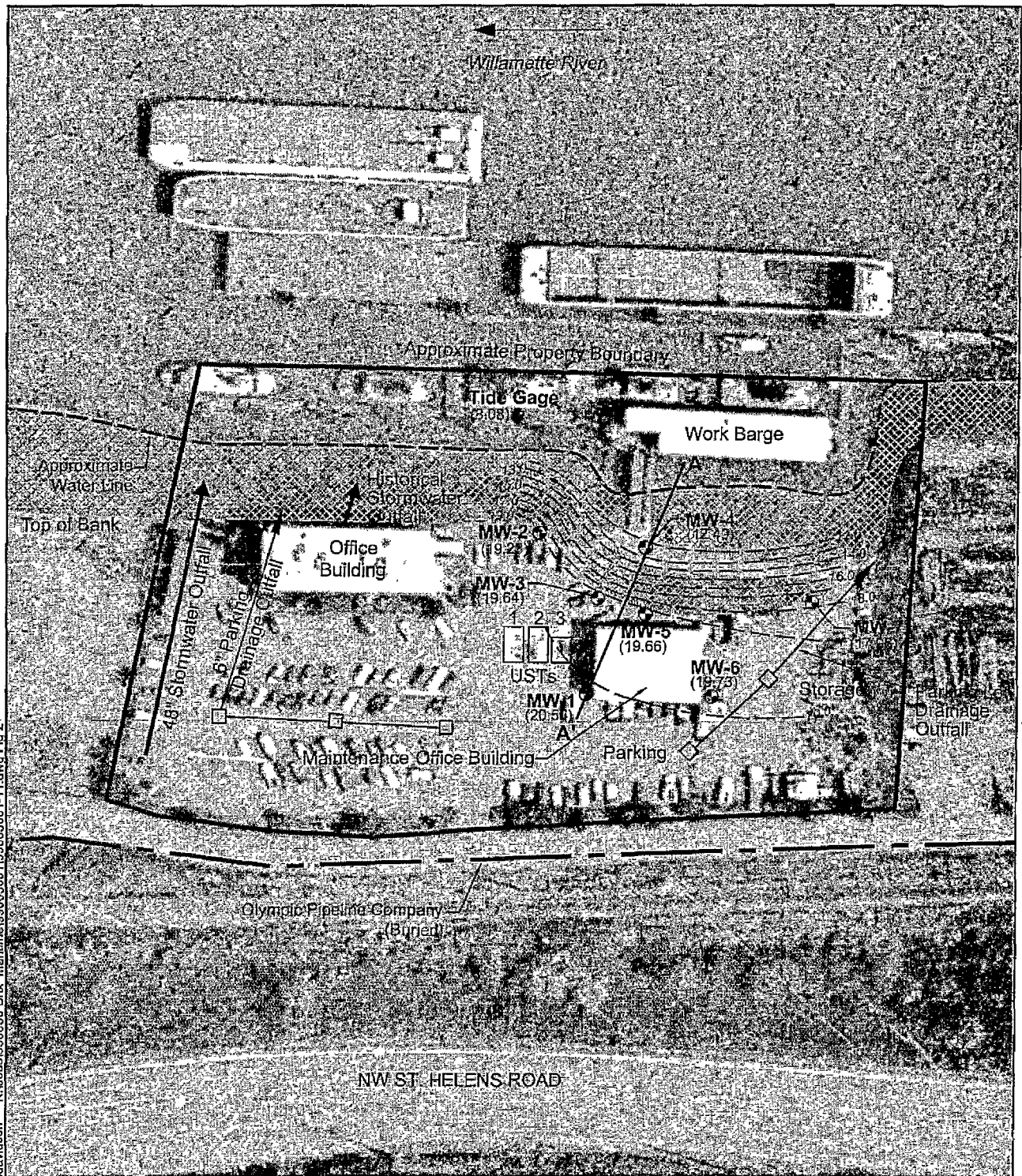

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 5
Well Location and Potentiometric Surface Map (October 29, 2004)
Brix Maritime
Portland, Oregon

BRIX002696

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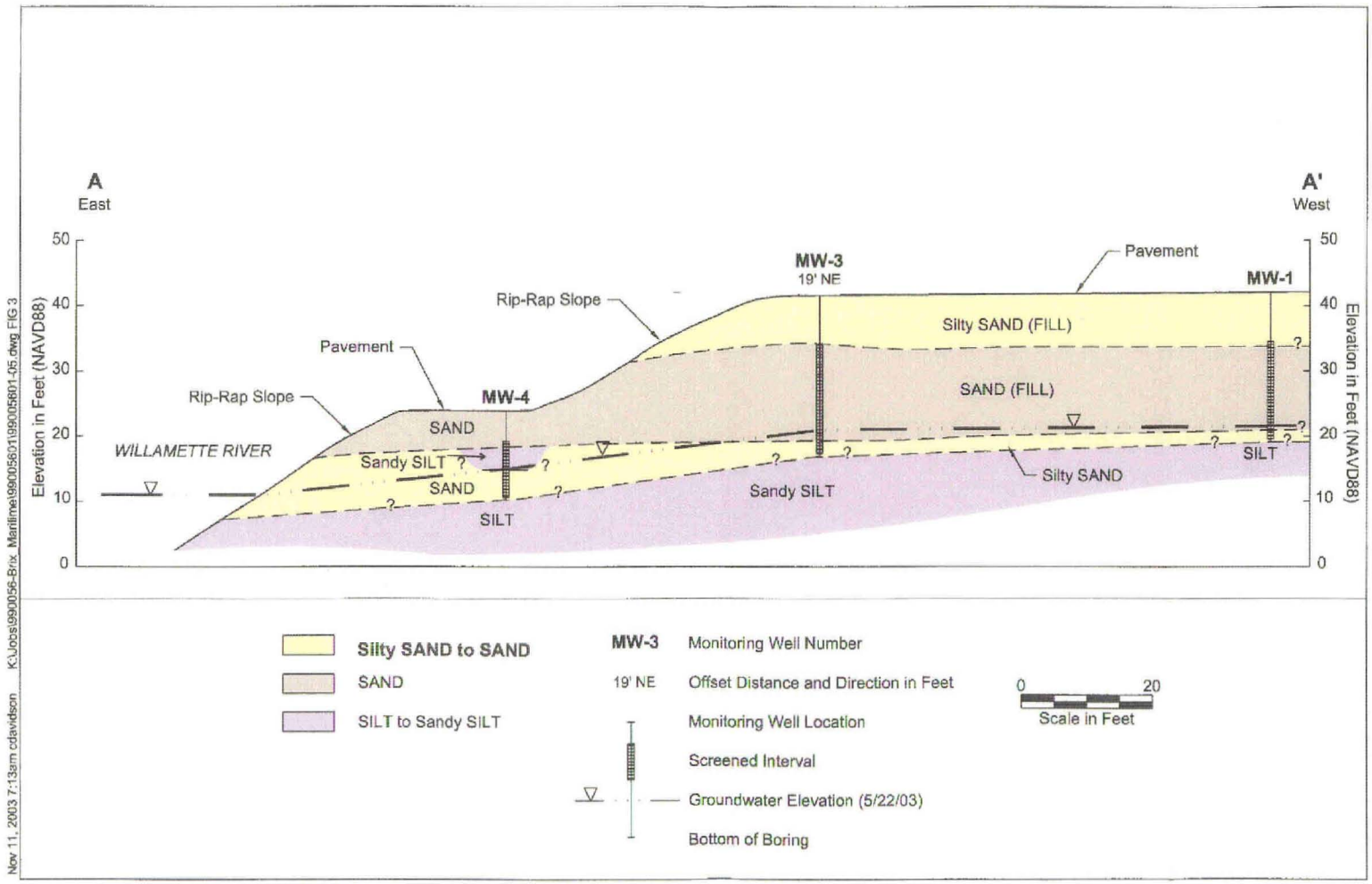

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 6
Geologic Profile A-A'
Brix Maritime
Portland, Oregon

BRIX002697

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Appendix A

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APPENDIX A

GROUNDWATER SAMPLING AND ANALYSIS PLAN

BRIX002699

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APPENDIX A

SAMPLING AND ANALYSIS PLAN

BRIX MARITIME
REMEDIAL INVESTIGATION WORKPLAN

BRIX002700

ANCHOR ENVIRONMENTAL LLC

CONTENTS

LIST FIGURES iii

1 INTRODUCTION 1-1

2 GROUNDWATER MONITORING 2-1
- 2.1 Water Level Measurements 2-1
- 2.2 Groundwater Sampling Procedures 2-1
- 2.3 Nomenclature 2-2
- 2.4 Laboratory and Field Analyses 2-2

3 EQUIPMENT CLEANING AND DECONTAMINATION 3-1

4 WASTE HANDLING 4-1

ATTACHMENT A

TYPICAL FORMS

BRIX002701

1 INTRODUCTION

On behalf of Brix Maritime Company (Brix), Anchor Environmental, LLC (Anchor) has developed a remedial investigation (RI) work plan under a May 8, 2002 Voluntary Agreement for Remedial Investigation and Source Control Measures with the Oregon Department of Environmental Quality (DEQ). The RI work plan consists of groundwater sampling and analysis and hydrogeologic data collection and analysis.

This Sampling and Analysis Plan (SAP) is part of the work plan, and describes methods that will be used for water sampling and laboratory testing.

BRIX002702

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2 GROUNDWATER MONITORING

2.1 Water Level Measurements

Depth-to-water (groundwater elevation) will be measured monthly in Brix's monitoring wells and at the staff gauge. After the monitoring well cap is removed, the monitoring well will be allowed to equilibrate to atmospheric pressures before measuring water levels. Measurements will be taken with an electronic water-level indicator. Levels will be measured to the nearest 0.01 foot from a surveyed notch or mark at the top of the PVC casing or other reference point. Measurements will be recorded immediately on field sheets with the date, time (on a 24-hour clock), reference point, and initials of the person who made the measurements. Water-level measurements taken for a single data set will be obtained for as short a period as practical, to reduce the potential for external factors (e.g., rainfall or barometric pressure) to affect water levels nonuniformly within the study area.

2.2 Groundwater Sampling Procedures

Sample collection and handling will be consistent with procedures described below. The monitoring wells will be sampled as follows:

- Depth-to-water will be measured with an electronic wireline sounder and recorded on a field data sheet (sample form is shown in Attachment A).
- At least 3 casing volumes will be purged from the top of the water column in the well with a bailer or peristaltic pump. The peristaltic pump, using low-flow procedures, is used to keep turbidity down during purging and sample collection.
- After each well casing volume is removed, the temperature, pH, and specific conductance will be measured with portable meters and recorded on a field data sheet. Specific conductance and pH must stabilize to within 10 percent of the previous reading before a sample is collected.
- Samples will be collected from the middle of the well screen with a single-use polyethylene bailer and transferred from the bailer to laboratory-prepared containers or samples will be collected from the discharge end of the peristaltic

BRIX002703

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pump tubing. Bailers will be disposed of after each sampling. Other equipment used for sample collection will be decontaminated both before it is used and after each sample is collected.

- Field activities and sampling data (i.e., well-purging data, equipment used, sample containers, preservatives used) will be documented in the field. Deviations from the general procedures will be noted on field documentation records and brought to the attention of the project manager.

- Samples will be labeled, preserved, and shipped to the analytical laboratory under chain-of-custody procedures.

- Quality control samples will include at least one duplicate sample for every ten samples, and one equipment blank for every ten samples if appropriate.

2.3 Nomenclature

Water samples will be blind-labeled. Each sample will be designated by the abbreviation "BM" followed by the date of collection and a unique identification number, which will be assigned in numerical order during a single monitoring period regardless of collection date. For example, a sample labeled BM-112403-1 indicates that the sample was obtained at the Brix site on November 24, 2003, and that it was the first one obtained for that sampling event. A table will be generated which indicates the blind label and the associated sample location.

2.4 Laboratory and Field Analyses

Groundwater will be sampled according to the schedule presented in the groundwater monitoring program as described in Section 5 of the RI workplan. The samples will be submitted to an analytical laboratory for analysis of volatile organic compounds using USEPA Method 8260B, polycyclic aromatic hydrocarbons by USEPA Method 8270-SIM, total petroleum hydrocarbons by NWTPH-Dx and NWTPH-Gx, and total and dissolved lead by USEPA method 200.8. Normal turnaround time will be requested for groundwater sample results.

BRIX002704

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3 EQUIPMENT CLEANING AND DECONTAMINATION

Sampling equipment will be decontaminated in the following sequence:

- Tap or distilled water rinse.
- Nonphosphatic detergent wash, consisting of a dilute mixture of Liquinox and tap or distilled water.
- Distilled water rinse.
- Methanol rinse.
- Final distilled water rinse.

The electric sounder used to measure water levels will be decontaminated before its use in each well. Decontamination will involve a nonphosphatic detergent wash, a distilled water rinse, a methanol rinse, and a final distilled water rinse.

BRIX002705

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4 WASTE HANDLING

Solid and liquid wastes produced during sampling will be contained for proper disposal by the following methods:

- Non-contaminated waste, such as bags, washed gloves, and material scrap will be kept separate from other waste. This material will be bagged or otherwise contained and disposed of in on-site dumpsters.
- Solid material produced from equipment decontamination will be periodically removed from the decon area, containerized, and secured on site.
- Potentially impacted water, decontamination rinsate, and discarded samples will be containerized and secured on site.
- Purge water from monitoring wells is contained for off site disposal by a third-party contractor.
- Barrels used for storage of potentially contaminated materials, such as drill cuttings, purge water, or decontamination rinsate, will be labeled with:
  - date the barrel was filled
  - name of the facility
  - contact person at Brix
  - borehole/piezometer number
  - borehole depth
  - type of material contained (e.g., soil, water, clothing, etc.)

BRIX002706

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ATTACHMENT A

TYPICAL FORMS

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FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime WELL ID:

SITE ADDRESS: Portland, Oregon BLIND ID:

DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
/ /	:	.	.	.	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	/ /	:		3	40 ml	HCl	YES	NO		
Amber Glass	/ /	:			250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease)
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA

Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3		.	.		.		.	
2		.	.		.		.	
1		.	.		.		.	
0		0.00	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: _____ _____
(PRINTED NAME) (SIGNATURE)

BRIX002708

Depth to Water Measurements
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.			Site: Brix Maritime	
			Project No. : 990056-01	
Well	Date (MM/DD/YY)	Time (2400)	DTW (feet)	Comments
MW-1				
MW-2				
MW-3				
MW-4				
MW-5				
MW-6				
MW-7				
River Gauge				
Note: DTW = Depth to Water; DTP = Depth to Product				

Appendix B

BRIX002710

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APPENDIX B

HEALTH AND SAFETY PLAN

BRIX002711

APPENDIX B

ANCHOR ENVIRONMENTAL, L.L.C.

SITE SPECIFIC HEALTH & SAFETY PLAN

Note: This Site Specific Health & Safety Plan must be re-evaluated and updated annually or when site conditions or scope of work changes.

Brix Maritime

Location: Portland, Oregon **Date: November 14, 2003**
Project Manager: John Edwards **Project: 990056-01**

SITE DESCRIPTION: The Site consists of approximately 3.7 acres with two primary structures: an office building and a maintenance building. A covered "work barge" associated with the property is moored on the Willamette River. The topography at the Site is generally level with elevations of approximately 40 feet above mean sea level (msl) for a majority of the site, sloping down to approximately 10 feet msl at the river edge, along the northeast property boundary. The Site is entirely developed and covered with asphalt, concrete, or buildings, with the exception of a steep riverbank sloping down to the Willamette River that is protected by rip-rap.

SCOPE OF WORK

Anchor personnel will be responsible for groundwater monitoring.

Note: As the scope of work changes the HASP will be modified to address any new hazards.

EMPLOYEE AND CONTRACTOR RESPONSIBILITIES

Each person is responsible for his/her own health and safety, for completing tasks in a safe manner and for reporting any unsafe acts or conditions to his/her supervisor and the Project Manager (PM). All persons on-site are responsible for continuous adherence to health and safety procedures during the performance of any project work. In no case may work be performed in a manner which conflicts with the intent of, or the inherent safety precautions expressed in, this HASP. After due warning, persons who violate procedure and work rules may be dismissed from the site, terminated, or have their contract revoked. Blatant disregard or repeated infractions of health and safety policies are grounds for disciplinary action up to, and including, dismissal, and/or removal from the project.

All Anchor and subcontractor personnel are required to read and acknowledge their understanding of this HASP. All project personnel are expected to abide by the requirements of this HASP and cooperate with project management and safety representatives in ensuring a safe

BRIX002712

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and healthful work site. Site personnel are required to immediately report any of the following to the PM:

- Accidents and injuries, no matter how minor;
- Unexpected or uncontrolled release of chemical substances;
- Any sign or symptoms of chemical exposure;
- Any unsafe or malfunctioning equipment; and
- Any changes in site conditions which may affect the health and safety of project personnel.

TRAINING AND MEDICAL SURVEILLANCE REQUIREMENTS

All personnel conducting site work shall have completed at least 24 hours of classroom-style health and safety training and 1 day of on-site training, as required by OSHA 29 CFR 1910.120. In addition, the Site Supervisor or PM shall have received an additional 8 hours of supervisory training. Anchor employees shall also be current in their annual refresher training and enrolled in a medical monitoring program in accordance with 29 CFR 1910.120(f).

SITE HEALTH AND SAFETY INFORMATION:

Potential Chemical Hazards

- Chemical hazards include volatile organic compounds (VOCs), Total Petroleum Hydrocarbons (TPHs), and polynuclear aromatic compounds (PAHs).

Exposure to chemical hazards is expected to be limited to incidental contact with groundwater during sampling activities.

TABLE 1 - POTENTIAL SITE CONTAMINANTS

Potential Site Contaminants	Maximum Concentration Detected in Groundwater at Site (µg/L)
VOCs:	
Benzene	32
Ethylbenzene	270
Total Xylenes	470
Toluene	14
PAHs:	
Fluoranthene	6.5
Pyrene	13.0
Benz(a)anthracene	2.8
Chrysene	3.4
Benzo(b)fluoranthene	2.2
Benzo(k)fluoranthene	1.9
Benzo(a)pyrene	3.6
Indeno(1,2,3-cd)pyrene	2.5
Dibenz(a,h)anthracene	0.3
Benzo(g,h,i)perylene	
TPH:	
Deisel	3,400
Heavy Oil	8,100
Gasoline	8,500

Physical Hazards

The physical hazards associated with the project scope primarily involve exposure to drilling operations, heavy equipment, overhead utilities, noise, slip/trip/fall hazards, and temperature stress. Safety procedures and guidelines for these hazards are attached to this plan.

SITE PERSONNEL PROTECTION REQUIREMENTS

As site activities progress, levels of PPE are subject to change or to modification. Upgrading of PPE can occur when action levels are exceeded or whenever the need arises to protect the safety

and health of site personnel. Levels of PPE will not be downgraded without prior approval from the Project Health and Safety Manager.

The initial level for all site activities is Level D.

TABLE 2 – PROTECTION LEVELS

ACTIVITY	LEVEL OF PROTECTION	EQUIPMENT REQUIREMENTS
General Site Activities	D	Work clothing, hard hat, steel-toed work boots, and eye protection, Wear traffic vests if the potential exists for vehicular traffic is in the area.

DECONTAMINATION:

Procedures for decontamination must be followed to prevent the spread of contamination and to eliminate the potential for chemical exposure.

1. Equipment - All equipment must be decontaminated or discarded upon exit from the exclusion zone.

2. Personnel - Decontamination will take place prior to exiting the exclusion zone.

LEVEL D Decontamination - Wash and rinse gloves (if any) and remove. Wash hands and face.
LEVEL C Decontamination -Wash and rinse outer gloves, boots and suit, and air-purifying respirator; wash respirator; remove inner gloves (if any) and dispose. Wash hands and face.
Handle all clothing inside out when possible

Emergency Response

Emergencies can range from minor to serious conditions. Various procedures for responding to site emergencies are listed in this section. The Site Manager, Project Manager or the site Safety Officer is responsible for contacting local emergency services in emergency situations. Various individual site characteristics will determine preliminary action to be taken to assure that these emergency procedures are successfully implemented in the event of an emergency.

Accident, Injury, and Illness Reporting and Investigation

Anchor employees are required to immediately report to their direct supervisor all occupational injuries, illnesses, accidents, and near miss incidents having the potential for injury. Any

BRIX002715

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supervisor (but preferably the supervisor directly responsible for the involved employees) with first-hand knowledge of an incident is required to:

- Immediately arrange for appropriate medical attention and notify the responsible health and safety representative.

Injury and/or incident reports, including those involving motor vehicles, must be submitted to the appropriate health and safety representative within one business day of the incident.

Sub-contractor employees shall notify their supervisors and the associated Anchor Project Manager of any incidents or injuries while engaged in an Anchor project.

Emergency Procedures for Contaminated Personnel

Whenever possible, personnel should be decontaminated in the contamination reduction zone before administering first aid.

Skin Contact — Remove contaminated clothing, wash immediately with water, use soap, if available.

Inhalation — Remove victim from contaminated atmosphere. Remove any respiratory protection equipment. Initiate artificial respiration, if necessary. Transport to the hospital.

Ingestion — Remove from contaminated atmosphere. Do not induce vomiting if victim is unconscious. Also never induce vomiting when acids, alkalis, or petroleum products are suspected. Transport to the hospital, if necessary.

Emergency Equipment/First Aid

The emergency equipment to be located on site either in site trailers or company vehicles includes a 10 unit first aid kit, emergency alarm (i.e., air horn), emergency eyewash, an ABC fire extinguisher, potable water, anti-bacterial soap, and telephone/walkie-talkies.

Site Evacuation

In the event of an emergency situation such as fire, explosion, significant release of toxic gases, etc., an air horn or other appropriate device will be sounded for approximately 10 seconds indicating the initiation of evacuation procedures. Personnel in the field will be notified through radio communications to evacuate the area. All personnel in both the restricted and non-restricted area will evacuate and assemble near the Support Zone or other safe area as identified by the SSO prior to the beginning of field operations. The location shall be upwind of the site, if possible.

Spill and Release Contingencies

If a spill has occurred, the first step is controlling the spread of contamination if possible. The site Safety Officer will immediately contact site management to inform them of the spill and activate emergency spill procedures.

BRIX002717

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EMERGENCY CONTACT INFORMATION

EMERGENCY INFORMATION		
Contact	**Phone Number**	**Hospital Directions**
Local Police	911	**Hospital:** Legacy Good Samaratin Hospital 1015 NW 22nd Ave Portland, OR
Fire Department	911	
Ambulance	911	
Local Hospital:	(503) 413-7119	**Hospital Directions and Route Maps on next page.**
Health and Safety Coordinator, David Templeton Work Cell	 (206) 287-9131 (206) 910-4279	
Project Manager, John Edwards Work Cell	 (503) 670-1108 (503) 816-6595	
Site Contact Linda Brown	(503) 978-6546	
Client Contact Frank Williamson	(206) 281-3891	

HOSPITAL DIRECTIONS AND ROUTE MAPS

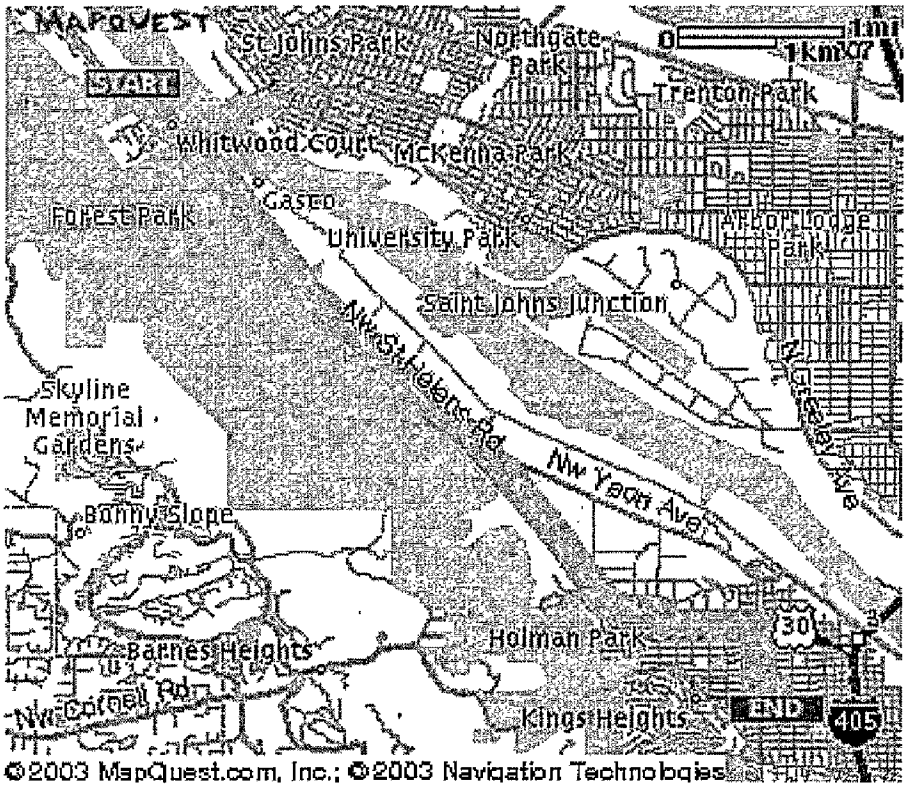
Starting From: (START on map).

Arriving At: (END on map).

Distance: 6.02 miles **Approximate Travel Time:** 12 minutes

Driving Directions:

- Head SE on NW ST HELENS ROAD.
- Turn SLIGHT RIGHT onto NW WARD WAY.
- NW WARD WAY becomes NW VAUGHN ST.
- Turn RIGHT onto NW 23RD AVE.
- Turn LEFT onto NW NORTHRUP ST.
- Turn Right onto NW 22ND AVE.



health and safety plan
sign-off form

PROJECT: BRIX MARITIME COMPANY
PROJECT NO. 990056-01

The Project Manager shall sign this form after she/he has conducted a pre-entry briefing.

Each Anchor employee, and subcontractor, conducting field work shall sign this form after the pre-entry briefing is completed and prior to commencing work on site. A copy of this signed form shall be kept at the site, and the original sent to the project manager, for inclusion into the project file.

Site Personnel Sign-off

☐ I have received a copy of the Site-Specific Health and Safety Plan.

☐ I have read the Plan and will comply with the provisions contained therein.

☐ I have attended a pre-entry briefing outlining the specific health and safety provisions on this site.

Name: _____ Date: _____
_____ Date: _____
_____ Date: _____
_____ Date: _____
_____ Date: _____
_____ Date: _____

Anchor Project Manager

☐ A pre-entry briefing has been conducted by myself on _____.

☐ I deferred the pre-entry briefing responsibility to the Health and Safety Officer.

Name: _____ Date: _____

SAFETY PRACTICES FOR FIELD PERSONNEL

Field operations for this project shall be conducted in accordance with the minimum safety practices described below required for all Anchor employees.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increase the probability of hand-to-mouth transfer and ingestion of materials is prohibited in any area where the possibility of contamination exists.

- Hands must be thoroughly washed when leaving a contaminated or suspected contaminated area before eating, drinking, or any other activities.

- Contaminated protective equipment shall not be removed from the work area until it has been properly decontaminated or containerized on site.

- Avoid activities which may cause dust. Removal of materials from protective clothing or equipment by blowing, shaking, or any means which may disperse materials into the air is prohibited.

- Field personnel must use the "buddy system" when wearing any respiratory protective devices. Communications between members must be maintained at all times. Emergency communications shall be prearranged in case unexpected situations arise. Visual contact must be maintained between pairs on site, and team members should stay close enough to assist each other in the event of an emergency.

- Personnel should be cautioned to inform each other of subjective symptoms of chemical exposure such as headache, dizziness, nausea, and irritation of the respiratory tract.

- No excessive facial hair which interferes with a satisfactory fit of the facepiece-to-face seal will be allowed on personnel required to wear respiratory protective equipment.

- The selection, use, and maintenance of respiratory protective equipment shall meet the requirements of established Anchor procedures, recognized consensus standards (AIHA, ANSI, NIOSH), and shall comply with the requirements set forth in 29 CFR 1910.134.

- At sites with known or suspected contamination, appropriate work areas for field personnel support, contaminant reduction, and exclusion will be designated and maintained.

- Anchor field personnel are to be thoroughly briefed on the anticipated hazards, equipment requirements, safety practices, emergency procedures, and communications methods, both initially and in daily briefings.

BRIX002721

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SAFETY PRACTICES FOR FIELD PERSONNEL (continued)

- All Anchor field vehicles shall contain a first aid kit and multipurpose portable fire extinguisher.
- All field personnel will, whenever possible, remain upwind of drilling rigs, open excavations, boreholes, etc.
- Subsurface work shall not be performed at any location until the area has been cleared by a utility locator firm to be free of underground utilities or other obstructions.
- Field personnel are specifically prohibited from entering into excavations, trenches, or other confined spaces deeper than 4 feet. Unattended boreholes must be properly covered or otherwise protected.

DRILLING SAFETY

The following practices shall be adhered to by drilling personnel:

- Equipment should be inspected daily by the operator to ensure that there are no operational problems.
- Before leaving the controls, shift the transmission controlling the rotary drive into neutral and place the feed level in neutral. Before leaving the vicinity of the drill, shut down the drill engine.
- Do not drive the drill rig with the mast in the raised position.
- Before raising the mast, check for overhead obstructions.
- Before the mast of a drill rig is raised, the drill rig must first be leveled and stabilized with leveling jacks and/or cribbing. Re-level the drill rig if it settles after initial set up. Lower the mast only when the leveling jacks are down, and do not raise the leveling jack pads until the mast is lowered completely.
- Employees involved in the operation shall not wear any loose-fitting clothing which has the potential to caught in moving machinery.
- During freezing weather, do not touch any metal parts of the drill rig with exposed flesh. Freezing of moist skin to metal can occur almost instantaneously.
- Adequately cover or protect all unattended boreholes to prevent drill rig personnel or site visitors from stepping or falling into the borehole
- Personnel shall wear steel-toed shoes, safety glasses, hearing protection and hard hats during drilling operations.

BRIX002722

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- The area shall be roped off, marked or posted, to keep the area clear of pedestrian traffic or spectators.
- All personnel should be instructed in the use of the emergency kill switch on the drill rig.

HAND TOOLS

Use of hand tools may expose workers to cuts, lacerations or puncture wounds if adequate hand protection is not worn or tools are improperly used or stored. Damaged hand tools may also expose employees to injuries from shattered tools and flying debris.

The following safe work practices apply to the use of hand tools:

- Only use a tool for its designed use.
- Do not use damaged tools.
- Driving faces of hammers, chisels, drift pins, bars, and similar tools must be inspected to eliminate mushroomed heads, broken faces and other defects.
- Tools must be returned to their proper storage place.
- Sharp tools must not be carried in pockets.
- Wood handles must be sound and securely wedged or fastened to the tool. Tape must not be used to cover defects such as cracks.
- When hand tools are being used overhead, those working or standing below must be notified.
- Pipe wrenches must be inspected regularly. Replace the heel and jaw sections if found to be defective or worn out.
- Pipe wrenches must not be used to bend, raise or lift pipe.
- Always wear safety glasses to protect the eyes.

UTILITY CLEARANCES

- Elevated superstructures (e.g., drill rig, backhoe, scaffolding, ladders, cranes) shall remain a distance of 10 feet away from utility lines and 20 feet away from power lines. Distance from utility lines may be adjusted by the SSO depending on actual voltage of the lines.
- During all intrusive activities (e.g., drilling, excavating, probing), the locator line service should be contacted to mark underground lines before any work is started.

BRIX002723

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- Personnel involved in intrusive work shall determine the minimum distance from marked utilities which work can be conducted with the assistance of the locator line service.

HEAVY EQUIPMENT OPERATIONS

Working around heavy equipment can be dangerous because of the size and power of the equipment, the limited operator field of vision and the noise levels that can be produced by the equipment. Heavy equipment to be utilized at the site shall include a variety of backhoes, dozers, track loaders, and off-road trucks.

The following practices shall be followed by operators when using heavy equipment:

- Equipment should be inspected daily by the operator to ensure that the equipment is in safe operating condition.
- When not in use, hydraulic components should be left in down or "dead" position.
- Roll-over protection shall be provided on hilly sites.
- No riding on vehicles or equipment except in fixed seats.
- Seat belts should be worn at all times.
- Backup alarms, automatically activated and loud enough to be heard above background noise are required on all heavy equipment.
- Parking brakes should always be applied on parked equipment.
- Equipment should never be operated closer than 10 feet from utility lines.
- Windshields must be maintained clean and free of visual obstructions.

To ensure the safety of Anchor personnel in the work area, the following safety procedures regarding heavy equipment must be reviewed prior to and followed during work activities:

- Ensure that equipment operators are trained and/or experienced in the operation of the specific equipment.
- Personnel should never approach a piece of heavy equipment without the operators acknowledgment and stoppage of work or yielding to the employee.
- Never walk under the load of a bucket or stand beside an opening truck bed.
- Maintain visual contact with the operator when in close proximity to the heavy equipment.

- Wear hearing protection while on or around heavy equipment, when normal conversation cannot be heard above work operations.

- Steel-toed shoes, safety glasses, and a hard hat shall be worn for all work conducted near heavy equipment.

FACILITY/TRAFFIC

Gas station sites and other work sites with high traffic flow and limited visibility present a significant hazard to Anchor field staff. Since this is an area of extremely high risk, it is important that the following H&S policies and procedures are followed. While visual devices are generally effective, the use of a structural barrier (such as a company vehicle) is a more sure method of protection should a motorist fail to see an employee. Barriers shall be used on work sites when it is possible to do so without adversely affecting the project work or other client considerations. Employees are reminded to maintain a high degree of awareness of moving vehicles on the site. The following guidelines concerning traffic warning devices should be followed when working in traffic flow areas:

- Meet with the Facility Manger or Client Contact at the start of fieldwork to discuss equipment and personnel access to the work area

- Obtain any facility-related emergency information, i.e. facility alarms, evacuation areas, and special hazards

- Fluorescent orange vests shall be worn by employees when working around traffic flow areas. Ensure that there is a clear line of sight between approaching traffic and the work area.

- Orange cones, at least 28 inches high, are typically used to direct traffic flow on roadways, but are not always appropriate as a flagging device on Anchor project sites. Due to the low height, a cone can be easily overlooked, especially when a motorist is backing up. Cones should be stacked to at least 5-feet high with flags attached at the top to be more visible. Alternatively, a fluorescent orange post and base device with flagging at the top may be used. One option often used with cones is to place an object on the cones that will make noise if struck by a car.

- When two or more Anchor employees are together on a site and a site specific activity has a high risk of impact from vehicular traffic, one employee shall act as a look-out for the other employee performing the specific work activity.

NOISE

Excessive noise is hazardous not only for it's potential to damage hearing, but also it's potential to disrupt communications and instructions.

BRIX002725

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- All employees will have access to disposal ear plugs with a Noise Reduction Rating of not less than 30

- Ear plugs must be worn in any environment where workers must raise their voices to be heard while standing at a distance of three feet or less

- Ear plugs must be worn by any personnel operating concrete cutting or sawing equipment.

POWER TOOLS

- All power tools must be in good condition and free of any damage

- All power tools must be double insulated or equipped with a grounding plug. Grounding features (three-prong plugs) must not be defeated by use of adapters unless the adapter is appropriately grounded.

- All power cords and extension cords must be in good condition with undamaged insulation. Plugs and boots must also be in good condition and undamaged.

- Power tools must be unplugged whenever serviced or when not being used.

BACK INJURY PREVENTION:

LIFTING, CARRYING, PUSHING AND PULLING, SHOVELING, AND DRUM HANDLING TECHNIQUES

Back injuries on the job are costing employers in the U.S.A. approximately 6.5 billion annually. Eight out of ten people will suffer a back injury during their life time, either on or off the job. Many of these injuries could be prevented by adhering to the following proper lifting concepts:

- Keep the load close to the body. Arrange tasks so that the load will be close to the body and at a proper and safe height which will not require bending or stooping. Tighten stomach muscles to offset the force of the load.

- Keep the load within reach. Try to arrange tasks to eliminate handling loads below 20 inches or above 50 inches. Try to keep the lifting zone between your shoulders and the knuckles.

- Control the load size. Loads which extend beyond 16 inches in front of the body put excessive lifting stress on the body and should be handled by two people or lifting aids should be employed.

- Maintain proper alignment of body. The task should be designed so that twisting of the body is minimized or eliminated. Twisting while carrying a load increases injury potential significantly.

BRIX002726

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- Lift with your legs. Your leg muscles are the strongest in your body. Always bend your knees and use your leg muscles when you go toward the floor whether you have a load or not. Do not bend at your waist if it can be avoided.

- Balance your load if possible. An evenly balanced load is much easier and much safer to handle than an off balance load. Grasp the object at opposite corners if possible.

- Avoid excessive weights if possible. Mechanical aids should be used for loads which are greater than those which can be handled safely by one person.

- Lift in a comfortable manner. Workers should use a lifting position that feels comfortable for them, however, they should bend their knees and keep their back as straight as possible when performing a lift. Your feet should be shoulder width apart in order to get the best footing possible.

- Lift smoothly and gradually. Quick jerking lifting motions increase sudden and abrupt stress to the back. This type of aggressive movement can affect the discs, muscles, and the ligaments. A well controlled and smooth lifting motion will reduce the likelihood of injury.

- Most importantly, think before lifting.

In addition to these lifting techniques it is also important to implement the proper carrying techniques as follows:

- Eliminate carrying where possible. If possible, conveyors, trucks, small loaders, and other mechanical equipment should be considered. Carts and dollies should be employed when surface conditions permit. Surface conditions can be altered with plywood or other materials.

- Use two-handed carries where possible. Using a two handed carry method helps to balance the load even out the body stress.

- Keep the load close to the body. Keeping the load in close and lifting in as erect a position as possible helps to reduce the stress to the lower spine.

- Keep your arms straight. Less stress is created on the muscles and ligaments when your arms are kept straight during a carry. Contraction of the muscles will quickly increase fatigue and the possibility of an accident.

- Balance the load. A balanced load is similar to the two handed carry. The load is evenly distributed across the body and the stress is also evenly shared.

- Avoid carrying any material on stairs. Carrying on stairs will obstruct your vision and increase the likelihood of slip and fall. The bumping of the load on your leg as you climb or descend increase the chance of an injury.

BRIX002727

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- Reduce the weight if possible. When the weight of the lifts is high look for ways to reduce the weight. Use smaller containers, put less in containers, indicate fill levels, and locate lighter containers.

- Use handles. Make the task easier by adding handles where possible. If numerous repetitions are required, it may be possible to design a handled device to accommodate a two handed carrying task.

In addition to these lifting and carrying techniques it is also important to consider pushing and pulling tasks:

- Eliminate manual pushing and pulling where possible. Look at those tasks that are repeated often to see if they can be modified or altered in a way that reduces pushing and pulling. consider mechanical aids, powered conveyors, gravity slides, and chutes.

- Reduce the necessary force. Force required is a function of weight, gravity and friction. Look for opportunities to reduce these factors. Improved bearings, larger wheels, reduced weight, improved rolling surfaces, lubrication, and improved regular maintenance are all opportunities for reducing work force and stress.

- Push load instead of pulling. Studies indicate that pushing loads rather than pulling them is the safest approach. There is less stress on muscles, joints, and ligaments. As in lifting, pushing pressure should be applied firmly, but gradually. Avoid aggressive impacts.

There are also a number of guidelines to follow when addressing tasks that involve shoveling operations:

- Choose correct shovel type. The shovel should be appropriate for the material and the project. Light, loose, and fluffy materials should be handled with a scoop type shovel. A smaller shovel like a spade should be used for more dense material.

- Use a long-handled shovel. A long handled shovel should be provided to avoid stooping during shoveling activities. Take the time to obtain the correct tool for the job.

- Maintain load to 10 pounds per shovelful. The general rule of thumb for the average work situation is 10 pounds per shovel load. Work performed is a function of repetition and load. Increasing shovel loads will increase fatigue as repetitions increase and it will also increase the potential for injury.

Drum handling operations can be made safer by considering the following techniques:

- Use a drum cart where feasible. A four wheel cart is preferred for drum handling because it is more stable, better latched, and has a better handle positioning. In addition, it is more easily tipped back and held in place when the drums are loaded.

- Do not rotate from horizontal to vertical unless nearly empty. Only empty or nearly empty drums should be rotated from horizontal to vertical. A tipster or forklift with a proper drum handling attachment is the preferred method.

- Use handling equipment for moving drums from one level to another. Whenever possible pallets, scales, and conveyors should be recessed in the floor to avoid raising drums to another level. If not, drums should be handled on a low platform or an incline adapter should be provided.

- Limit drum weight to 300 pounds. Regardless of the material involved, drums should be filled to a maximum weight of 300 pounds.

- Limit travel distance to 30 feet. The other general guideline regarding drum handling involves keeping drum transport to a maximum of thirty feet.

SLIP / TRIP / HIT / FALL HAZARDS

Slip/trip/hit and fall injuries are the most frequent of all injuries to workers. They occur for a wide variety of reasons, but can be minimized by the following prudent practices:

- Spot check the work area to identify hazards.

- Establish and utilized a pathway which is most free of slip and trip hazards.

- Beware of trip hazards such as wet floors, slippery surfaces, and uneven surfaces or terrain.

- Carry loads which you can see over.

- Keep work area clean and free of clutter, especially in storage rooms and walkways.

- Communicate hazards to on-site personnel.

- Secure all loose clothing, ties, and remove jewelry while around machinery.

- Report and/or remove hazards.

- Keep a safe buffer zone between workers using equipment and tools.

HEAT STRESS

Heat-related illness can cause physical discomfort, loss of efficiency and attention to safety, and personal injury. Age, weight, degree of physical fitness, degree of acclimatization, metabolism, use of alcohol or drugs, and a variety of medical conditions such as hypertension all affect a person's sensitivity to heat. The elderly are at higher risk because of impaired cardiac output and decreased ability to sweat. Infants and young children also are susceptible to heat stress, as

BRIX002729

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well. Even the type of clothing worn must be considered. Prior heat injury predisposes an individual to additional injury.

The fluid loss and dehydration resulting from physical activity puts outdoors laborers at particular risk. Certain medications predispose individuals to heat stress, such as drugs that alter sweat production (antihistamines, anti-psychotics, antidepressants) or interfere with the body's ability to regulate temperature. Persons with heart or circulatory diseases or those who are on "low salt" diets should consult with their physicians prior to working in hot environments.

It is difficult to predict just who will be affected and when, because individual susceptibility varies. In addition, environmental factors include more than the ambient air temperature. Radiant heat, air movement, conduction, and relative humidity all affect an individual's response to heat.

HEAT RELATED ILLNESSES

Heat rash, also known as prickly heat, may occur in hot and humid environments where sweat is not easily removed from the surface of the skin by evaporation. It can normally be prevented by resting in a cool place and allowing the skin to dry.

Fainting (heat synope) may be a problem for the worker unacclimatized to a hot environment who simply stands still in the heat. Victims usually recover quickly after a brief period of lying down. Moving around, rather than standing still, will usually reduce the possibility of fainting.

Heat cramps, painful spasms of the muscles, are caused when workers drink large quantities of water but fail to replace their bodies' salt loss. Tired muscles, those used for performing the work, are usually the ones most susceptible to cramps. Cramps may occur during or after working hours and may be relieved by taking liquids by mouth or saline solutions intravenously for quicker relief, if medically determined to be required.

Heat exhaustion results from loss of fluid through sweating when a worker has failed to drink enough fluids or take in enough salt or both. The worker with heat exhaustion still sweats but experiences extreme weakness or fatigue, giddiness, nausea, or headache. The skin is clammy and moist, the complexion pale or flushed, and the body temperature is normal or slightly higher. Treatment is usually simple: the victim should rest in a cool place and drink an electrolyte solution (a beverage used by athletes to quickly restore potassium, calcium, and magnesium salts) such as Gatorade®. Severe cases involving victims who vomit or lose consciousness may require longer treatment under medical supervision.

Heat stroke, the most serious health problem for workers in hot environments, is caused by the failure of the body's internal mechanism to regulate its core temperature. Sweating stops and the body can no longer rid itself of excess heat. Signs include mental confusion, delirium, loss of consciousness, convulsions or coma; a body temperature of 106 degrees F or higher; and hot dry skin which may be red, mottled, or bluish. Victims of heat stroke will die unless treated promptly. While awaiting medical help, the victim must be removed to a cool area and his or her clothing soaked with cool water. He or she should be fanned vigorously to increase cooling. Prompt first aid can prevent permanent injury to the brain and other vital organs.

BRIX002730

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PROTECTION AND CONTROLS

OSHA does not have a specific regulation for heat stress. But because heat stress is known as a serious hazard, workers are protected under the General Duty Clause of the Occupational Safety and Health Act. The clause says employers must provide "employment free from recognized hazards causing or likely to cause physical harm."

The following procedures are preventative measures to reduce heat stress:

- **Drink a lot of cool water all day - before you feel thirsty.** Every 15 or 20 minutes, you should drink a cup of water, Gatorade, or equivalent (5 to 7 ounces). These liquids should contain electrolytes to help replace those lost during sweating. Most workers exposed to hot conditions drink less fluids than needed because of an insufficient thirst drive. A worker, therefore, should not depend on thirst to signal when and how much to drink. If you drink only when you are thirsty you are dehydrated already. Caffeinated fluids should be minimized as they can lead to dehydration.

- **Take rest breaks.** Establish work and rest regimes. Rest in a cool, shady spot. Use fans. Provide a supply of salty foods that can be eaten during rest periods. Supervisors should be aware of the early signs of heat stress and should permit workers to interrupt their work if they are extremely uncomfortable.

- **Conduct monitoring for heat stress.** This can be accomplished by using a Wet Bulb Global Temperature (WBGT) meter. The WBGT is a weighted average of the wet bulb, dry bulb, and global temperature which is supposed to simulate the temperature stresses experienced by people. The wet bulb (WB) temperature is measured by exposing a wet sensor, such as a wet cotton wick fitted over the bulb of a thermometer, to the effects of evaporation and convection. The dry bulb (DB) temperature is measured with an ordinary mercury-in-glass thermometer, that is shielded from direct radiant energy sources. The globe temperature (GT) is the temperature inside a blackened, hollow, thin copper globe, which takes into account the radiant heat from the sun. WBGT values are calculated by the following equations:

Outdoors with solar load: $WBGT = 0.7\ WB + 0.2\ GT + 0.1\ DB$

Indoors or outdoors with no solar load: $WBGT = 0.7\ WB + 0.3\ GT$

- **Do the heaviest work in the coolest time of the day.**

- **Work in the shade.** Use a beach umbrella or string a tarp from your vehicle.

- **Ice vests.** Vests, coats and bandannas containing ice packs are commercially available which help to minimize heat stress. These may be necessary especially if working in protective clothing such as Tyvek or Saranex suits which prevent heat from the body to escape.

BRIX002731

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- **Maintain shower sprinkler on site.** If water and sprinkler facilities are available this is a good method for quickly cooling down workers on a regular basis.

- **For heavy work in hot areas,** take turns with other workers, so some can rest.

- **If you travel to a warm area for a new job,** you need time for your body to get used to the heat. Acclimatization to the heat through short exposures followed by longer periods of work in the hot environment can reduce heat stress. New employees and workers returning from an absence of two weeks or more should have a 5-day period of acclimatization. This period should begin with 50 percent of the normal workload and time exposure the first day and gradually building up to 100 percent on the fifth day.

- **If you work in protective clothing,** you need more rest breaks. You may also need to check your temperature and heart rate. When semipermeable or impermeable clothing is being used and the temperature is 70 degrees F or more, the EPA says that a health professional should be present to monitor worker's body weight, temperature, and heart rate.

- **A buddy system** should be implemented during field activities involving work in hot environments, especially while wearing Level C and B protective clothing. The buddy shall be able to provide his or her partner with assistance, observe his or her partner for signs of heat stress disorders, aid in the treatment of heat stress should the need occur, and notify emergency personnel if emergency help is needed.

- **If you think someone has heat stroke, call 911.** Move the person to the shade, wipe his/her skin with cool water, and loosen his/her clothes. Use a piece of cardboard or other material to fan them.

BRIX002732

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WORK AND REST REGIMES TO PREVENT HEAT STRESS

Work and rest regimes are designed to aid in the prevention of heat stress. The following table shows the work and rest regimes for D, C, and B levels of protection, according to the WBGT, acclimatization and the use of personal protective equipment (PPE). Non-acclimatized personnel should begin with 50 percent of the normal workload and time exposure the first day and gradually build up to 100 percent over a five day period. The specific ranges for the work and rest regime should be determined by the site supervisor or site safety officer based on environmental conditions encountered, difficulty of the work being performed, and the health and fitness of the worker's involved.

Work/Rest Regime for Heat Stress

WBGT (Acclimatized workers)	Work and Rest Regime/hour (percent) Level D	Work/Rest Regime/hour (percent) Level C[a]	Work/Rest Regime/hour (percent) Level B[b]
77 °F	Continuous	Continuous	75/25 or Continuous
84 °F	Continuous	75/25 or Continuous	50/50 or 75/25
88 °F	75/25 or Continuous	50/50 or 75/25	25/75 or 50/50
90 °F[c]	50/50 or 75/25	25/75 or 50/50	No work or 25/75
94 °F[d]	25/75 or 50/50	No Work or 25/75	No Work
98 °F[e]	No Work or 25/75	No Work	No Work

NOTE: WBGT = wet bulb globe temperature.

[a] Used also for all Level B work using Saranex/Tyvek suits and ice vests.
[b] Used also for all Level B work using Saranex/Tyvek suits, no ice vests.
[c] No Level B work conducted in temperatures above 90 °F.
[d] No Level C work conducted in temperatures above 94 °F.
[e] No Level D work conducted in temperatures above 98 °F.

BRIX002733

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COLD RELATED ILLNESSES

Cold temperatures can also pose health hazards to site workers. Exposure to cold is classified into two categories: local or general. Local injuries include frostnip, frostbite, chilblain and trenchfoot. General injuries include hypothermia and blood vessel abnormalities (genetically or chemically induced). Major factors contributing to cold injury are exposure to humidity and high winds, contact with wetness or metal, inadequate clothing, age and general health. Allergies, vascular disease, excessive smoking or drinking, and certain drugs and medicines are physical conditions that can compound the effects of exposure to a cold environment. A cold stress guidelines table is included at the end of this section for quick reference.

SIGNS AND SYMPTOMS

Hypothermia. Hypothermia is a condition of reduced body temperature. Most cases develop in air temperatures between 30-50^0 F, not taking wind-chill factor into consideration. Symptoms of hypothermia include personality changes, reduced mental alertness, irrationality, and uncontrollable shivering. The heartbeat slows and sometimes becomes irregular, weakening the pulse and changing blood pressure. Changes in the body chemistry cause severe shaking or rigid muscles, vague or slow speech, memory lapses, incoherence, and drowsiness. Cool skin, slow irregular breathing, low blood pressure, apparent exhaustion, and fatigue after rest may precede complete collapse.

As the core body temperature drops, the victim can become listless, confused, and make little or no effort to keep warm. Pain in the extremities can be the first warning of dangerous exposures to cold. At a core body temperature of about 85^0 F, serious problems develop due to significant drops in blood pressure, pulse rate and respiration.

Sedative drugs and alcohol increase the risk of hypothermia. Sedative drugs interfere with the transmission of impulses to the brain. Alcohol dilates blood vessels near the skin's surface, increasing heat loss and lowering body temperature.

First aid treatment includes removal of the victim to a warm and dry location, removal of cold and damp clothing, wrapping the victim in warm blankets or clothing, and rewarming the victim from the core, not from the extremities. Severe hypothermia must be treated by a medical professional

Symptoms of frostbite include numbness and whitening of the skin. First aid treatment includes warming with blankets, warm compresses, or lukewarm water. Severe frostbite must be treated by a medical professional.

Raynaud's Phenomenon. Raynaud's Phenomenon is the abnormal constriction of the blood vessels of the finger on exposure to cold temperatures, resulting in blanching of the fingertips. Numbness, itching, tingling, or a burning sensation may occur during related attacks. The disease is also associated with the use of vibrating hand tools in a condition sometimes called White Finger Disease. Persistent cold sensitivity, ulceration, and amputations can occur in severe cases.

BRIX002734

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Frostnip occurs when the face or extremities are exposed to a cold wind, causing the skin to turn white.

Frostbite is the freezing of the body tissues due to exposure to extremely low temperatures, resulting in damage to and loss of tissue. Frostbite occurs because of inadequate circulation or insulation, resulting in freezing of fluids around the cells of the body tissues. Most vulnerable parts of the body are the nose, cheeks, ears, fingers, and toes.

Frostbite can affect outer layers of skin or can include the tissues beneath. Damage can be serious, with permanent loss of movement in the affected parts, scarring, necrotic tissue, and amputation resulting. Skin and nails that slough off may grow back.

The freezing point of the skin is about 30^0 F. As wind velocity increases, heat loss is greater and frostbite will set in more rapidly.

There are three degrees of frostbite. First degree is freezing without blistering and peeling; second degree is freezing with blistering and peeling; and third degree is freezing with death of skin tissues and possibly the deeper tissues.

The following are symptoms of frostbite:

- Skin changes color to white or grayish-yellow, progresses to reddish-violet, and finally turns black as the tissue dies.
- Pain may be felt at first, but subsides.
- Blisters may appear.
- Affected part is cold and numb.

The first symptom of frostbite is usually an uncomfortable sensation of coldness, followed by numbness. Tingling, stinging, cramping and aching feelings will follow. Frostbite of the outer layer of the skin has a waxy or whitish look and is firm to the touch. Cases of deep frostbite cause severe injury. The victim is often unaware of the frostbite until someone else observes these symptoms. It is therefore important to use the "buddy system" when working in cold environments, so that symptoms of overexposure can be monitored.

BRIX002735

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Wind chill, or the cooling effect of moving air, is of critical importance when evaluating the cold exposure of site workers. The potential for frostbite and hypothermia increases greatly with combined cold temperatures and high wind speeds. Workers should inform the site supervisor, or site safety officer, if their hands, face, or feet feel numb, and workers should monitor each other for patches of pale or white skin on the face and ears.

The following table describes the cooling power of wind on exposed flesh. This information can be used as a guide for determining equivalent chill temperatures when the wind is present in cold environments.

Cooling Power of Wind on Exposed Flesh Expressed as an Equivalent Temperature*

Estimated Wind Speed (in mph)	Actual Temperature Reading (°F)											
	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
	Equivalent Chill Temperature (°F)											
Calm	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60
5	48	37	27	16	6	-5	-15	-26	-36	-47	-57	-68
10	40	28	16	4	-9	-24	-33	-46	-58	-70	-83	-95
15	36	22	9	-5	-18	-32	-45	-58	-72	-85	-99	-112
20	32	18	4	-10	-25	-39	-53	-67	-82	-96	-110	-121
25	30	16	0	-15	-29	-44	-59	-74	-82	-104	-118	-133
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109	-129	-140
35	27	11	-4	-20	-35	-51	-67	-82	-98	-113	-129	-145
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116	-132	-148
(Wind speeds greater than 40 mph have little additional effect)	**LITTLE DANGER** In less than an hour with dry skin. Maximum danger of false sense of security.				**INCREASING DANGER** Danger from freezing of exposed flesh within one minute.			**GREAT DANGER** Flesh may freeze within 30 seconds.				
	Trench foot may occur at any point on this chart.											

* Developed by U.S. Army Research Institute of Environmental Medicine, Natick, MA.

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Trench Foot and Chilblains. Trench foot is swelling of the foot caused by long continuous exposure to cold without freezing, combined with persistent dampness or immersion in water. Edema (swelling), tingling, itching and severe pain occurs, followed by blistering, necrotic tissue and ulcerations. Chilblains have similar symptoms as trench foot, except that other areas of the body are affected.

TREATMENT

Remove the patient to a warm, dry place. If clothing is wet, remove and replace with dry clothing. Keep patient warm. Rewarming of patient should be gradual to avoid stroke symptoms. Patient dehydration may result in cold injury due to a significant change in blood flow to the extremities. If patient is conscious and alert, warm, sweet liquids should be provided. Coffee and other caffeinated liquids should be avoided because of diuretic and circulatory effects. Extremities affected by frostbite should be gradually warmed up and returned to normal temperature. Moist compresses should be applied; begin with lukewarm compresses and slowly increase the temperature as changes in skin temperature are detected. Keep patient warm and calm. Remove to a medical facility as soon as possible.

PREVENTION AND CONTROLS

The reduction of adverse health effects from cold exposure is achieved by adopting the following work practices:

- Providing adequate dry insulating clothing to maintain core temperature above 98.6 ^{0}F to workers if work is performed in air temperature below 40 ^{0}F. Wind chill cooling rates and the cooling power of air are critical factors. The higher the wind speed and the lower the temperature in the work area, the greater the insulation value of the protective clothing required.

- If the air temperature is of 32 ^{0}F or less, hands should be protected by gloves or mittens.

- If only light work is involved and the worker's clothing becomes wet on the job site, the outer layer of clothing should be impermeable to water. With more severe work under such conditions, the outer layer should be water repellent, and the outer wear should be changed as it becomes wet. The outer garments should include provisions for easy ventilation in order to prevent wetting of the inner layer of sweat.

- If available clothing does not give adequate protection to prevent cold injury, work should be modified or suspended until adequate clothing is made available, or until weather conditions improve.

- Use heated warming shelters available nearby (e.g., on-site trailer) at regular intervals, the frequency depending on the severity of the environmental exposure. When entering the heated shelter, remove the outer layer of clothing and loosen the remainder of clothing to permit heat evaporation or change to dry work clothing.

BRIX002737

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- Provide warm sweet drinks (e.g., hot chocolate) and soups at the work site for calorie intake and fluid volume. Limit the intake of coffee because of the diuretic and circulatory effect.

- Include the weight and bulk of clothing in estimating the required work performance and weights to be lifted by the worker.

- Implement a buddy system in which workers are responsible for observing fellow workers for early signs and symptoms of cold stress.

- Unacclimatized employees should not work full-time in cold until they become accustomed to the working conditions and required protective clothing.

- Observe work and warming regimen as shown in the following table.

BRIX002738

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The following table shows the recommended number of breaks that should be taken per hour based upon the air temperature and wind speeds encountered. This table also lists the maximum sustained work period (in minutes) allowed when working under these conditions.

Work/Warming Regimen

Air Temperature - Sunny Sky		No Noticeable Wind		5 mph Wind		10 mph Wind		15 mph Wind		20 mph Wind	
^{0}C (approx.)	^{0}F (approx.)	Max Work Period	# of breaks	Max Work Period	# of breaks	Max Work Period	# of breaks	Max Work Period	# of breaks	Max Work Period	# of breaks
-26 to -28	-15 to -19	(Norm Breaks) 1		(Norm Breaks) 1		75 min.	2	55 min.	3	40 min.	4
-29 to -31	-20 to -24	(Norm Breaks) 1		75 min.	2	55 min.	3	40 min.	4	30 min.	5
-32 to -34	-25 to -29	75 min.	2	55 min.	3	40 min.	4	30 min.	5	non-emergency work should cease	
-35 to -37	-30 to -34	55 min.	3	40 min.	4	30 min.	5	non-emergency work should cease		non-emergency work should cease	
-38 to -39	-35 to -39	40 min.	4	30 min.	5	non-emergency work should cease		non-emergency work should cease		non-emergency work should cease	
-40 to -42	-40 to -44	30 min.	5	non-emergency work should cease		non-emergency work should cease		non-emergency work should cease		non-emergency work should cease	
-43 and below	-45 and below	non-emergency work should cease		non-emergency work should cease		non-emergency work should cease		non-emergency work should cease		non-emergency work should cease	

BRIX002739

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Appendix C

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APPENDIX C

WELL LOGS

BRIX002741

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-1
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.81'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	24.0'
LOGGED BY	John Renda	DATE COMPLETED	02/11/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
524	1.0	3 2 1		5				5.0 to 6.5 feet: SILTY SAND (SM); medium to dark brown; 60 to 70 percent fine to medium sand; subangular to subrounded; 20 to 30 percent non to low plasticity fines; 10 percent fine to medium gravel; subrounded; gasoline-like odor; moist.
1,114	1.0	4 8 10		10				10.0 to 11.5 feet: SAND (SP); dark gray to black; fine to medium sand; subangular to subrounded; trace fine to medium gravel; subrounded; gasoline-like odor; moist.
1,219	1.0	2 5 5		15				15.0 to 16.5 feet: SAND (SP), as above.
				20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:1.3/5/03,BRIX...890066-01

BRIX002742

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-1
LOCATION	Portland, Oregon	PAGE	2 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.81'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	24.0'
LOGGED BY	John Renda	DATE COMPLETED	02/11/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
81.2	1.5	2 1 1						**20.0 to 21.0 feet: SAND (SP)**, same as above.
								21.0 to 21.5 feet: SILTY SAND (SM); dark gray to black; 70 to 80 percent low to medium plasticity fines; trace wood fragments; gasoline-like odor; wet.
20.3	0.5	1 0 0						**22.5 to 24.0 feet: SILT (ML)**; gray; low to medium plasticity fines; trace fine to medium sand; trace wood fragments and roots; moist.
				25				Boring terminated at 22.5 feet. Split-spoon sampler advanced to 24.0 feet. **WELL COMPLETION DETAILS** 0 to 7.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 7.1 to 22.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots. 22.1 to 22.6 feet: 2-inch-diameter threaded end cap. 0 to 1.0 foot: Concrete. 1.0 to 5.5 feet: Bentonite chips hydrated with potable water. 5.5 to 22.6 feet: 10-20 Colorado Silica Sand.
				30				
				35				
				40				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:3.3/28/03.BRIX..990056-01

BRIX002743

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LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-2
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	42.13'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	26.5'
LOGGED BY	John Renda	DATE COMPLETED	02/11/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
								0.5 to 2.5 feet: GRAVEL (GW), base fill.
0	1.5	15 15 15		5				5.0 to 6.5 feet: SILTY SAND (SM); medium to dark brown; 60 percent fine to medium sand, subangular to subrounded; 20 to 30 percent nonplastic to low plasticity fines; 10 to 20 percent gravel; fine to medium; angular; moist.
								@ 7.5 feet: smoother drilling.
0	1.0	3 4 4		10				10.0 to 11.5 feet: SILTY SAND (SM); medium to dark brown; 60 to 70 percent fine to medium sand; subangular to subrounded; 30 to 40 percent nonplastic to low plasticity fines; moist.
								@ 11.0 feet: color change to gray.
0	1.5	5 9 12		15				15.0 to 16.5 feet: SAND (SP); medium brown; fine to medium sand; subangular to subrounded; trace fine to medium gravel; subrounded; moist.
								@ 20.0 feet: wet.
				20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.3/19/03,BRIX...990056-01

BRIX002744

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Brix Maritime**	BORING NO.	**MW-2**
LOCATION	**Portland, Oregon**	PAGE	**2 of 2**
DRILLED BY	**GeoTech Explorations, Inc.**	REFERENCE ELEV.	**42.13'**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**26.5'**
LOGGED BY	**John Renda**	DATE COMPLETED	**02/11/03**

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
0	1.0	5 7 9						**20.0 to 21.5 feet: SAND (SP)**; same as above.
0	1.0	4 5 3						**22.5 to 23.5 feet: SAND (SP)**; same as above. **23.5 to 24.0 feet: SILTY SAND (SM)**; dark gray to black; 70 to 80 percent fine sand; 20 to 30 percent nonplastic to low plasticity fines; wet.
0	1.5	1 1 2		25				**25.0 to 26.5 feet: SILT (ML)**; gray; medium plasticity fines; trace fine to medium sand; trace root hairs; moist.
				30				Boring terminated at 25.0 feet. Split-spoon sampler advanced to 26.5 feet. **WELL COMPLETION DETAILS** 0 to 9.6 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 9.6 to 24.6 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots. 24.6 to 25.1 feet: 2-inch-diameter threaded end cap. 0 to 1.0 foot: Concrete. 1.0 to 8.0 feet: Bentonite chips hydrated with potable water. 8.0.0 to 25.0 feet: 10-20 Colorado Silica Sand.
				35				
				40				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:3.3/28/03.BRIX...990056-01

BRIX002745

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-3
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.93'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	26.5'
LOGGED BY	John Renda	DATE COMPLETED	7/17/02

SAMPLE NUMBER	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.4 foot: ASPHALT
	1	7 6 6		5				**5.0 to 6.5 feet: SILTY SAND (SM);** medium to dark brown; fine to medium sand; subangular to subrounded; non to low plasticity fines; trace fine to medium gravel; subrounded; semi-consolidated lenses with petroleum hydrocarbon odor; moist.
	0	15 50/0.2		10				**10.0 to 10.7 feet: No Recovery;** rods bouncing with hammer blows. Wood?
	1	5 10 7		15				**15.0 to 16.5 feet: SAND (SP);** dark gray to black; fine to medium sand; subangular to subrounded; trace fine to medium gravel; subrounded; moist.
				20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.9/20/02.BRIX...990056-01

BRIX002746

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-3
LOCATION	Portland, Oregon	PAGE	2 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.93'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	26.5'
LOGGED BY	John Renda	DATE COMPLETED	7/17/02

SAMPLE NUMBER	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
	1.5	6 7 4						**20.0 to 21.5 feet: SAND (SP)**; same as above with petroleum hydrocarbon-like odor; moist.
	1.5	4 2 4						**22.5 to 24.0 feet: SILTY SAND (SM)**; dark gray to black; 70 to 80 percent fine to medium sand; subangular to subrounded; 20 to 30 percent low plasticity fines; trace wood chunks; petroleum hydrocarbon odor; moist.
	1.5	2 3 5		25				**25.0 to 26.5 feet: SANDY SILT (ML)**; dark gray to black; 70 to 80 percent low to medium plasticity fines; 20 to 30 percent fine to medium sand; moist.

Boring terminated at 25.0 feet.
Split-spoon sampler advanced to 26.5 feet.

WELL COMPLETION DETAILS
0 to 9.3 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe.
9.3 to 24.3 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots.
24.3 to 24.8 feet: 2-inch-diameter threaded end cap.

0 to 1.0 foot: Concrete.
1.0 to 6.0 feet: Bentonite chips hydrated with potable water.
6.0 to 25.0 feet: 10-20 Colorado Silica Sand.

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REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.9/20/02.BRIX...990056-01

BRIX002747

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-4
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	23.55'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	16.5'
LOGGED BY	John Renda	DATE COMPLETED	7/17/02

SAMPLE NUMBER	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.4 foot: ASPHALT
				5				**5.0 to 5.8 feet: SAND (SP)**; rusty brown; fine to medium sand; angular to subrounded.
	1	4 3 4						**5.8 to 6.5 feet: SANDY SILT (ML)**; gray; 75 to 80 percent nonplastic to low plasticity fines; 20 to 25 percent fine to medium sand; trace wood fragments; moist.
				10				**10.0 to 11.3 feet: SANDY SILT (ML)**; same as above.
	1.5	1 2 4						**11.3 to 11.5 feet: SAND (SP)**; gray; fine to medium sand; angular to subrounded; moist.
				15				**15.0 to 16.5 feet: SILT (ML)**; gray; low to medium plasticity; trace fine to medium sand; trace wood fragments and roots; moist.
	1.5	1 1 2						Boring terminated at 15.0 feet. Split-spoon sampler advanced to 16.5 feet.
				20				See Page 2 for Well Completion Details.

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.9/20/02.BRIX...990056-01

BRIX002748

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Brix Maritime**	BORING NO.	**MW-4**
LOCATION	**Portland, Oregon**	PAGE	**2 of 2**
DRILLED BY	**GeoTech Explorations, Inc.**	REFERENCE ELEV.	**23.55'**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**16.5'**
LOGGED BY	**John Renda**	DATE COMPLETED	**7/17/02**

SAMPLE NUMBER	RECOVERY (feet)	BLOWS (per 6 Inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
				25				**WELL COMPLETION DETAILS** 0 to 4.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 4.5 to 14.5 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots. 14.5 to 15.0 feet: 2-inch-diameter threaded end cap. 0 to 1.0 foot: Concrete. 1.0 to 3.0 feet: Bentonite chips hydrated with potable water. 3.0 to 15.0 feet: 10-20 Colorado Silica Sand.
				30				
				35				
				40				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.9/20/02.BRIX.,.990056-01

BRIX002749

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LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-5
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.66'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	24.0'
LOGGED BY	John Renda	DATE COMPLETED	02/11/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
								0.5 to 2.5 feet: GRAVEL (GW); gravel base fill.
				5				
2	1.0	4 5 5						5.0 to 6.0 feet: SAND (SP); dark gray to black; fine to medium sand; subangular to subrounded; trace fine to medium gravel; subangular to subrounded; petroleum-hydrocarbon-like odor; moist.
				10				
2.2	1.0	3 20 23						5.0 to 6.0 feet: SAND (SP); same as above.
				15				
6.3	1.0	3 5 9						15.0 to 16.5 feet: SAND (SP); same as above.
				20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.3/19/03,BRIX...990056-01

BRIX002750

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-5
LOCATION	Portland, Oregon	PAGE	2 of 2
DRILLED BY	GeoTech Explorations, Inc.	REFERENCE ELEV.	41.66'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	24.0'
LOGGED BY	John Renda	DATE COMPLETED	02/11/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
3.0	1.0	3 5 6						**20.0 to 21.5 feet: SAND (SP);** same as above; wet.
101	1.0	0 1 3						**22.5 to 22.7 feet: SAND (SP);** same as above. **22.7 to 24.0 feet: SILT (ML);** gray; medium plasticity fines; trace fine to medium sand; trace root hairs; slight sheen at sand/silt interface; moist.
				25				Boring terminated at 22.5 feet. Split-spoon sampler advanced to 24.0 feet.
				30				**WELL COMPLETION DETAILS** 0 to 7.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 7.1 to 22.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.020-inch machined slots. 22.1 to 22.6 feet: 2-inch-diameter threaded end cap. 0 to 1.0 foot: Concrete. 1.0 to 5.5 feet: Bentonite chips hydrated with potable water. 5.5.0 to 22.6 feet: 10-20 Colorado Silica Sand.
				35				
				40				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:3.3/28/03.BRIX...990056-01

BRIX002751

LOG OF EXPLORATORY BORING

PROJECT NAME	Brix Maritime	BORING NO.	MW-6
LOCATION	Portland, Oregon	PAGE	1 of 2
DRILLED BY	Cascade Drilling	REFERENCE ELEV.	41.21'
DRILL METHOD	Hollow-stem Auger	TOTAL DEPTH	26.0'
LOGGED BY	John Renda	DATE COMPLETED	6/19/03

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
0.9	0.5	4 7 12		5				**5.0 to 6.0 feet: SAND (SP)**; medium to dark gray; fine to medium sand; subangular to subrounded; trace fine to medium gravel; subangular to subrounded; moist. **6.0 to 6.5 feet: SANDY SILT (SM)**; gray; low to medium plasticity fines; fine to medium sand; subangular to subrounded; moist.
6.1	0.5	6 10 17		10				**10.0 to 11.5 feet: SAND (SP)**; dark gray to black; fine to medium sand; subangular to subrounded; moist.
2.6	1.2	15 18 20		15				**15.0 to 16.5 feet: SAND (SP)**; same as above.
			▽	20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.07/08/03.BRIX...990056-01

BRIX002752

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Brix Maritime**	BORING NO.	**MW-6**
LOCATION	**Portland, Oregon**	PAGE	**2 of 2**
DRILLED BY	**Cascade Drilling**	REFERENCE ELEV.	**41.21'**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**26.0'**
LOGGED BY	**John Renda**	DATE COMPLETED	**6/19/03**

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
		5						**20.0 to 21.0 feet: SAND (SP)**; same as above; wet.
12.6	1.5	6						
		9						**21.0 to 21.5 feet: SILT (ML)**; gray; nonplastic to low plasticity fines with fine to medium sand interbeds; wet.
		2						**21.5 to 25.5 feet: SILTY SAND (SM)**; dark gray to black; 70 to 80 percent fine sand; 20 to 30 percent low to medium plasticity fines; wet.
6.4	1.0	1						
		3						
		1						
2.7	1.5	2						
		3						
		2		25				
3.3	1.5	3						
		5						**25.5 to 26.0 feet: SILTY (ML)**; gray; low to medium plasticity fines; trace fine sand; trace root hairs; moist.
								Boring terminated at 25.0 feet.
								Split-spoon sampler advanced to 26.0 feet.
				30				
				35				
				40				

WELL COMPLETION DETAILS

0 to 10.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe.

10.1 to 25.1 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots.

25.1 to 25.6 feet: 2-inch-diameter threaded end cap.

0 to 1.0 foot: Concrete.

1.0 to 7.8 feet: Bentonite chips hydrated with potable water.

7.8 to 26.0 feet: 20-40 Colorado Silica Sand.

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.07/08/03.BRIX...990056-01

BRIX002753

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LOG OF EXPLORATORY BORING

PROJECT NAME	**Brix Maritime**	BORING NO.	**MW-7**
LOCATION	**Portland, Oregon**	PAGE	**1 of 2**
DRILLED BY	**Cascade Drilling**	REFERENCE ELEV.	**40.95'**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**26.5'**
LOGGED BY	**John Renda**	DATE COMPLETED	**6/19/03**

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
								0 to 0.5 foot: ASPHALT
				5				
1.0	0.5	5 14 11						**5.0 to 6.5 feet: SILTY SAND (SM);** gray; 60 to 70 percent fine to medium sand; subangular to subrounded; 20 to 30 percent nonplastic to low plasticity fines; moist.
				10				
0.2	0.5	5 13 19						**10.0 to 11.5 feet: SAND (SP);** medium brown; fine to medium sand; subangular to subrounded; moist.
				15				
1.3	1.0	6 15 17						**15.0 to 16.5 feet: SAND (SP);** same as above.
				20				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.07/08/03.BRIX...990056-01

BRIX002754

LOG OF EXPLORATORY BORING

PROJECT NAME	**Brix Maritime**	BORING NO.	**MW-7**
LOCATION	**Portland, Oregon**	PAGE	**2 of 2**
DRILLED BY	**Cascade Drilling**	REFERENCE ELEV.	**40.95'**
DRILL METHOD	**Hollow-stem Auger**	TOTAL DEPTH	**26.5'**
LOGGED BY	**John Renda**	DATE COMPLETED	**6/19/03**

PID (in ppm)	RECOVERY (feet)	BLOWS (per 6 inches)	GROUND WATER LEVEL	DEPTH IN FEET	SAMPLES	WELL DETAILS	LITHO-LOGIC COLUMN	LITHOLOGIC DESCRIPTION
8.2	0.5	12 14 24	▽					**20.0 to 21.5 feet: SILTY SAND (SM)**; gray; 70 to 80 percent fine to medium sand; subangular to subrounded; 20 to 30 percent low to medium plasticity fines; wood chunk; wet.
0.8	1.0	6 11 7						**22.5 to 24.0 feet: SAND (SP)**; gray; fine to medium sand; subangular to subrounded; 10 to 15 percent nonplastic to low plasticity fines; wet.
				25				**25.0 to 25.5 feet: SAND (SP)**; same as above.
1.5	1.0	2 2 2						**25.5 to 26.5 feet: SILT (ML)**; gray; medium plasticity fines; trace fine to medium sand; trace root hairs; moist.
								Boring terminated at 25.0 feet. Split-spoon sampler advanced to 26.5 feet.
				30				**WELL COMPLETION DETAILS** 0 to 9.8 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC blank riser pipe. 9.8 to 24.8 feet: 2-inch-diameter, flush-threaded, Schedule 40 PVC well screen with 0.010-inch machined slots. 24.8 to 25.3 feet: 2-inch-diameter threaded end cap. 0 to 1.0 foot: Concrete. 1.0 to 8.1 feet: Bentonite chips hydrated with potable water. 8.1 to 26.5 feet: 20-40 Colorado Silica Sand.
				35				
				40				

REMARKS

ANCHOR ENVIRONMENTAL, L.L.C.

BRIX.gds:2.07/08/03.BRIX...990056-01

BRIX002755

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Appendix D

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APPENDIX D

FACILITY STORMWATER INSPECTION LETTER

BRIX002757

CITY OF PORTLAND
ENVIRONMENTAL SERVICES
Water Pollution Control Laboratory
6543 N. Burlington Ave., Portland, Oregon 97203-5452
(503) 823-5600

July 8, 2004

Ms. Linda Brown
Foss Maritime
9030 NW St. Helens Rd.
Portland, OR 97210

RE: Facility Stormwater Inspection of June 29, 2004.

Dear Ms. Brown:

Thank you for your time and cooperation during the recent inspection of your facility. The inspection verified the standard industrial classification (SIC) code to be 4492 (Towing and Tugboat Services). Industries with this SIC code are required to obtain a stormwater permit if they have any equipment fueling, maintenance, or washing on site and exposure of equipment or materials to stormwater runoff. It was noted during the inspection that, although fueling and maintenance are performed at the site, these activities occur over water. Therefore, they are not subject to National Pollutant Discharge Elimination System (NPDES) stormwater regulations.

Although you are not required to obtain a stormwater discharge permit, there are some Best Management Practices that could be employed at the site. You should consider having the lot swept by a vacuum sweeper truck on a regular basis to reduce the amount of Total Suspended Solids (dirt, rocks, etc) that are discharged from the site. Outdoor storage of spare equipment should be minimized.

The City of Portland appreciates your cooperation with regards to these matters and your efforts to minimize stormwater pollution. If you have any questions or comments regarding this letter you may contact me at 503-823-5692.

Sincerely,

Wesley C. McDaniel
Industrial Stormwater Section
Bureau of Environmental Services

CC: Dennis Jurries, DEQ

BRIX002758

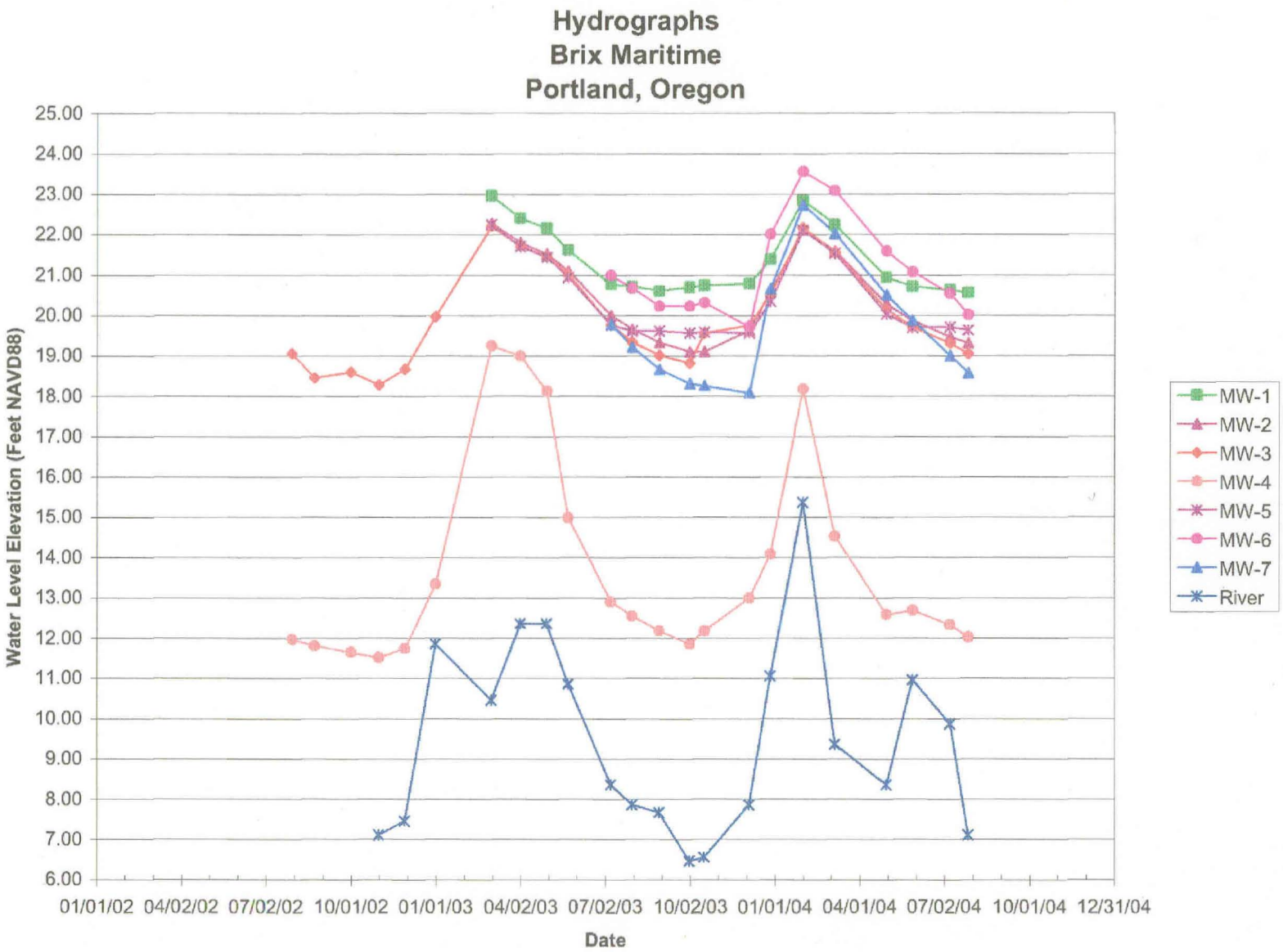
Appendix E

Confidential Business Information

APPENDIX E

HYDROGRAPHS AND TIME-SERIES CONENTRATION PLOTS

Confidential Business Information



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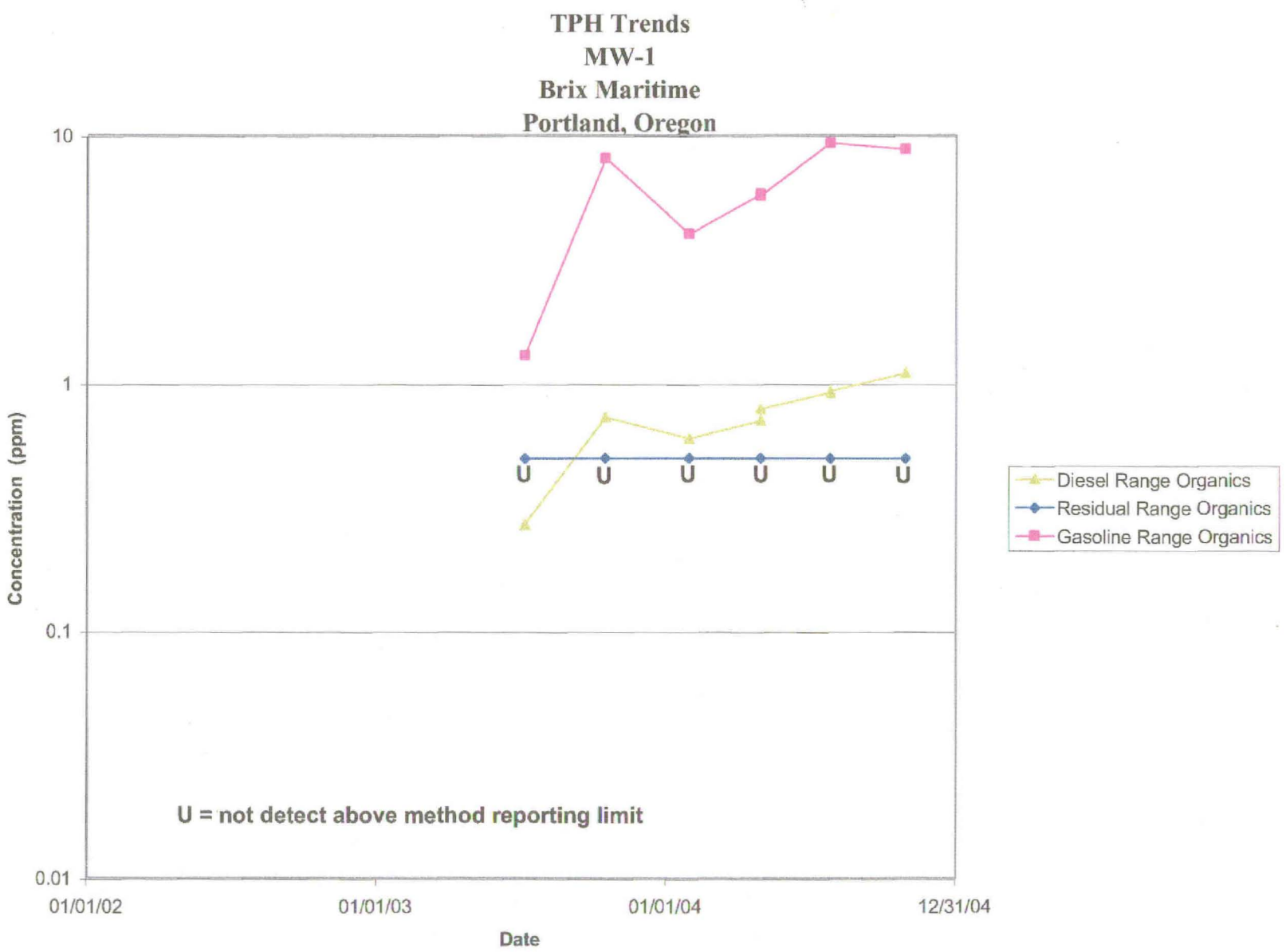

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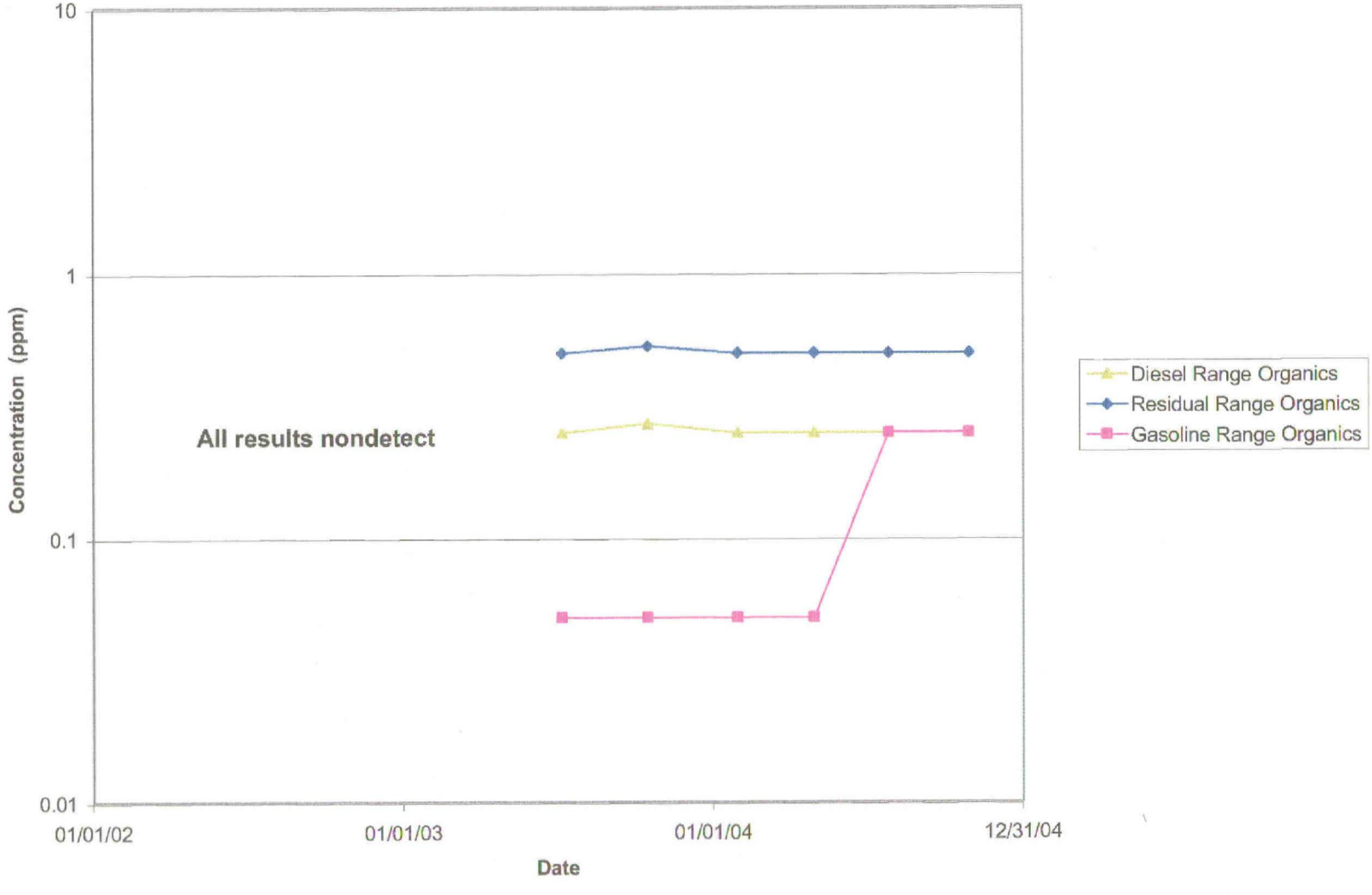
Confidential Business Information

TPH Trends
MW-2
Brix Maritime
Portland, Oregon



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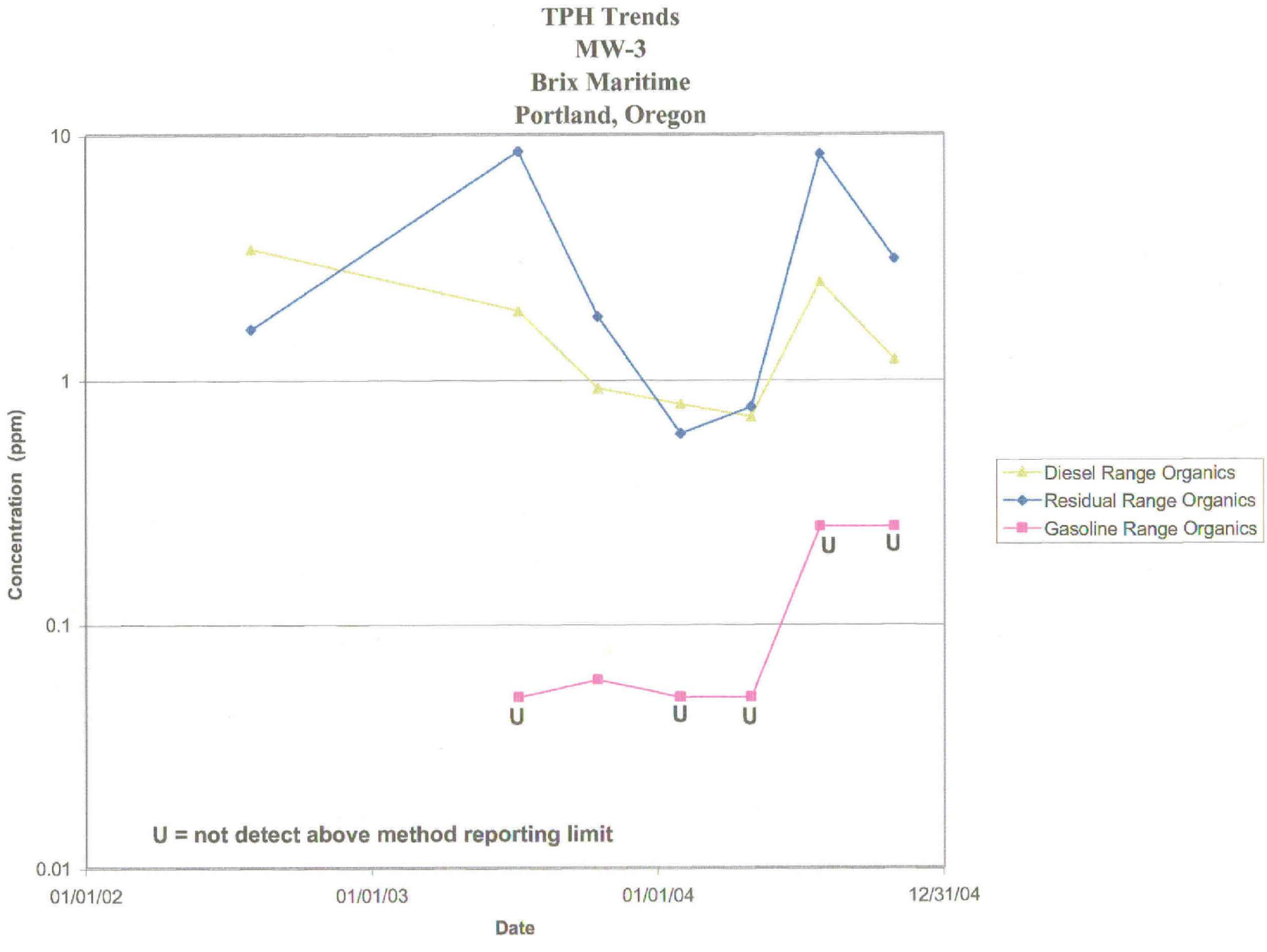
Confidential Business Information



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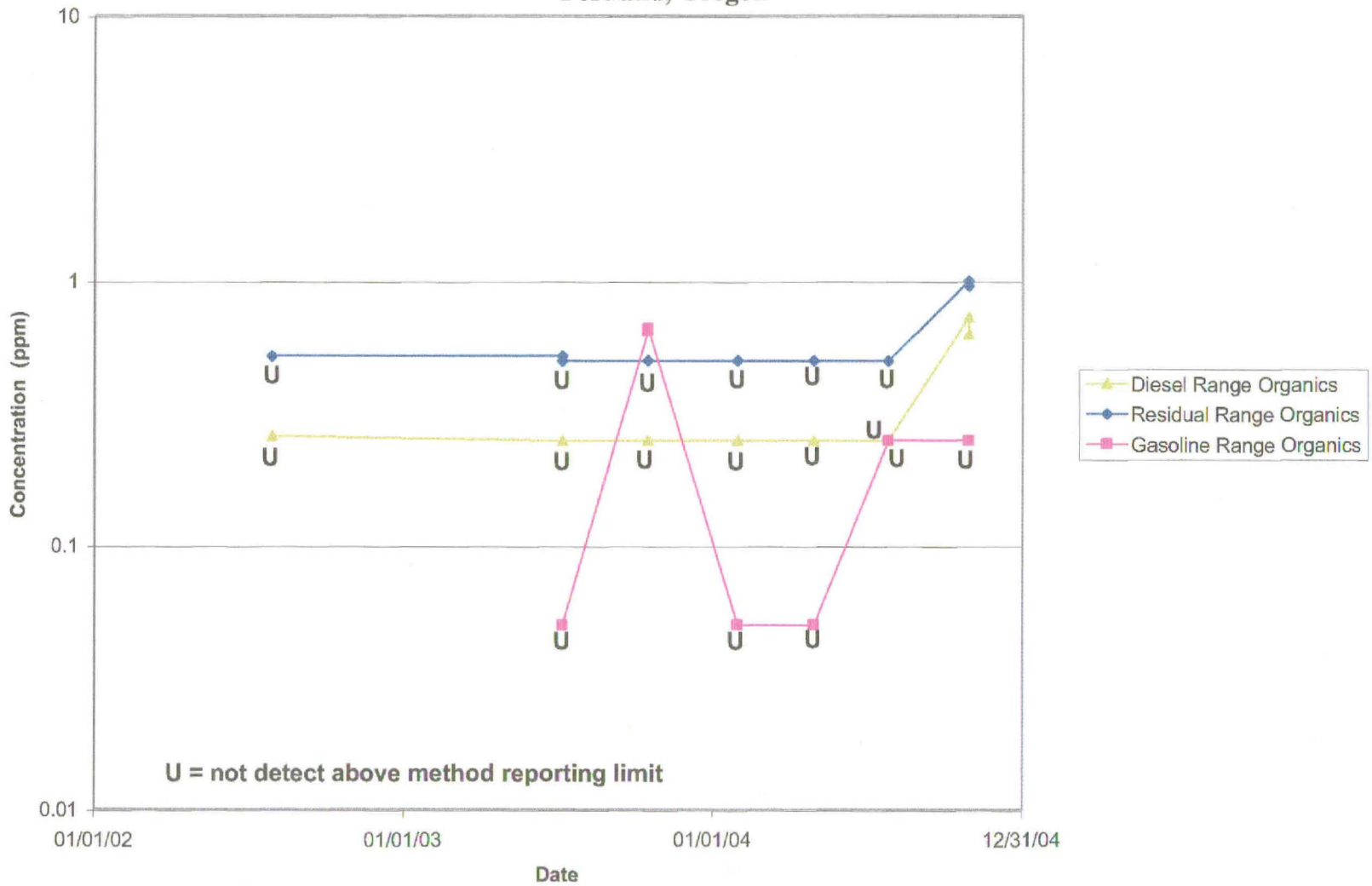
Confidential Business Information

Confidential Business Information

TPH Trends
MW-4
Brix Maritime
Portland, Oregon



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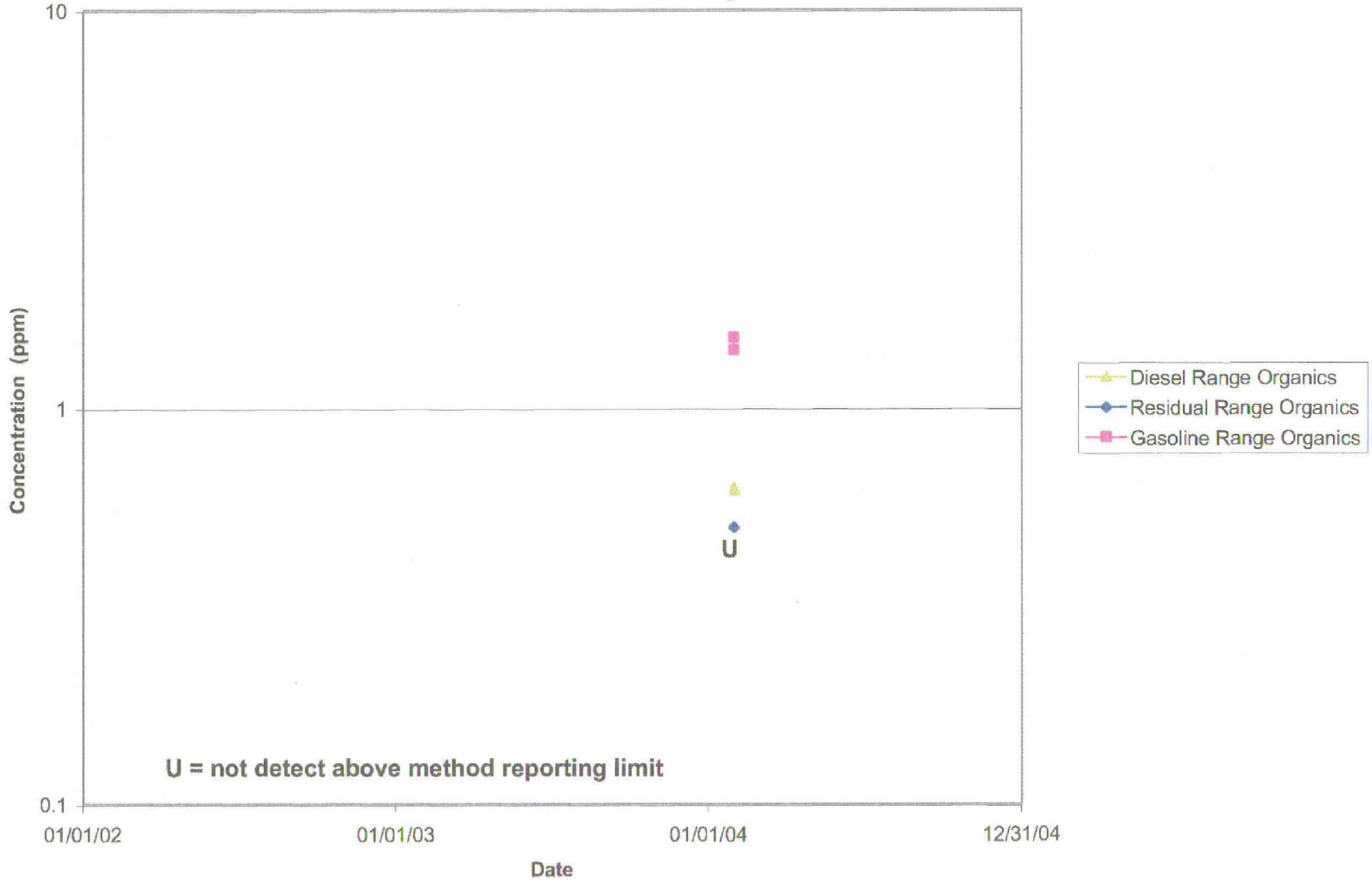
TPH Trends
MW-5
Brix Maritime
Portland, Oregon



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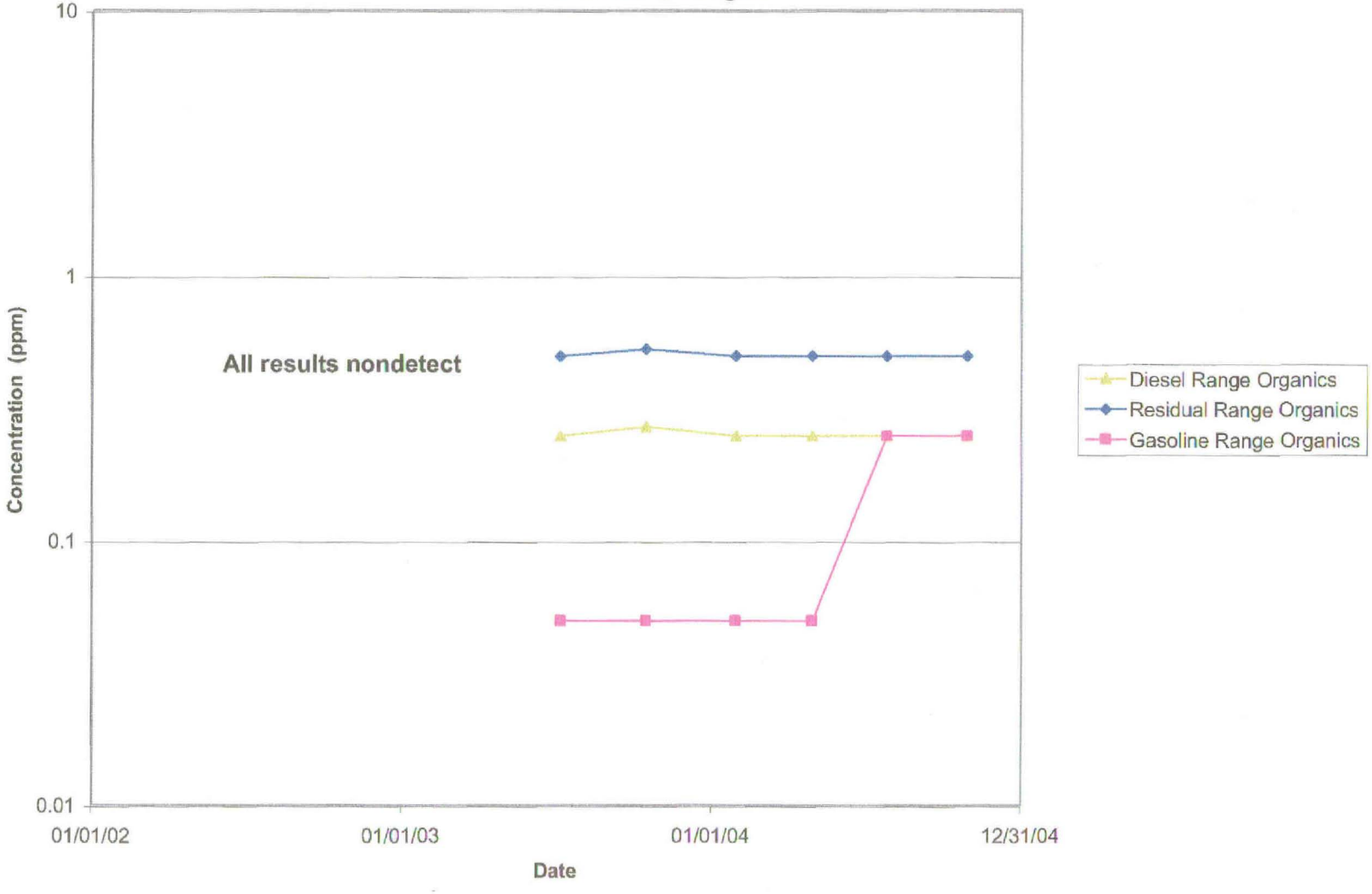
Confidential Business Information

Confidential Business Information

TPH Trends
MW-6
Brix Maritime
Portland, Oregon



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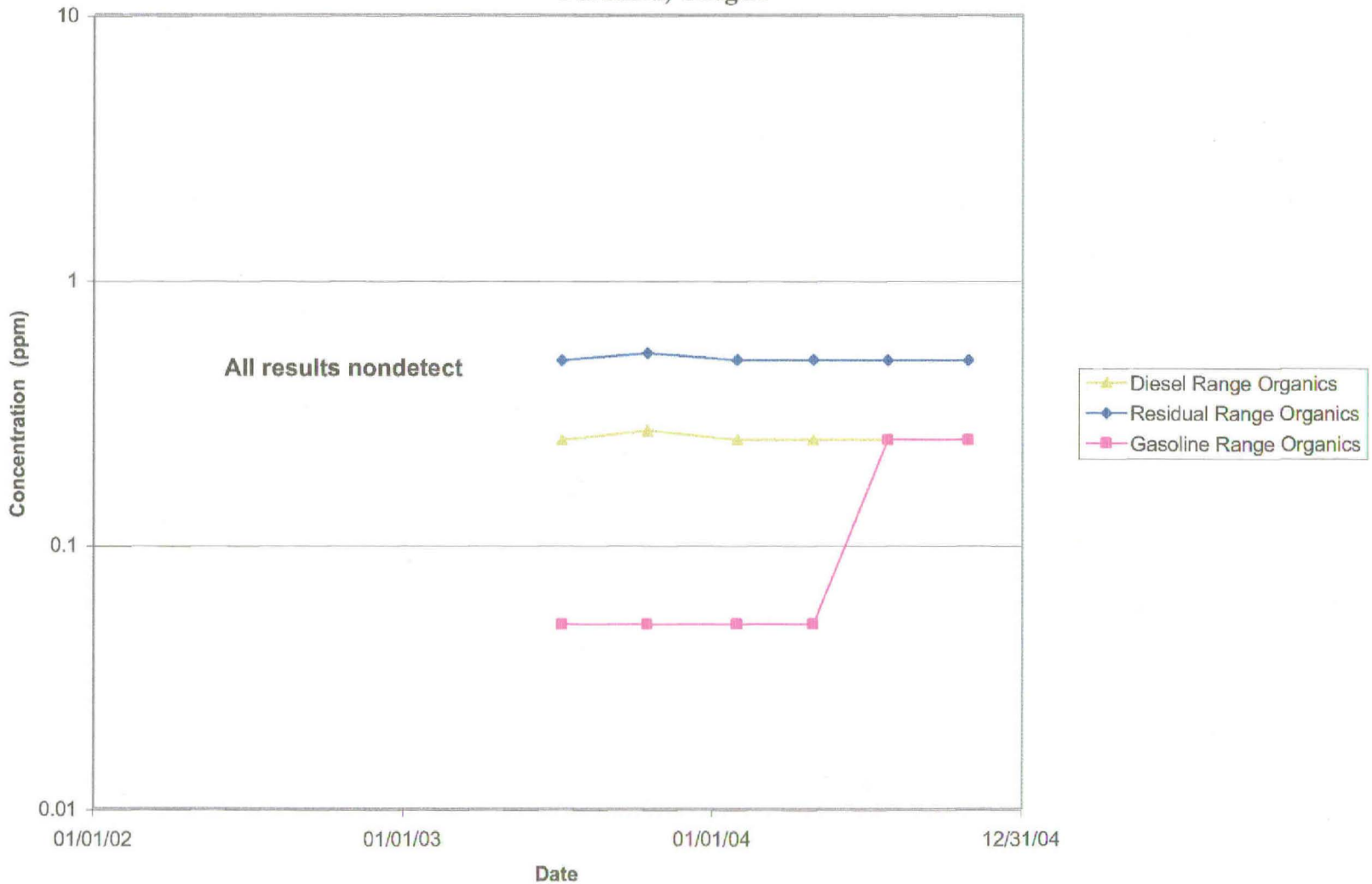
Confidential Business Information

TPH Trends
MW-7
Brix Maritime
Portland, Oregon



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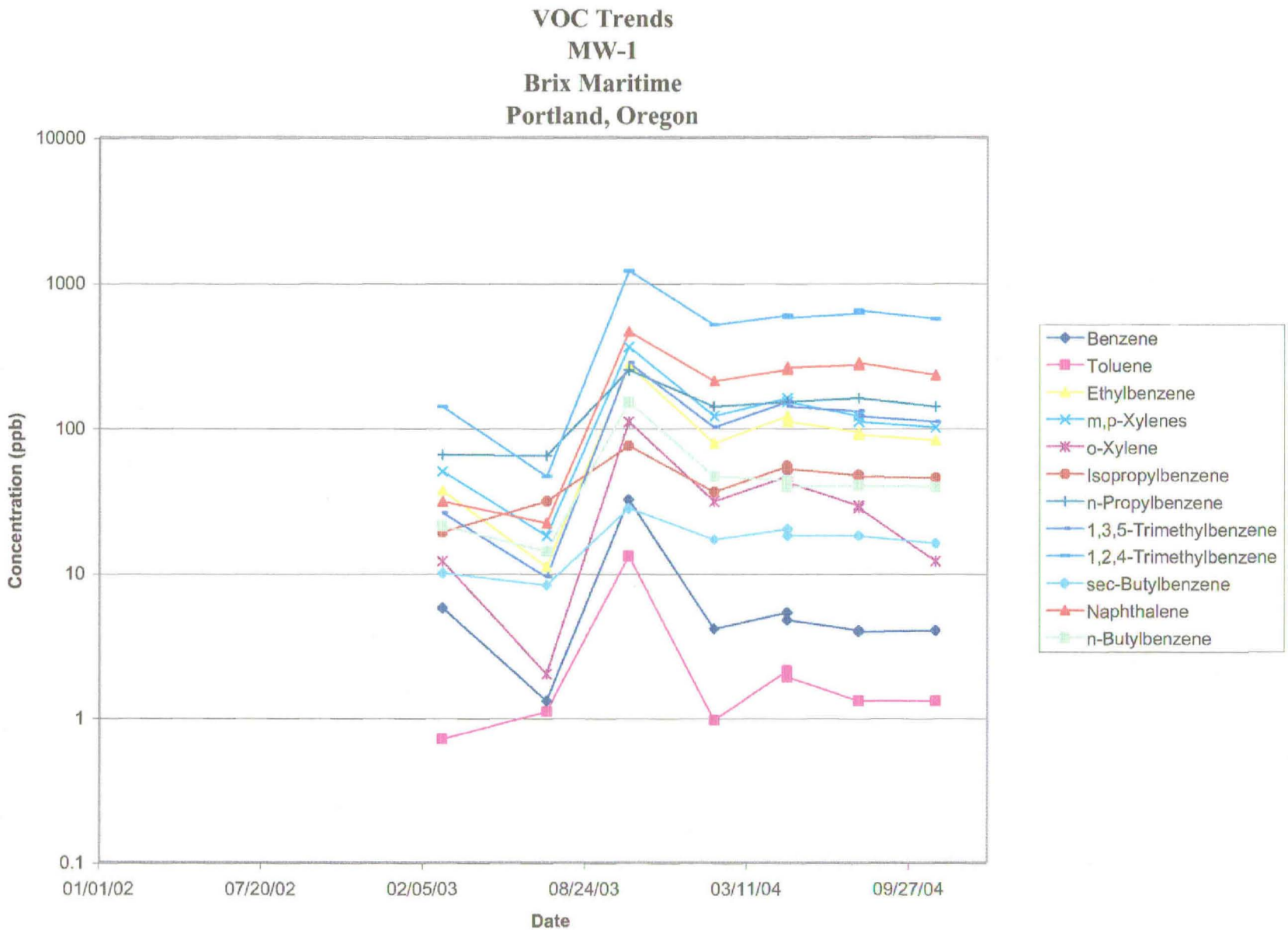

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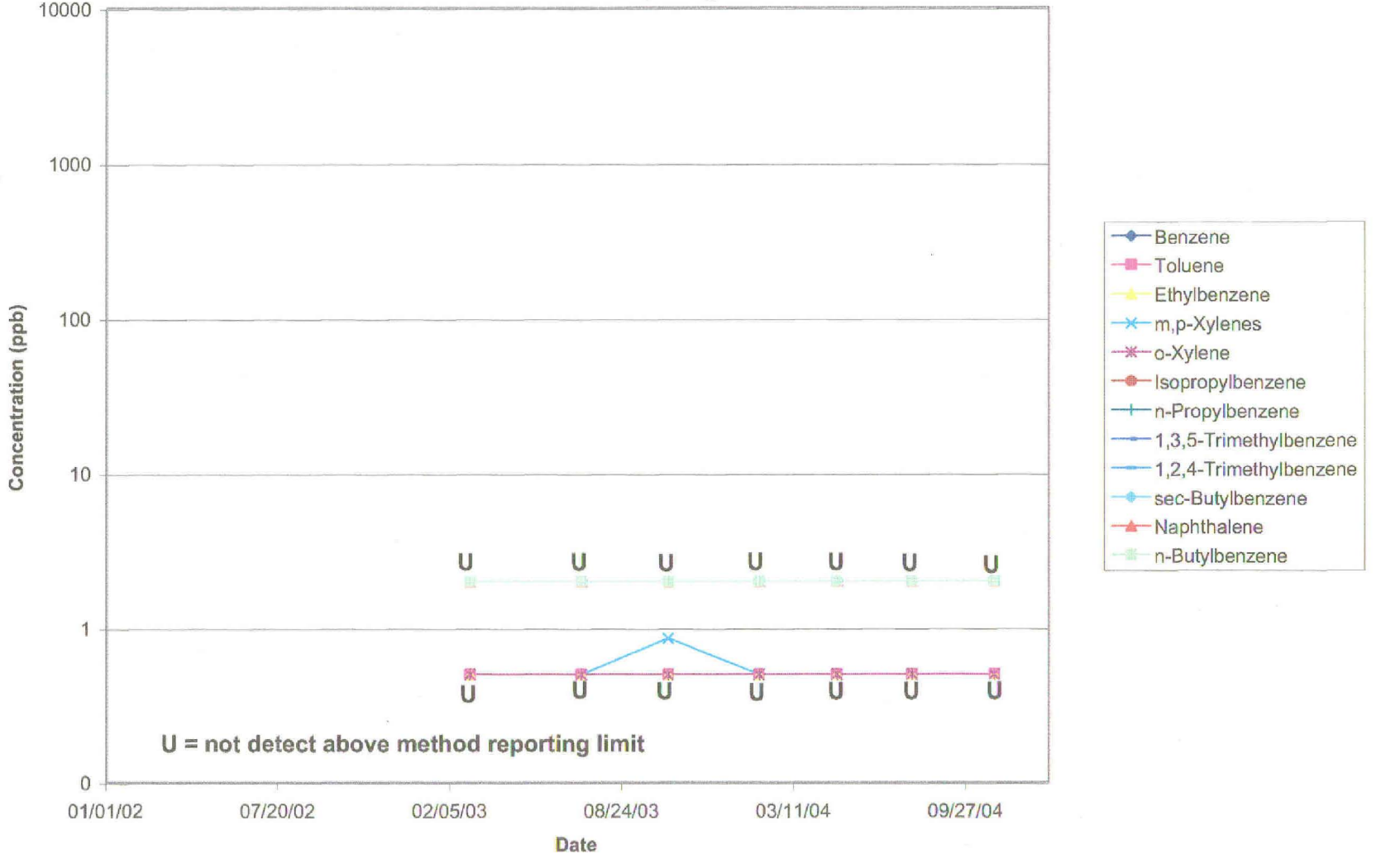
Confidential Business Information

Confidential Business Information

VOC Trends
MW-2
Brix Maritime
Portland, Oregon



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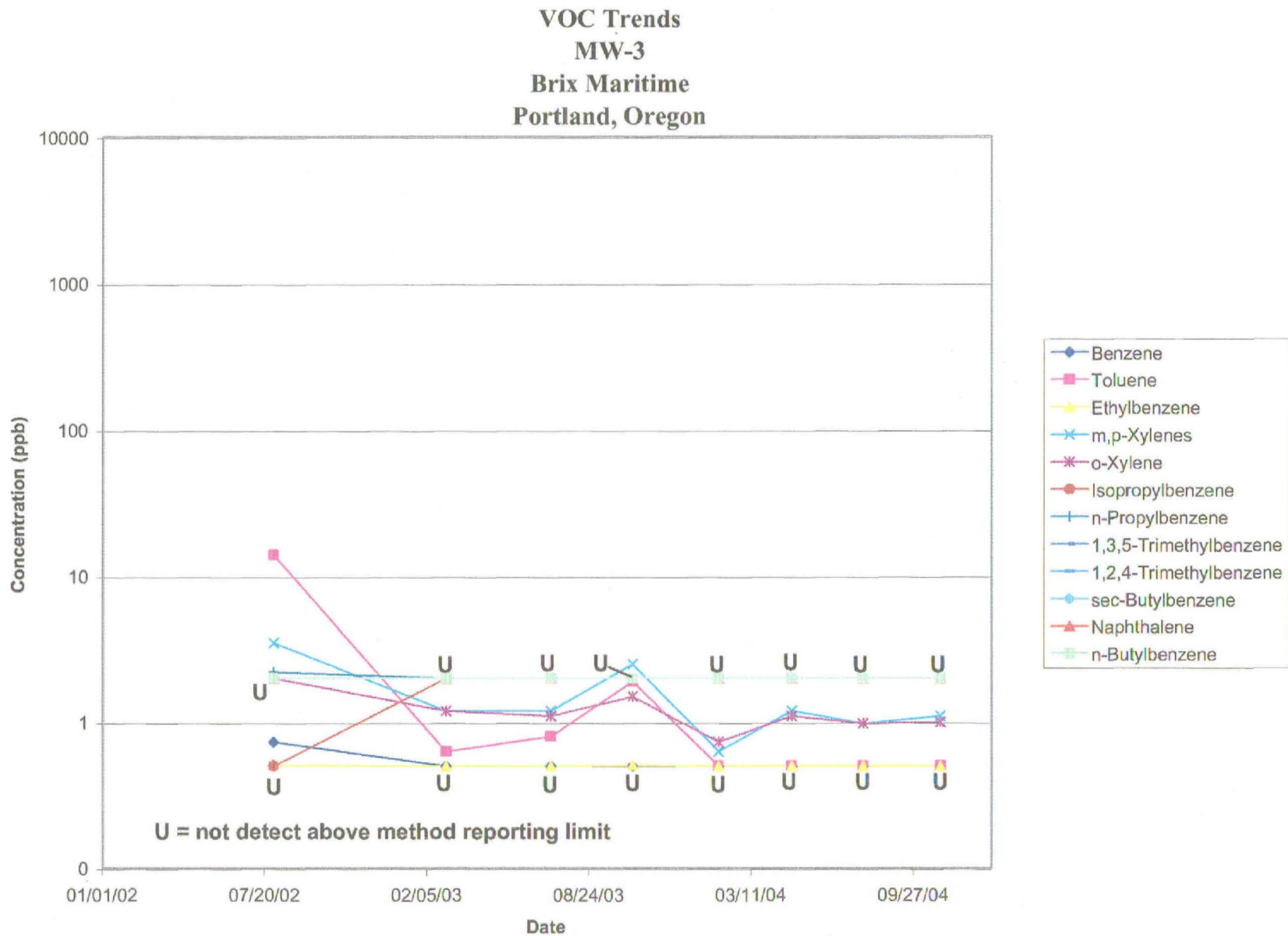

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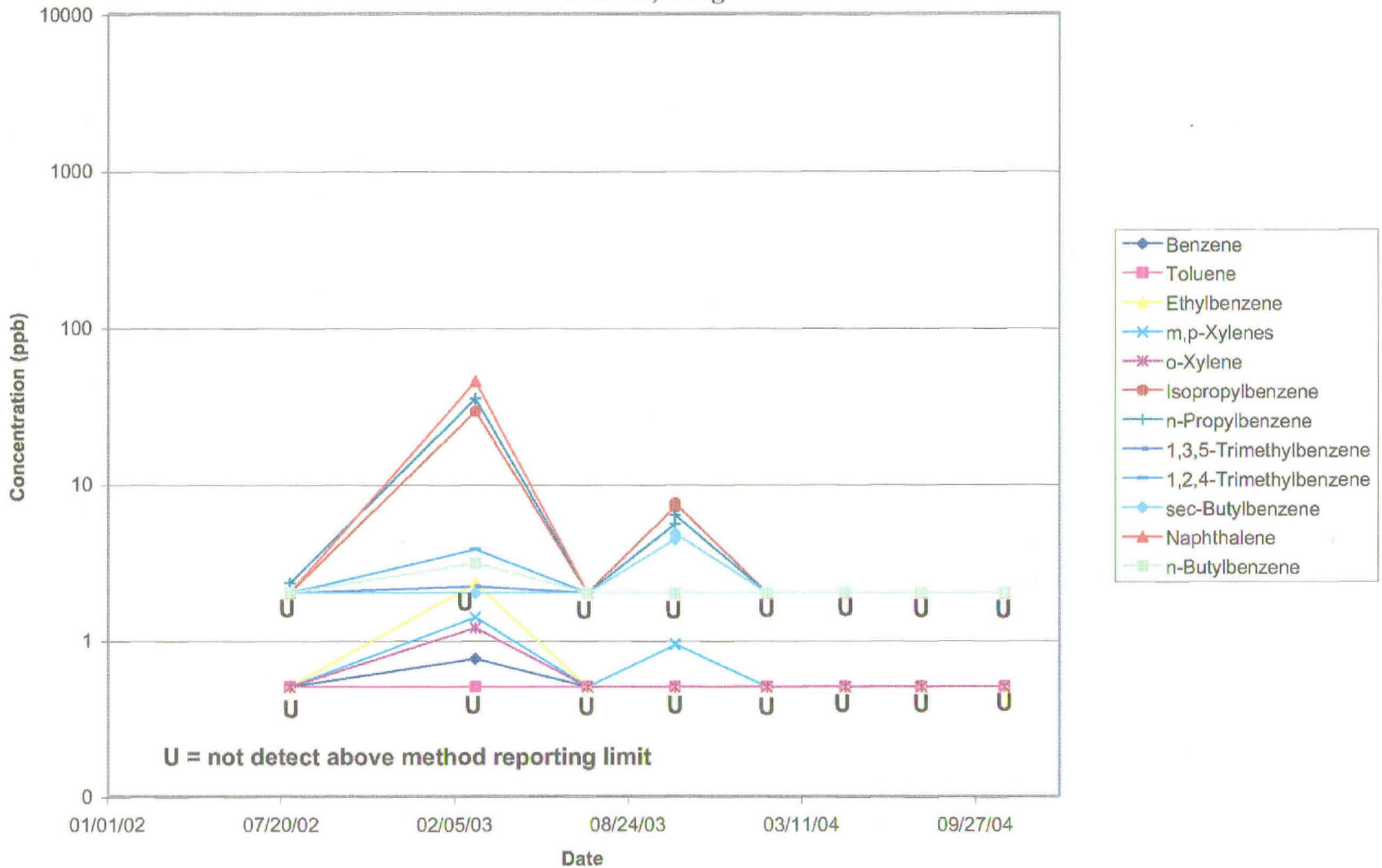
Confidential Business Information

Confidential Business Information

VOC Trends
MW-4
Brix Maritime
Portland, Oregon



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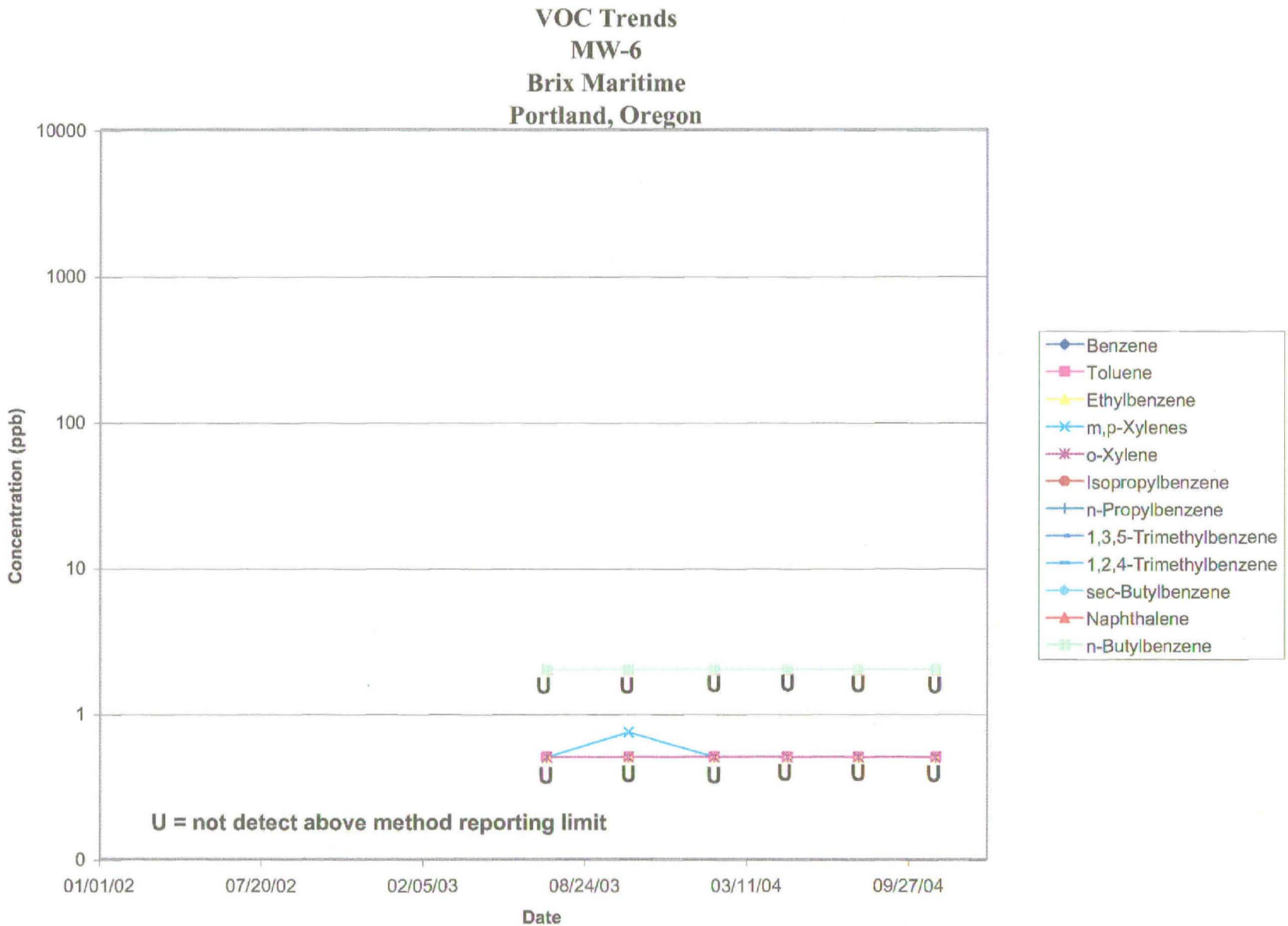

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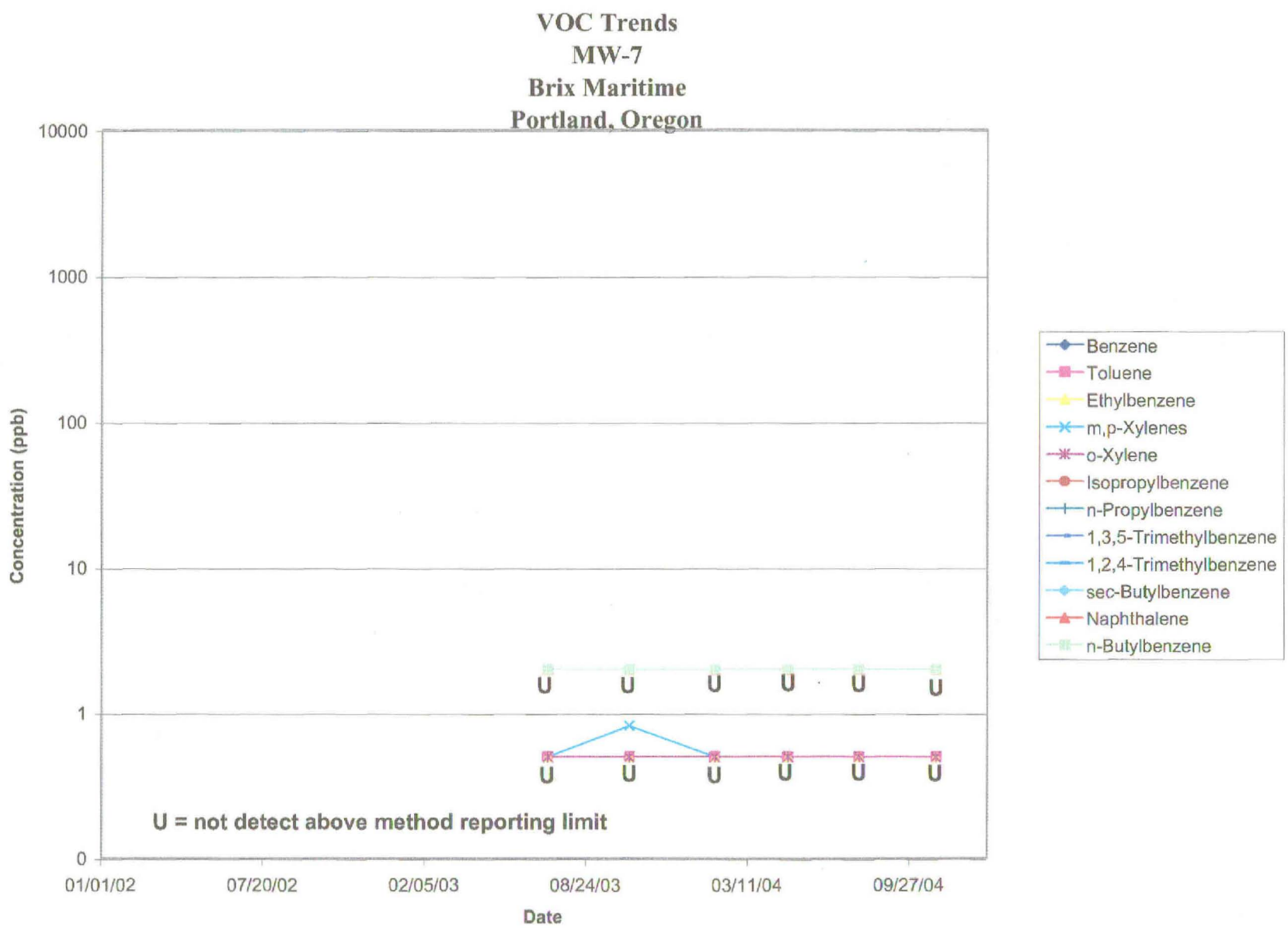
Confidential Business Information



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Confidential Business Information

LPAH Trends

Brix Maritime
Portland, Oregon

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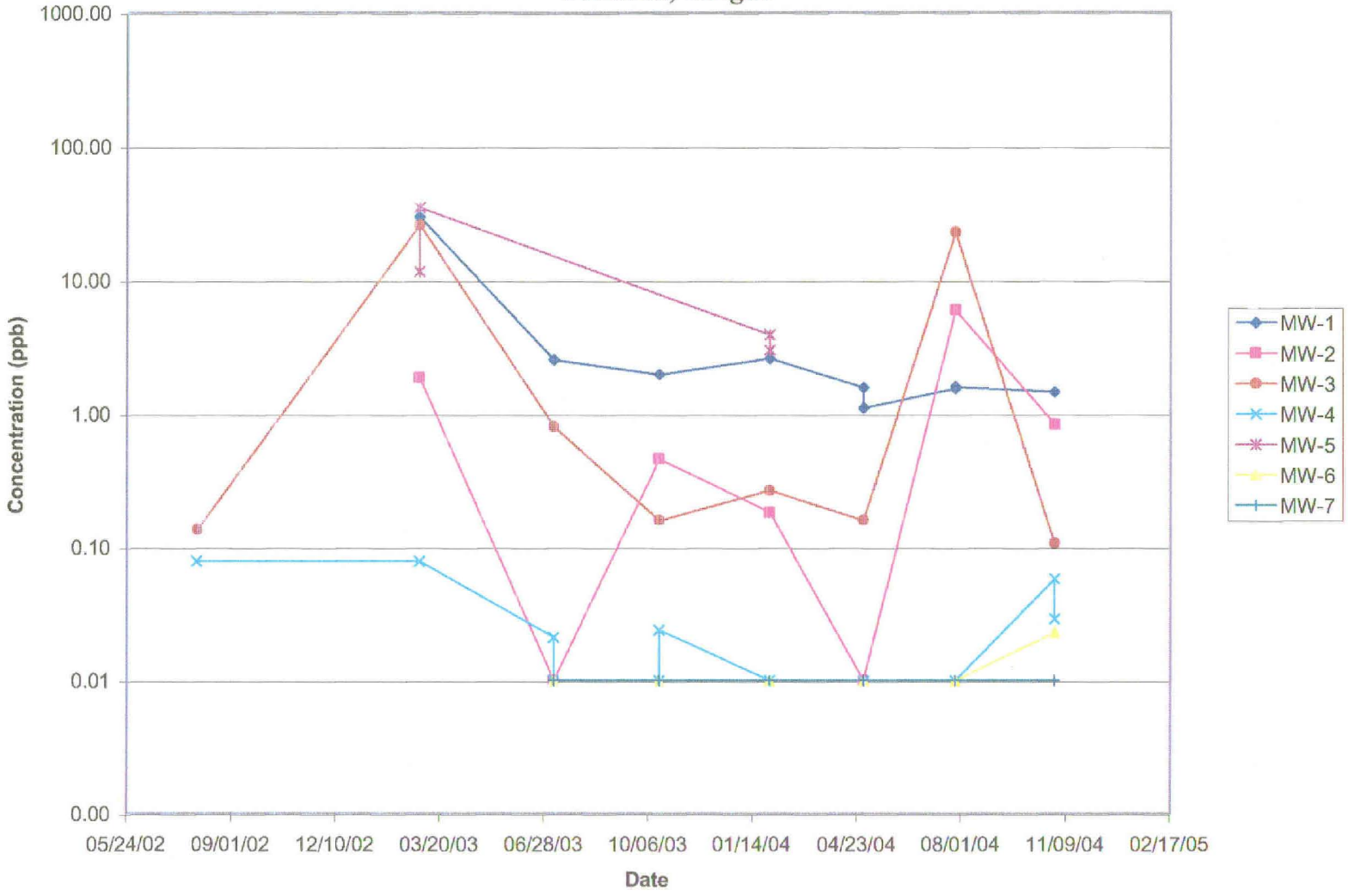
Confidential Business Information

HPAH Trends

Brix Maritime
Portland, Oregon



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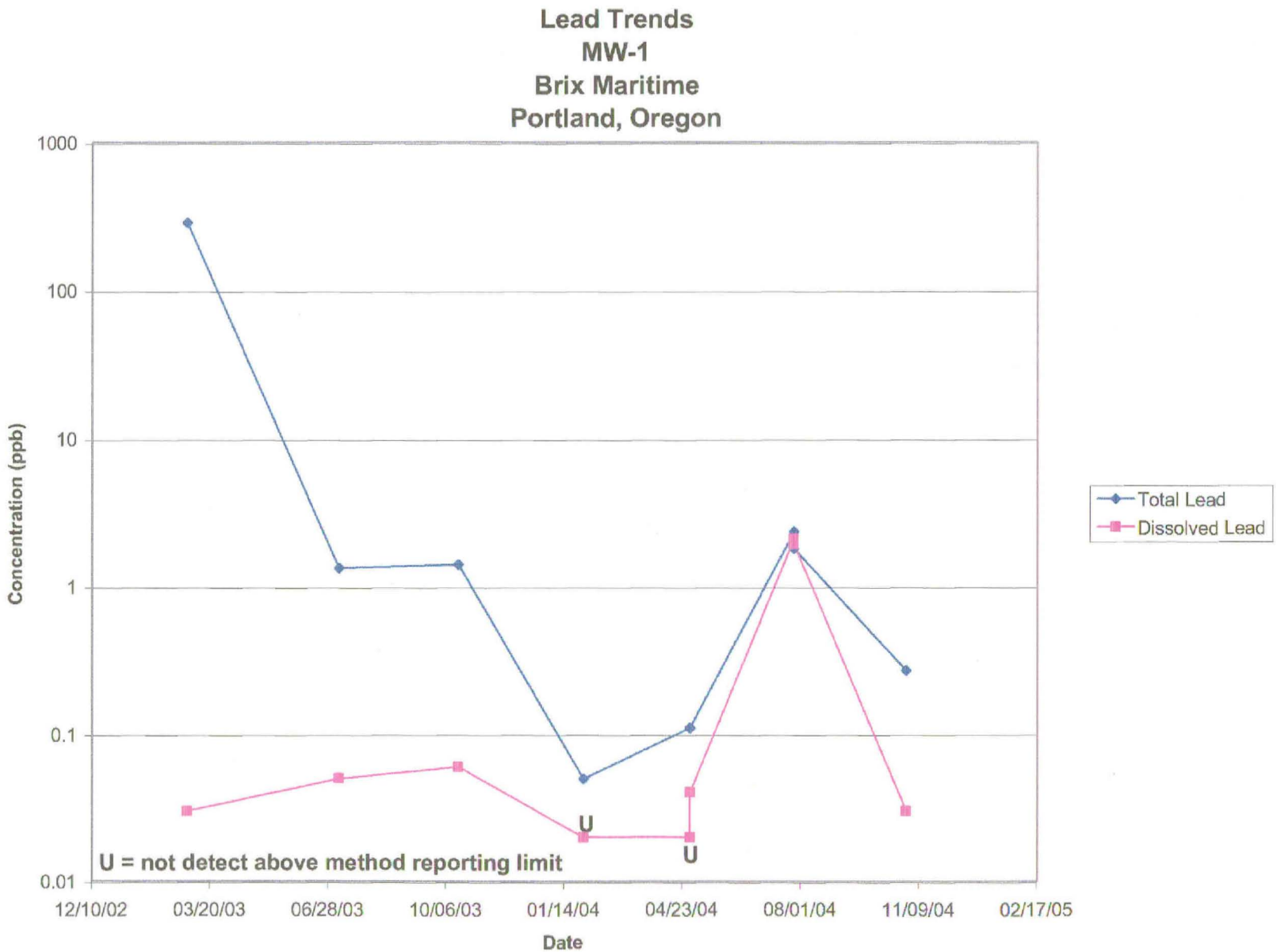

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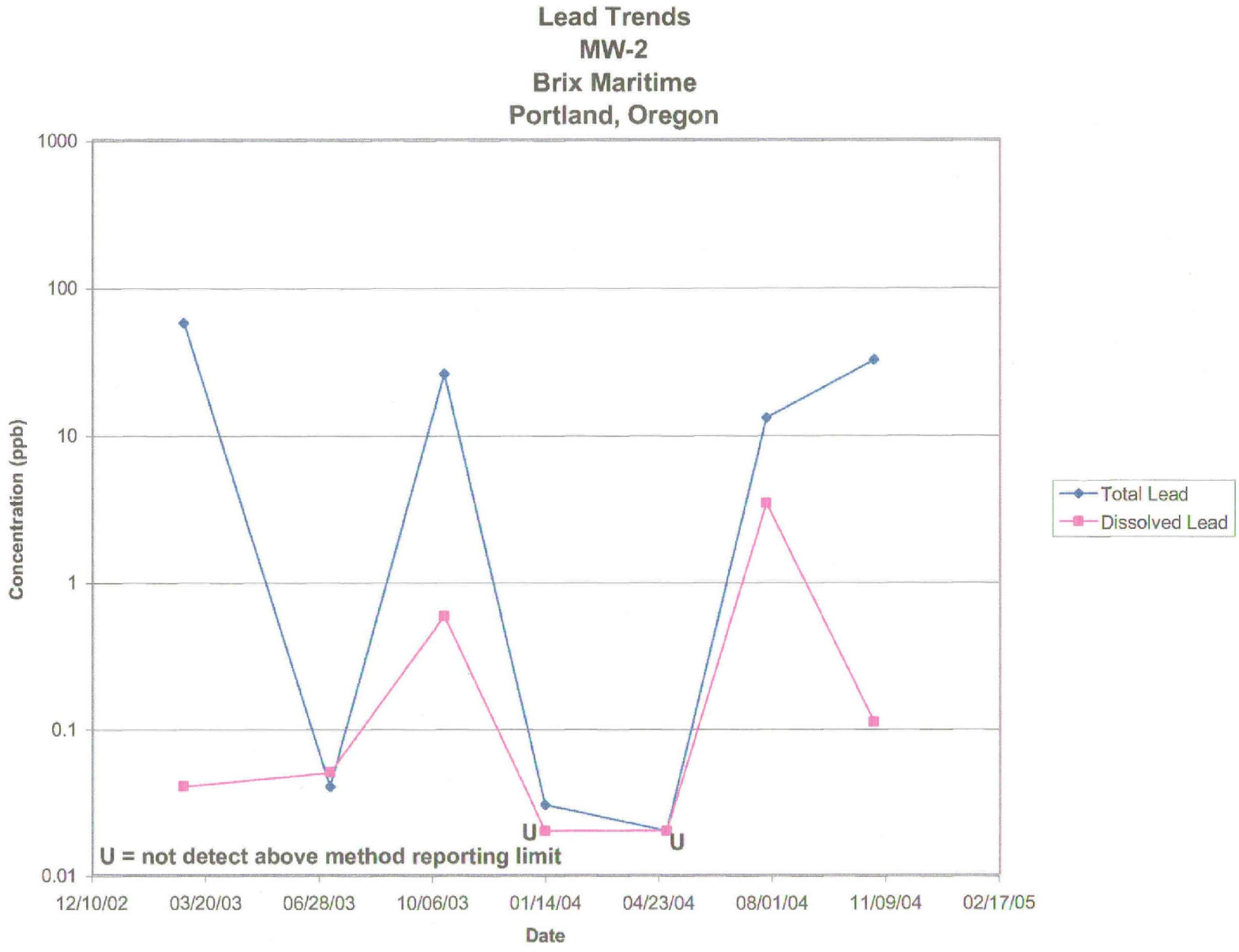

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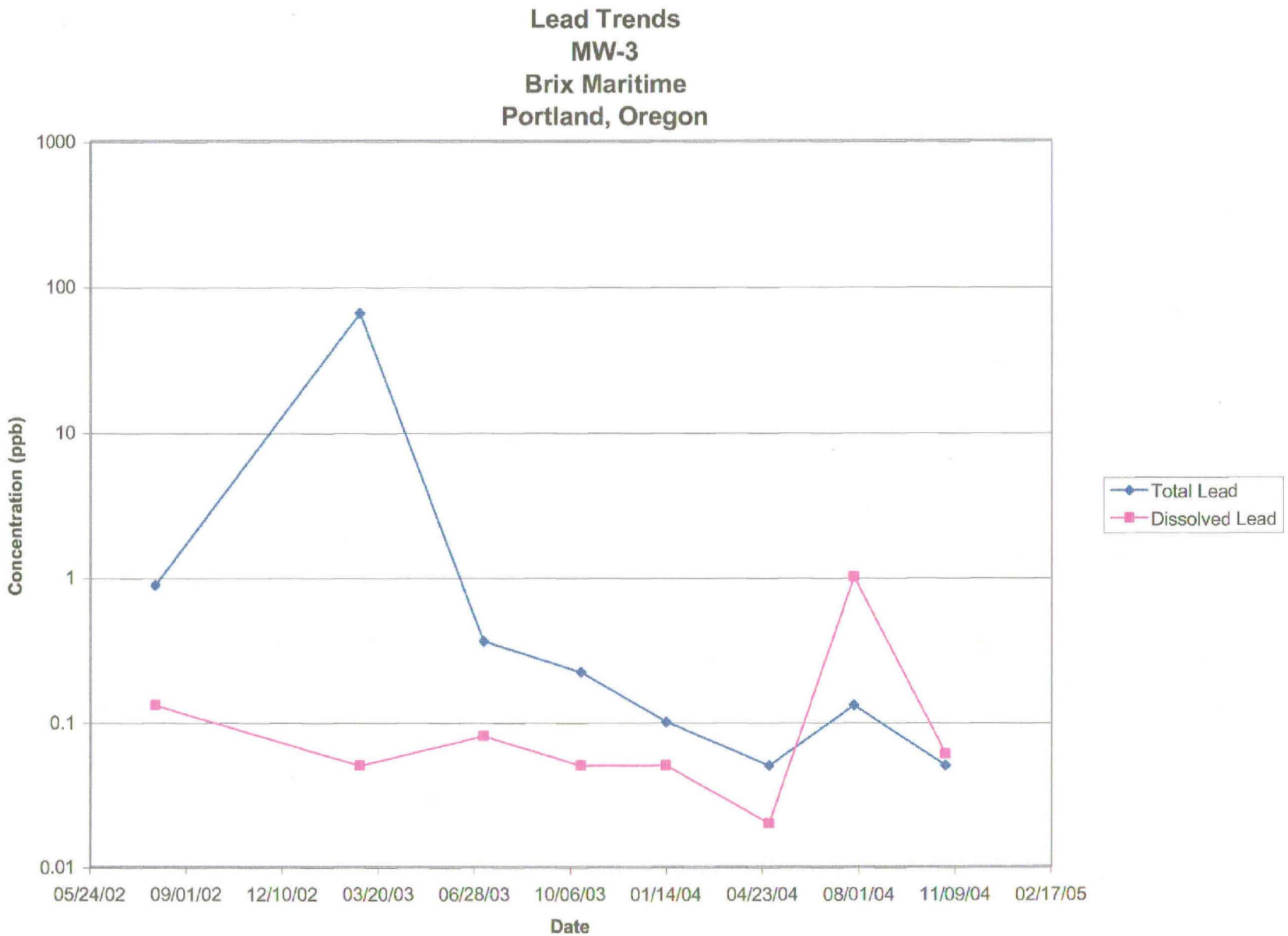

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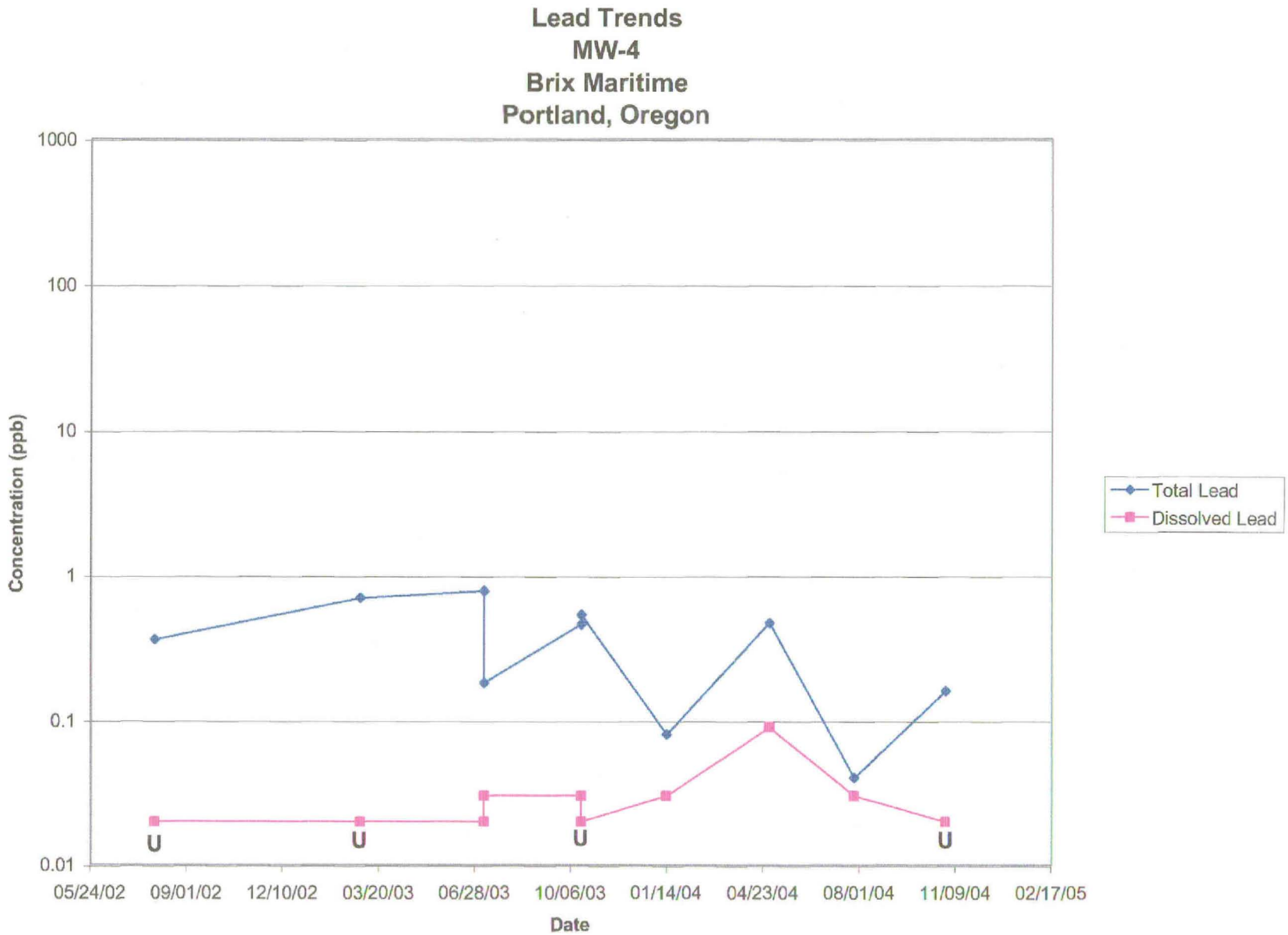
Confidential Business Information

Confidential Business Information



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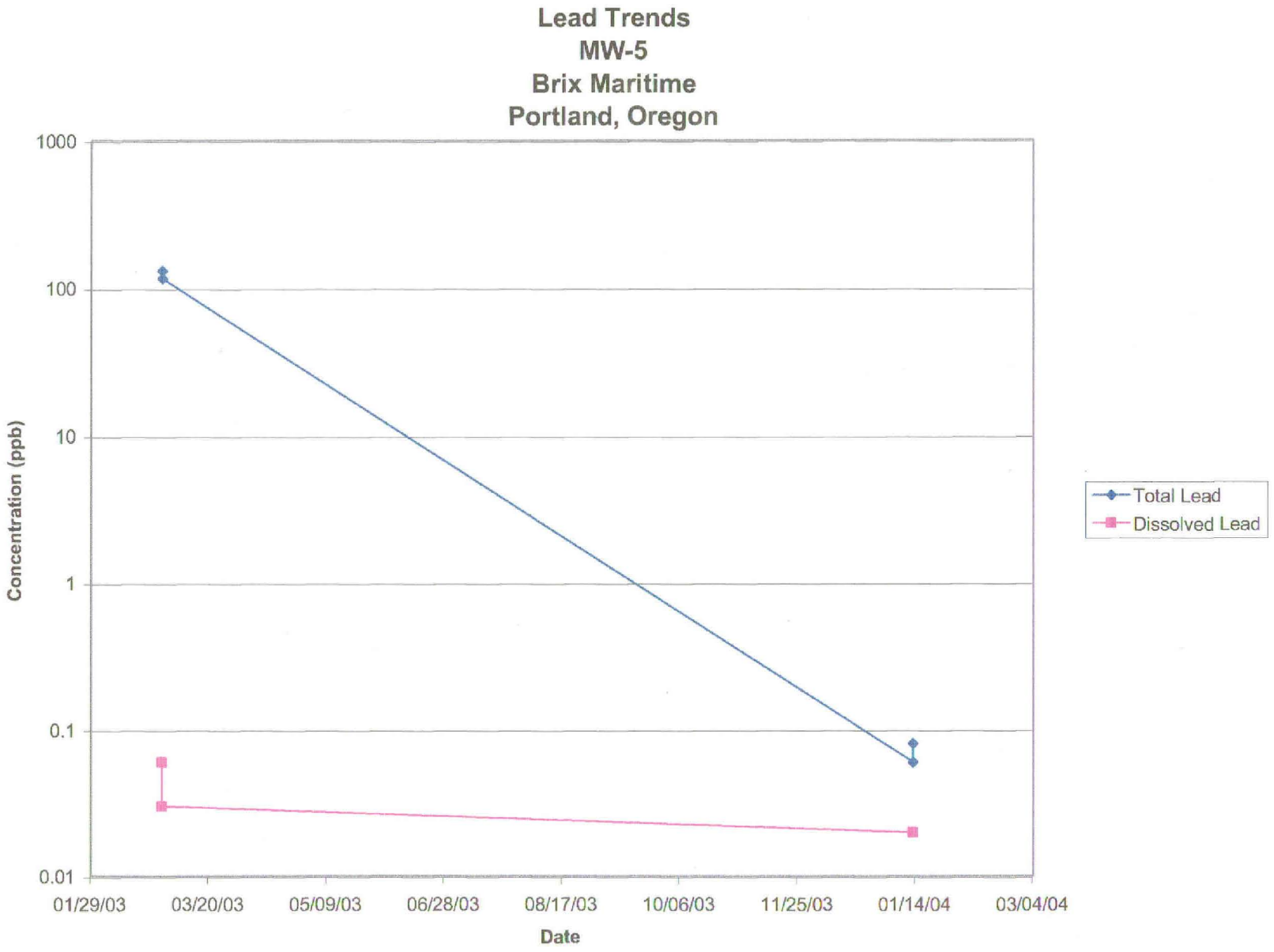

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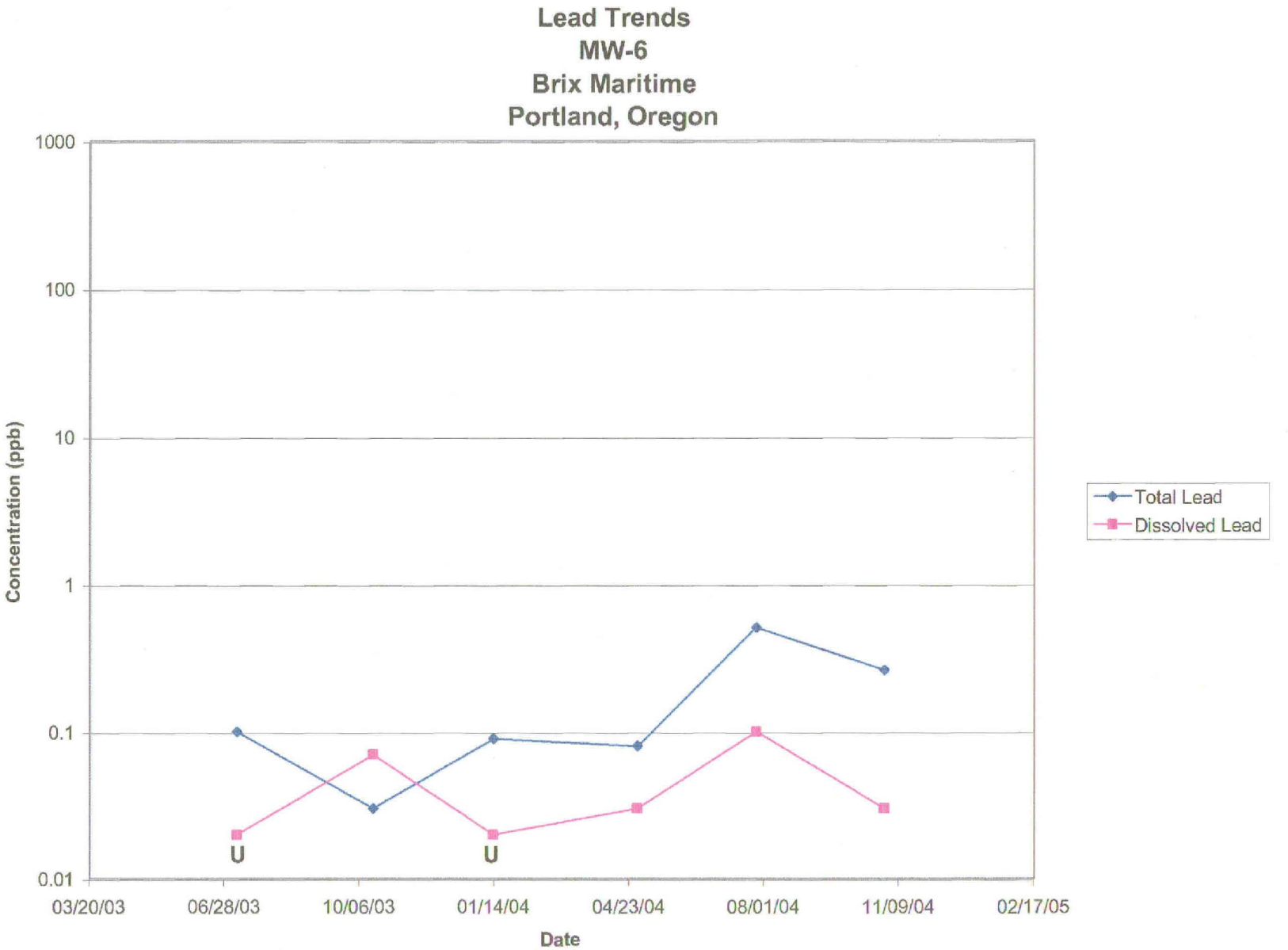
Confidential Business Information

Confidential Business Information



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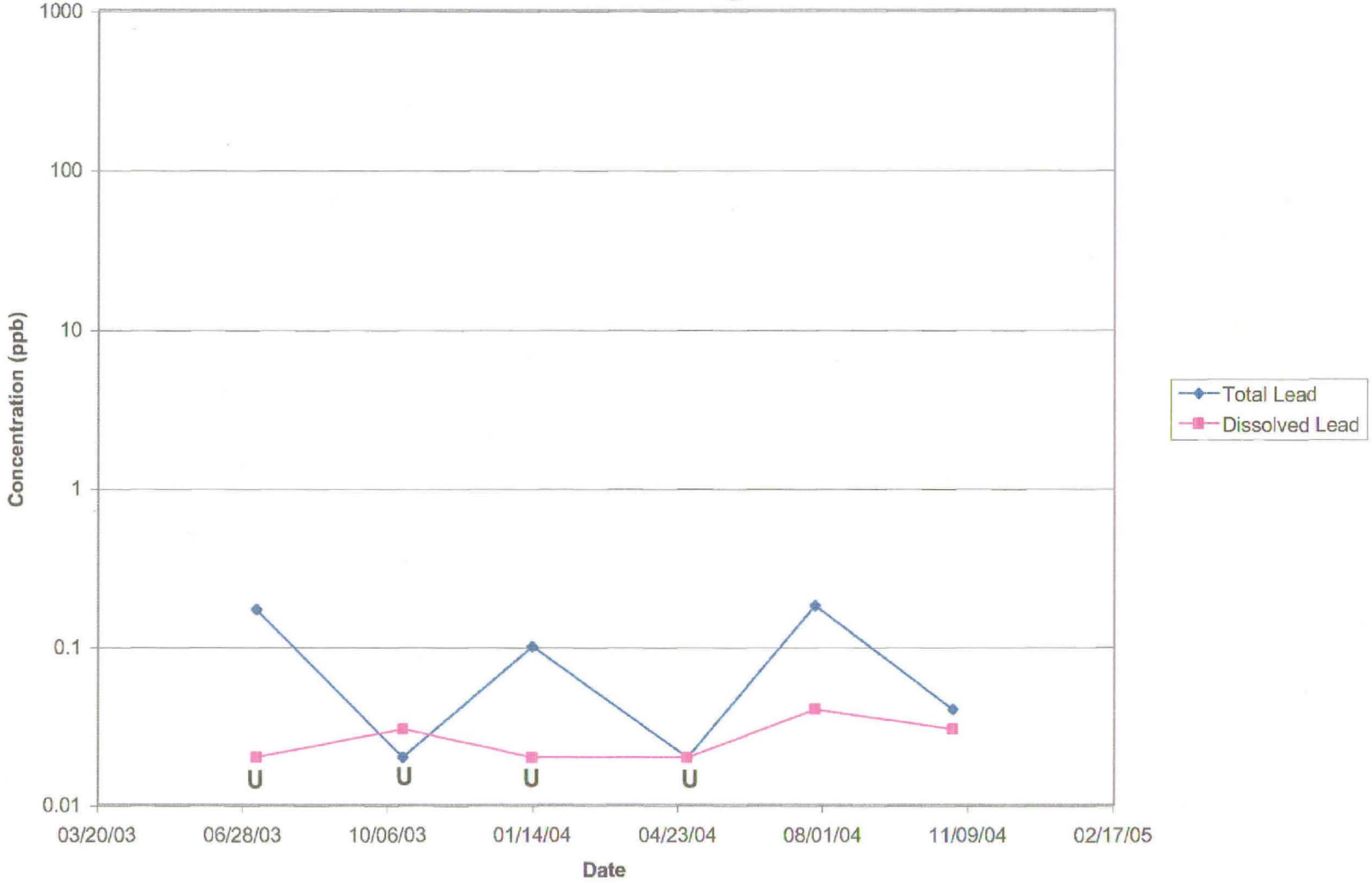
Confidential Business Information

Lead Trends
MW-7
Brix Maritime
Portland, Oregon



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Appendix F

BRIX002785

APPENDIX F

PORTLAND GENERAL ELECTRIC TRANSFORMER LETTER

Confidential Business Information

Portland General Electric Company
121 SW Salmon Street • Portland, Oregon 97204

September 21, 2004
PCB Inquiry
Report No. 065

Mr. John Renda
6650 SW Redwood Ln., Suite 110
Portland, Oregon 97224

Dear Mr. Renda:

The following oil filled transformers located at 9030 NW St. Helens Rd., Portland, OR are owned and maintained by Portland General Electric Company. Listed below is the U.S. Environmental Protection Agency (EPA) Polychlorinated Biphenyl (PCB) classification for the transformers which have been tested for PCB's:

PGE Number	KVA Size	EPA Classification	Date Purchased
391	112.5	UNTESTED	01/01/1979
412	112.5	UNTESTED	01/01/1979

The EPA classifications for transformers with PCB's are:

Classification	PCB Concentration
PCB Transformer	greater than 500 part per million
PCB-Contaminated	50 to 499 part per million
Non-PCB	less than 50 part per million

PGE has always specified that mineral oil be used in the transformers that PGE purchases. However, previous oil handling methods in the industry sometimes resulted in contaminating the oil with PCB's. The actual content of PCB's in those transformers identified on this page as "untested" are not known. Please refer to the Code of Federal Regulations Title 40 Part 761 for EPA guidelines on untested oil-filled transformers

PGE has the ability to test the PCB content in a PGE transformer upon request for a fee. PGE's safe work practices require the de-energizing of equipment to obtain the oil samples for laboratory analysis.

PGE is responsible for the cleanup due to spills from company owned transformers. However, PGE will seek equipment replacement costs, cleanup costs, or other damages from other responsible parties in which the spill was not due to PGE equipment malfunction.

If you have any questions related to this PCB Inquiry report, please call me at (503) 464-8528.

Sincerely,

Pat DeWyse

Pat DeWyse
Environmental Services Department

pcbinfo.let

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PROGRESS REPORT – FIRST QUARTER 2005

BRIX MARITIME COMPANY
PORTLAND, OREGON

Prepared for

Brix Maritime Company

Prepared by

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224

April 15, 2005

ANCHOR ENVIRONMENTAL L.L.C.

BRIX002789

Confidential Business Information

PROGRESS REPORT – FIRST QUARTER 2005

BRIX MARITIME COMPANY
PORTLAND, OREGON

Prepared for

Brix Maritime Company

Prepared by

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224

April 15, 2005

BRIX002790

Confidential Business Information

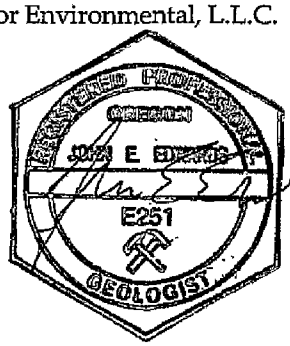
Progress Report – First Quarter 2005

Brix Maritime Company

Portland, Oregon

The material and data in this report were prepared under the supervision and direction of the undersigned.

John J. Renda, R.G.
Anchor Environmental, L.L.C.



John Edwards, R.G. C.E.G.
Anchor Environmental, L.L.C.

BRIX002791

Table of Contents

1 INTRODUCTION 1

2 ACTIONS TAKEN DURING THE FIRST QUARTER 1

3 ACTIONS SCHEDULED FOR THE SECOND QUARTER 1

4 DATA GENERATED IN THE FIRST QUARTER 2
4.1 Soil Borings and Well Installation 2
4.1.1 Background 2
4.1.2 Soil Borings 3
4.1.3 Well Installation 4
4.2 Hydrology Data and Potentiometric Surface Map 4
4.3 Groundwater Sampling 4
4.4 Groundwater Analytical Testing 5
4.5 Data Validation 5

5 SUMMARIES OF PROBLEMS AND ACTIONS TAKEN TO RESOLVE PROBLEMS 5

List of Tables

Table 1 – Hydrology Data
Table 2 – Total Petroleum Hydrocarbons
Table 3 – Polycyclic Aromatic Hydrocarbons
Table 4 – Volatile Organic Compounds
Table 5 – Lead in Groundwater
Table 6 – Metals in Groundwater
Table 7 – Analytical Results for Soil Samples
Table 8 – Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons

List of Figures

Figure 1 – Site Location Map
Figure 2 – Well Location and Potentiometric Surface Map

List of Appendices

Appendix A – Field Data Package
Appendix B – Laboratory Report
Appendix C – Data Validation Review
Appendix D – Well and Boring Survey
Appendix E – Monitoring Well and Boring Logs

BRIX002792

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1 INTRODUCTION

This Progress Report was prepared in accordance with Section II(H) of the Oregon Department of Environmental Quality (DEQ) Voluntary Agreement for Remedial Investigation and Source Control Measures (ECSI 2464 No. LQDVC-NWR-02-03). This report covers the work completed during the quarter ending March 31, 2005 for the Brix Maritime site in Portland, Oregon (Figure 1) and is divided into the following subject areas:

- Actions Taken During the First Quarter
- Actions Scheduled for the Second Quarter
- Data Generated in the First Quarter
- Summaries of Problems and Actions Taken To Resolve Problems

2 ACTIONS TAKEN DURING THE FIRST QUARTER

- Anchor submitted the Fourth Quarter 2004 progress report to DEQ in January 2005.
- Anchor submitted the RI Workplan to DEQ in February 2005.
- Three borings (B-31, B-32, and B-33) were advanced on February 18, 2005.
- Monitoring well MW-8 was installed on February 18, 2005.
- Monitoring well MW-8 was developed on February 23, 2005.
- Water levels were measured on February 25, 2005 in monitoring wells MW-1 through MW-8 and at the river staff gauge.
- Monitoring wells MW-1, MW-3, MW-4, and MW-8 were sampled on February 25, 2005.
- The locations of all wells and borings were surveyed in March 2005.

3 ACTIONS SCHEDULED FOR THE SECOND QUARTER

- Monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5 (if sufficient water is present), MW-6, and MW-7 will be sampled in late April or early May 2005.
- Monitor MW-8 for free product.
- Anchor will prepare and submit the First Quarter Progress Report (this report) to DEQ.

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4 DATA GENERATED IN THE FIRST QUARTER

4.1 Soil Borings and Well Installation

4.1.1 Background

In DEQ's February 25, 2004 letter and July 26, 2004 e-mail comments, DEQ states that additional soil quality data may be needed to complete the RI and support the source control assessment. In subsequent communications Anchor and DEQ have discussed the need for two additional borings for the purpose of obtaining soil samples. The purpose of the borings was to obtain soil samples that represent the highest likely concentrations of petroleum constituents as input for calculating site specific Risk Based Concentrations and to support risk screening for source control assessment. In the February 2004 letter, DEQ noted two locations where additional soil sampling may be required to more adequately evaluate the site soils according to DEQ's 2003 guidance, Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites. The two areas included the following.

1. The area of the January 1993 excavation of soil impacted by lube oil (near the location of boring B-28).
2. The area near the former fuel dispenser (near the location of borings B-7 and B-22).

In an email dated October 25, 2004, Anchor proposed a soil boring in both of these locations using a direct push (Geoprobe) sampler with soil sampling and analysis.

In an email dated November 4, 2004, DEQ approved the two soil borings, and asked for additional soil borings to search for free product in the original lube oil pipeline leak area. To determine if lube oil free product is present in the former pipeline area between well MW-1 and well MW-3, DEQ proposed that we collect soil and groundwater grab samples from additional borings to delineate free product in the former release area. DEQ also requested the addition of 7 metals (As, Ba, Cd, Cr, Cu, Mn, and Zn) to the list of analytes for all future groundwater monitoring.
In an email dated December 16, 2004, Anchor proposed an additional monitoring well (MW-8) to be located between wells MW-1 and MW-3 as a more

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reliable method of evaluating the presence of free product than the grab sample investigation proposed by DEQ in the November 4, 2004 e-mail.

In a January 11, 2005 telephone conversation, DEQ approved the installation of monitoring well MW-8.

4.1.2 Soil Borings

On February 18, 2005, three soil borings (B-31, B-32, and B-33) were advanced by direct push (Geoprobe). The locations of soil borings B-1 through B-33 were surveyed. A map showing the locations of the surveyed locations of the borings in attached in Appendix D. Please not that in the Appendix D figure, different names were used by the surveyors for the soil borings; however, the boring numbers are correct. Please reference the boring locations by number.

Boring B-31 was advanced near the former fuel dispenser, between borings B-7 and B-22. Soil from boring B-31 was expected to have a strong gasoline odor based on data from borings B-7 and B-22. Only a slight gasoline odor was detected in soils from boring B-31. An additional boring (B-32) was advanced approximately 5 feet southwest of boring B-31 and soils with a stronger field indication of gasoline were encountered. Gasoline odors were detected in the soil samples obtained from B-32 at 5 to 6 feet below ground surface and at 10 to 12 feet below ground surface. Both soil samples from B-32 were analyzed for petroleum hydrocarbon by method NWTPH-HCID. The soil sample testing results are in tables 7 and 8. The sample from 10 to 12 feet had the highest detection of petroleum hydrocarbons and was further analyzed for total petroleum hydrocarbons (TPH) as gasoline by NWTPH-Gx; TPH as diesel and heavy oils by NWTPH-Dx; Polycyclic Aromatic Hydrocarbons (PAHs) by U.S. Environmental Protection Agency (USEPA) Method 8270-SIM; Volatile Organic Compounds (VOCs) by USEPA Method 8260+MTBE; Volatile Petroleum Hydrocarbons (VPH) ; Extractable Petroleum Hydrocarbons (EPH); and total lead USEPA method 200.8.

Boring B-33 was advanced near boring B-28 in the area of the former lube oil release. Oily soil was observed at a depth of approximately 20 to 22 feet below ground

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surface. A sample was collected and analyzed for TPH as gasoline by NWTPH-Gx; TPH as diesel and heavy oils by NWTPH-Dx; PAHs; VOCs; VPH; EPH; and total lead.

Copies of the Laboratory Reports are in Appendix B. Copies of the boring logs are in Appendix E.

4.1.3 Well Installation

Monitoring well MW-8 was installed on February 18, 2005 adjacent to boring B-33 at a depth of approximately 23 feet below ground surface. Monitoring well MW-8 was developed on February 23, 2005 by a combination of surging with a bailer, bailing, and pumping with a peristaltic pump. A copy of the MW-8 well log is Appendix E.

4.2 Hydrology Data and Potentiometric Surface Map

Water levels were measured in all onsite monitoring wells and at the river staff gauge on February 25, 2005. Water levels and groundwater elevations based on the 1988 North American Vertical Datum (NAVD 88) are presented in Table 1. No free-phase petroleum hydrocarbons were detected in any of the monitoring wells.

A groundwater potentiometric surface map, using the February 25, 2005 measurements, is shown on Figure 2. Consistent with all past monitoring events, the contour pattern indicates that shallow groundwater flows west to east from the upland portion of the site to the river.

During the monthly water level measurements, the river bank was examined for petroleum hydrocarbon seeps or sheens. No petroleum hydrocarbon seeps or sheens were observed.

4.3 Groundwater Sampling

Monitoring wells MW-1, -3, -4, and -8 were sampled on February 25, 2005. Monitoring well MW-5 had insufficient water for sample collection, and MW-2, MW-6, and MW-7 are now sampled semi-annually (spring and fall) instead of quarterly. Field sampling

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procedures, field parameters, field sampling data sheets, and chain of custody documentation are in Appendix A.

4.4 Groundwater Analytical Testing

The groundwater samples, including one duplicate sample, were analyzed for total petroleum hydrocarbons (TPH) as gasoline by NWTPH-Gx; TPH as diesel and heavy oils by NWTPH-Dx; Polycyclic Aromatic Hydrocarbons (PAHs) by U.S. Environmental Protection Agency (USEPA) Method 8270-SIM; Volatile Organic Compounds (VOCs) by USEPA Method 8260+MTBE; and total and dissolved arsenic, barium, cadmium, chromium, copper, manganese, lead, and zinc by USEPA method 200.8. The analytical results are presented in Tables 2 through 6. A copy of the laboratory report is in Appendix B.

The addition of arsenic, barium, cadmium, chromium, copper, manganese, lead, and zinc to the list of analytes was requested by DEQ in an email dated November 4, 2004. No elevated metals were detected. Anchor recommends removing the metals (including lead) from future monitoring at the site.

4.5 Data Validation

Review of the sampling and laboratory records showed no apparent discrepancies between samples collected in the field and those analyzed in the laboratory. The data are judged to be acceptable for their intended use. The data validation review of the laboratory records is summarized in Appendix C.

5 SUMMARIES OF PROBLEMS AND ACTIONS TAKEN TO RESOLVE PROBLEMS

Soil from boring B-31 was expected to have a strong gasoline odor based on data from borings B-7 and B-22. Only a slight gasoline odor was detected in soils from boring B-31. Therefore, an additional boring (B-32) was advanced and soils with a stronger field indication of gasoline were encountered. The original proposed location of boring B-33 (adjacent to boring B-28) was in conflict with underground utilities. The location of boring B-33 was moved approximately 10 feet to the northwest, within the former lube oil conveyance trench.

BRIX002797

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TABLES

BRIX002798

Table 1
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C. — Site: Brix Maritime
Project No. ; 990056-01

Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	Time (2400)	DTW (feet)	Water Elevation (Feet NAVD88)	Water Column (Feet)	Comments
Monitoring Wells								
MW-1	41.81	34.7-19.7	02/28/03	12:20	18.89	22.92	3.22	
MW-1	41.81	34.7-19.7	03/31/03	16:35	19.43	22.38	2.68	
MW-1	41.81	34.7-19.7	04/29/03	10:25	19.69	22.12	2.42	
MW-1	41.81	34.7-19.7	05/22/03	15:00	20.22	21.59	1.89	
MW-1	41.81	34.7-19.7	07/07/03	10:45	21.08	20.73	1.03	
MW-1	41.81	34.7-19.7	07/30/03	17:10	21.13	20.68	0.98	
MW-1	41.81	34.7-19.7	08/28/03	16:00	21.24	20.57	0.87	
MW-1	41.81	34.7-19.7	09/30/03	16:45	21.15	20.66	0.96	
MW-1	41.81	34.7-19.7	10/16/03	8:06	21.10	20.71	1.01	
MW-1	41.81	34.7-19.7	12/03/03	10:42	21.06	20.75	1.05	
MW-1	41.81	34.7-19.7	12/26/03	7:40	20.46	21.35	1.65	
MW-1	41.81	34.7-19.7	01/30/04	9:45	19.01	22.80	3.10	
MW-1	41.81	34.7-19.7	03/04/04	8:25	19.60	22.21	2.51	
MW-1	41.81	34.7-19.7	04/29/04	10:15	20.91	20.90	1.20	
MW-1	41.81	34.7-19.7	05/27/04	12:43	21.13	20.68	0.98	
MW-1	41.81	34.7-19.7	07/06/04	12:43	21.22	20.59	0.89	
MW-1	41.81	34.7-19.7	07/26/04	12:43	21.28	20.53	0.83	
MW-1	41.81	34.7-19.7	10/29/04	12:43	21.25	20.56	0.86	
MW-1	41.81	34.7-19.7	02/25/05	11:34	20.81	21.00	1.30	
MW-2	42.13	32.5-17.5	02/28/03	12:10	19.88	22.25	4.75	
MW-2	42.13	32.5-17.5	03/31/03	15:50	20.36	21.77	4.27	
MW-2	42.13	32.5-17.5	04/29/03	9:30	20.64	21.49	3.99	
MW-2	42.13	32.5-17.5	05/22/03	14:35	21.06	21.07	3.57	
MW-2	42.13	32.5-17.5	07/07/03	10:40	22.17	19.96	2.46	
MW-2	42.13	32.5-17.5	07/30/03	16:22	22.50	19.63	2.13	
MW-2	42.13	32.5-17.5	08/28/03	15:20	22.84	19.29	1.79	
MW-2	42.13	32.5-17.5	09/30/03	16:10	23.07	19.06	1.56	
MW-2	42.13	32.5-17.5	10/16/03	7:47	23.06	19.07	1.57	
MW-2	42.13	32.5-17.5	12/03/03	10.20	22.54	19.59	2.09	
MW-2	42.13	32.5-17.5	12/26/03	7:20	21.58	20.55	3.05	
MW-2	42.13	32.5-17.5	01/30/04	9:55	20.05	22.08	4.58	
MW-2	42.13	32.5-17.5	03/04/04	8.00	20.57	21.56	4.06	
MW-2	42.13	32.5-17.5	04/29/04	10:20	21.89	20.24	2.74	
MW-2	42.13	32.5-17.5	05/27/04	16:22	22.29	19.84	2.34	
MW-2	42.13	32.5-17.5	07/06/04	10:20	22.70	19.43	1.93	
MW-2	42.13	32.5-17.5	07/26/04	16,22	22.85	19.28	1.78	
MW-2	42.13	32.5-17.5	10/29/04	16:22	22.90	19.23	1.73	
MW-2	42.13	32.5-17.5	02/25/05	11:05	22.20	19.93	2.43	
MW-3	41.93	32.6-17.6	07/29/02	13:00	22.91	19.02	1.42	
MW-3	41.93	32.6-17.6	08/22/02	7:15	23.50	18.43	0.83	Oil detected in well, thickness estimated at 0.02 foot
MW-3	41.93	32.6-17.6	09/30/02	7:00	23.37	18.56	0.96	Oil detected in well, thickness estimated at 0.02 foot
MW-3	41.93	32.6-17.6	10/30/02	15:50	23.68	18.25	0.65	DTP = 23.49 (0.19 foot thick)
MW-3	41.93	32.6-17.6	11/27/02	16:30	23.30	18.63	1.03	DTP = 23.16 (0.14 foot thick)
MW-3	41.93	32.6-17.6	12/30/02	16:30	21.99	19.94	2.34	Oil noted on probe, product too thin to measure with Interface probe
MW-3	41.93	32.6-17.6	02/28/03	12:15	19.75	22.18	4.58	Oil noted on probe, product too thin to measure with interface probe
MW-3	41.93	32.6-17.6	03/31/03	16:20	20.24	21.69	4.09	No oil noted on probe
MW-3	41.93	32.6-17.6	04/29/03	10:02	20.50	21.43	3.83	No oil noted on probe
MW-3	41.93	32.6-17.6	05/22/03	14:45	20.94	20.99	3.39	No oil noted on probe
MW-3	41.93	32.6-17.6	07/07/03	10:52	22.21	19.72	2.12	No oil noted on probe
MW-3	41.93	32.6-17.6	07/30/03	16:15	22.62	19.31	1.71	No oil noted on probe
MW-3	41.93	32.6-17.6	08/28/03	15:50	22.95	18.98	1.38	Oil noted on probe, product too thin to measure with Interface probe
MW-3	41.93	32.6-17.6	09/30/03	17:00	23.15	18.78	1.18	DTP = 23.04 (0.11 foot thick)
MW-3	41.93	32.6-17.6	10/16/03	8:15	22.40	19.53	1.93	No oil noted on probe
MW-3	41.93	32.6-17.6	12/03/03	10:50	22.21	19.72	2.12	Sheen, product too thin to measure
MW-3	41.93	32.6-17.6	12/26/03	7:45	21.44	20.49	2.89	No oil noted on probe
MW-3	41.93	32.6-17.6	01/30/04	10:03	19.80	22.13	4.53	No oil noted on probe
MW-3	41.93	32.6-17.6	03/04/04	8:22	20.41	21.52	3.92	No oil noted on probe
MW-3	41.93	32.6-17.6	04/29/04	10:25	21.82	20.11	2.51	No oil noted on probe
MW-3	41.93	32.6-17.6	05/27/04	16:50	22.25	19.68	2.08	No oil noted on probe
MW-3	41.93	32.6-17.6	07/06/04	10:25	22.66	19.27	1.67	No oil noted on probe
MW-3	41.93	32.6-17.6	07/26/04	16:50	22.91	19.02	1.42	DTP = 22.89 (0.02 foot thick)
MW-3	41.93	32.6-17.6	10/29/04	16:50	22.29	19.64	2.04	Oil noted on probe, product too thin to measure with interface probe
MW-3	41.95	32.6-17.6	02/25/05	13:15	22.03	19.92	2.32	No measureable product, petroleum odor

Table 1
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C. — Site: Brix Maritime
Project No. : 990056-01

Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	Time (2400)	DTW (feet)	Water Elevation (Feet NAVD88)	Water Column (Feet)	Comments
MW-4	23.55	19.1-9.1	07/29/02	12:55	11.62	11.93	2.83	
MW-4	23.55	19.1-9.1	08/22/02	7:25	11.77	11.78	2.68	
MW-4	23.55	19.1-9.1	09/30/02	6:50	11.94	11.61	2.51	
MW-4	23.55	19.1-9.1	10/30/02	15:55	12.06	11.49	2.39	
MW-4	23.55	19.1-9.1	11/27/02	16:35	11.85	11.70	2.60	
MW-4	23.55	19.1-9.1	12/30/02	16:35	10.24	13.31	4.21	
MW-4	23.55	19.1-9.1	02/28/03	12:35	4.34	19.21	10.11	
MW-4	23.55	19.1-9.1	03/31/03	16:45	4.59	18.96	9.86	
MW-4	23.55	19.1-9.1	04/29/03	9:50	5.46	18.09	8.99	
MW-4	23.55	19.1-9.1	05/22/03	14:50	8.59	14.96	5.86	
MW-4	23.55	19.1-9.1	07/07/03	10:33	10.69	12.86	3.76	
MW-4	23.55	19.1-9.1	07/30/03	16:30	11.03	12.52	3.42	
MW-4	23.55	19.1-9.1	08/28/03	15:30	11.40	12.15	3.05	
MW-4	23.55	19.1-9.1	09/30/03	16:15	11.74	11.81	2.71	
MW-4	23.55	19.1-9.1	10/16/03	7:52	11.40	12.15	3.05	
MW-4	23.55	19.1-9.1	12/03/03	10:30	10.59	12.96	3.86	
MW-4	23.55	19.1-9.1	12/26/03	7:25	9.50	14.05	4.95	
MW-4	23.55	19.1-9.1	01/30/04	10:10	5.41	18.14	9.04	
MW-4	23.55	19.1-9.1	03/04/04	8:05	9.05	14.50	5.40	
MW-4	23.55	19.1-9.1	04/29/04	13:30	11.00	12.55	3.45	
MW-4	23.55	19.1-9.1	05/27/04	16:27	10.89	12.66	3.56	
MW-4	23.55	19.1-9.1	07/06/04	13:30	11.26	12.29	3.19	
MW-4	23.55	19.1-9.1	07/26/04	16:27	11.56	11.99	2.89	
MW-4	23.55	19.1-9.1	10/29/04	16:27	11.06	12.49	3.39	
MW-4	23.55	19.1-9.1	02/25/05	10:20	10.60	12.95	3.85	
MW-5	41.66	34.6-19.6	02/28/03	12:28	19.45	22.21	2.61	
MW-5	41.66	34.6-19.6	03/31/03	16:10	19.99	21.67	2.07	
MW-5	41.66	34.6-19.6	04/29/03	10:10	20.25	21.41	1.81	
MW-5	41.66	34.6-19.6	05/22/03	14:55	20.75	20.91	1.31	
MW-5	41.66	34.6-19.6	07/07/03	11.00	21.93	19.73	0.13	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	07/30/03	16:55	22.08	19.58	-0.02	dry
MW-5	41.66	34.6-19.6	08/28/03	15:45	22.08	19.58	-0.02	dry
MW-5	41.66	34.6-19.6	09/30/03	16:40	22.13	19.53	-0.07	dry
MW-5	41.66	34.6-19.6	10/16/03	8.03	22.10	19.56	-0.04	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	12/03/03	10:40	22.13	19.53	-0.07	dry
MW-5	41.66	34.6-19.6	12/26/03	7:36	21.35	20.31	0.71	
MW-5	41.66	34.6-19.6	01/30/04	10:18	19.59	22.07	2.47	
MW-5	41.66	34.6-19.6	03/04/04	8:19	20.16	21.50	1.90	
MW-5	41.66	34.6-19.6	04/29/04	10:35	21.67	19.99	0.39	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	05/27/04	16:47	21.99	19.67	0.07	
MW-5	41.66	34.6-19.6	07/06/04	10:35	21.98	19.68	0.08	Insufficient water to collect sample
MW-5	41.66	34.6-19.6	07/26/04	16:47	dry	<19.60	0.00	dry
MW-5	41.66	34.6-19.6	10/29/04	16:47	22.00	19.66	0.06	Insufficient water to collect sample
MW-5	41.66	34 6-19.6	02/25/05	10:45	21.85	19.81	0.21	Petroleum odor, no measureable product, water level below bottom of screen (dry)
MW-6	41.21	31.1-16.1	07/07/03	11:10	20.26	20.95	4.85	
MW-6	41.21	31.1-16.1	07/30/03	16:38	20.57	20.64	4.54	
MW-6	41.21	31.1-16.1	08/28/03	15:40	21.02	20.19	4.09	
MW-6	41.21	31.1-16.1	09/30/03	15:40	21.02	20.19	4.09	
MW-6	41.21	31.1-16.1	10/16/03	8:00	20.93	20.28	4.18	
MW-6	41.21	31.1-16.1	12/03/03	10:36	21.53	19.68	3.58	
MW-6	41.21	31.1-16.1	12/26/03	7:50	19.24	21.97	5.87	
MW-6	41.21	31.1-16.1	01/30/04	14:35	17.70	23.51	7.41	
MW-6	41.21	31.1-16.1	03/04/04	8:31	18.16	23.05	6.95	
MW-6	41.21	31.1-16.1	04/29/04	10:40	19.66	21.55	5.45	
MW-6	41.21	31.1-16.1	05/27/04	16:45	20.17	21.04	4.94	
MW-6	41.21	31.1-16.1	07/06/04	10:40	20.71	20.50	4.40	
MW-6	41.21	31.1-16.1	07/26/04	16:45	21.23	19.98	3.88	
MW-6	41.21	31.1-16.1	10/29/04	16:45	21.48	19.73	3.63	
MW-6	41.21	31.1-16.1	02/25/05	9.55	19.78	21.43	5.33	

Table 1
Hydrology Data
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.								Site: Brix Maritime Project No.: 990056-01
Well	Reference Elevation (Feet NAVD88)	Screen Interval (Feet NAVD88)	Date (MM/DD/YY)	Time (2400)	DTW (feet)	Water Elevation (Feet NAVD88)	Water Column (Feet)	Comments
MW-7	40.95	31.2-16.2	07/07/03	10:30	21.21	19.74	3.54	
MW-7	40.95	31.2-16.2	07/30/03	16:45	21.76	19.19	2.99	
MW-7	40.95	31.2-16.2	08/28/03	15:35	22.32	18.63	2.43	
MW-7	40.95	31.2-16.2	09/30/03	16:30	22.67	18.28	2.08	
MW-7	40.95	31.2-16.2	10/16/03	7:55	22.72	18.23	2.03	
MW-7	40.95	31.2-16.2	12/03/03	10:33	22.90	18.05	1.85	
MW-7	40.95	31.2-16.2	12/26/03	7:32	20.32	20.63	4.43	
MW-7	40.95	31.2-16.2	01/30/04	10:33	18.26	22.69	6.49	
MW-7	40.95	31.2-16.2	03/04/04	8:13	18.96	21.99	5.79	
MW-7	40.95	31.2-16.2	04/29/04	10:45	20.49	20.46	4.26	
MW-7	40.95	31.2-16.2	05/27/04	16:41	21.10	19.85	3.65	
MW-7	40.95	31.2-16.2	07/06/04	10:45	21.98	18.97	2.77	
MW-7	40.95	31.2-16.2	07/26/04	16:41	22.40	18.55	2.35	
MW-7	40.95	31.2-16.2	10/29/04	16:41	22.99	17.96	1.76	
MW-7	40.95	31.2-16.2	02/25/05	10:00	20.80	20.15	3.95	
MW-8	41.73	24.8-19.8	02/25/05	11:22	21.15	20.58		
River Gauge[1]								
River	4.33	NA	10/30/02	16:00	2.75	7.08		
River	4.33	NA	11/27/02	16:40	3.1	7.43		
River	4.33	NA	12/30/02	16:20	7.5	11.83		
River	4.33	NA	02/28/03	12:00	6.1	10.43		
River	4.33	NA	03/31/03	16:00	8.0	12.33		
River	4.33	NA	04/29/03	9:40	8.0	12.33		
River	4.33	NA	05/22/03	14:40	6.5	10.83		
River	4.33	NA	07/07/03	10:47	4.0	8.33		
River	4.33	NA	07/30/03	17:15	3.5	7.83		
River	4.33	NA	08/28/03	15:15	3.3	7.63		
River	4.33	NA	09/30/03	16:22	2.1	6.43		
River	4.33	NA	10/16/03	7:42	2.2	6.53		
River	4.33	NA	12/03/03	10.23	3.5	7.83		
River	4.33	NA	12/26/03	7:27	6.7	11.03		
River	4.33	NA	01/30/04	9:50	11.0	15.33		
River	4.33	NA	03/04/04	8:10	5.0	9.33		
River	4.33	NA	04/29/04	10.22	4.0	8.33		
River	4.33	NA	05/27/04	16:37	6.6	10.93		
River	4.33	NA	07/06/04	10:22	5.5	9.83		
River	4.33	NA	07/26/04	16:37	2.75	7.08		
River	4.33	NA	10/29/04	16:37	3.75	8.08		
River	4.33	NA	02/25/05	10:30	4.00	8.33		

Note: DTW = Depth to Water; DTP = Depth to Product; NA = Not Applicable
1 = The river gauge is marked in 1-foot increments, field measurements are estimated to the closest 0.1 foot

Table 2
Total Petroleum Hydrocarbons
Brix Maritime
Portland, Oregon

Location (sample depth in ft bgs)	Matrix	Date Date Sampled	Diesel Range Organics		Residual Range Organics		Gasoline Range Organics	
MW-1	Water	07/07/03	0.27	L	0.5	U	1.3	H
MW-1	Water	10/16/03	0.73	L	0.5	U	8.1	H
MW-1	Water	01/30/04	0.60	L	0.5	U	4.0	H
MW-1	Water	04/29/04	0.71	L	0.5	U	5.8	H
MW-1 Duplicate	Water	04/29/04	0.79	L	0.5	U	5.7	H
MW-1	Water	07/26/04	0.92	L	0.5	U	9.3	Y
MW-1 Duplicate	Water	07/26/04	0.93	L	0.5	U	9.3	Y
MW-1	Water	10/29/04	1.10	L	0.5	U	8.8	Y
MW-1	Water	02/25/05	1.40	L	0.5	U	12.0	DY
MW-1 Duplicate	Water	02/25/05	1.30	L	0.5	U	11.0	DY
MW-2	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-2	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-2	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-2	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-2	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-2	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-3	Water	07/30/02	3.4	Y	1.6	O		
MW-3	Water	07/07/03	1.9	Y	8.5	O	0.05	U
MW-3	Water	10/16/03	0.92	Y	1.8	O	0.059	Y
MW-3	Water	01/30/04	0.79	Y	0.6	O	0.05	U
MW-3	Water	04/29/04	0.7	Y	0.77	O	0.05	U
MW-3	Water	07/26/04	2.5	Y	8.3	O	0.25	U
MW-3	Water	10/29/04	1.2	Y	3.1	O	0.25	U
MW-3	Water	02/25/05	1.2	Y	1.8	O	0.25	U
MW-4	Water	07/29/02	0.26	U	0.52	U		
MW-4	Water	07/07/03	0.25	U	0.52	O	0.05	U
MW-4 Duplicate	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-4	Water	10/16/03	0.25	U	0.5	U	0.65	Y
MW-4 Duplicate	Water	10/16/03	0.25	U	0.5	U	0.66	Y
MW-4	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-4	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-4	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-4	Water	10/29/04	0.73	Z	1.0	Z	0.25	U
MW-4 Duplicate	Water	10/29/04	0.63	Z	0.96	Z	0.25	U
MW-4	Water	02/25/05	0.25	U	0.50	U	0.25	U
MW-5	Water	01/30/04	0.62	L	0.5	U	1.4	H
MW-5 Duplicate	Water	01/30/04	0.63	L	0.5	U	1.5	H
MW-6	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-6	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-6	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-6	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-6	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-6	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-7	Water	07/07/03	0.25	U	0.5	U	0.05	U
MW-7	Water	10/16/03	0.27	U	0.53	U	0.05	U
MW-7	Water	01/30/04	0.25	U	0.5	U	0.05	U
MW-7	Water	04/29/04	0.25	U	0.5	U	0.05	U
MW-7	Water	07/26/04	0.25	U	0.5	U	0.25	U
MW-7	Water	10/29/04	0.25	U	0.5	U	0.25	U
MW-8	Water	02/25/05	1	Y	1.3	O	0.25	U

Notes: Water concentrations are in mg/L. Soil concentrations are in mg/kg.
ft bgs = feet below ground surface.
U = Not detected at method reporting limit.
O = The fingerprint resembles oil, but does not match the calibration standard.
L = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of lighter weight constituents than the calibration standard.
H = The fingerprint resembles a petroleum product, but the elution pattern indicates the presence of heavier weight constituents than the calibration standard.
Y = The fingerprint resembles a petroleum product in the correct carbon range, but the elution pattern does not match the calibration standard

BRIX002802

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-1		MW-1		MW-1		MW-1		MW-1		MW-1 Dup		MW-1		MW-1 Dup		MW-1		MW-1		MW-1 Dup	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	02/28/03		07/07/03		10/16/03		01/30/04		04/29/04		04/29/04		07/26/04		07/26/04		10/29/04		02/25/05		02/25/05	
LPAHs											LPAHs											
Naphthalene	23	D	23	D	160	D	110	D	170	D	150	D	170	D	170	D	160	D	150	D	170	D
Acenaphthylene	0.19		0.02	U	0.02	U	0.15	UB	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U	0.10		0.088	Ui
Acenaphthene	0.43		0.38		0.34		0.17		0.30		0.23		0.34		0.33		0.33		0.33		0.38	
Dibenzofuran	0.12		0.067		0.085		0.032		0.062		0.057		0.073		0.074		0.085		0.093		0.10	
Fluorene	0.36		0.27		0.24		0.11		0.19		0.14		0.23		0.24		0.23		0.28		0.32	
Phenanthrene	1.8		0.56		0.42		0.16		0.34		0.27		0.36		0.36		0.32		0.44		0.53	
Anthracene	0.53		0.11		0.065		0.073		0.079		0.057		0.068		0.067		0.070		0.090		0.099	
2-Methylnaphthalene	9.0		7.9		42.0	D	40.0	D	46.0	D	40.0	D	51.0	D	49.0	D	42.0	D	46	D	53.0	D
Total LPAH	35.43		32.29		203.15		150.55		216.97		190.75		222.07		220.07		203.04		197.33		224.43	
HPAHs											HPAHs											
Fluoranthene	4.3		0.5		0.3		0.39		0.33		0.24		0.31		0.33		0.21		0.27		0.31	
Pyrene	13	D	1.2		0.9		1.6		0.76		0.57		0.80		0.85		0.60		0.50		0.57	
Benz(a)anthracene	2.1		0.22		0.16		0.20		0.12		0.084		0.13		0.130		0.130		0.096		0.11	
Chrysene	2.7		0.27		0.24		0.24		0.16		0.11		0.15		0.15		0.15		0.11		0.12	
Benzo(b)fluoranthene	1.4		0.088		0.073		0.047		0.049		0.029		0.044		0.041		0.084		0.038		0.038	
Benzo(k)fluoranthene	1.1		0.098		0.096		0.053		0.061		0.036		0.047		0.043		0.082		0.034		0.044	
Benzo(a)pyrene	2.0		0.11		0.097		0.064		0.066		0.038		0.056		0.052		0.110		0.046		0.048	
Indeno(1,2,3-cd)pyrene	1.5		0.023		0.036		0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.044		0.020	U	0.020	U
Dibenz(a,h)anthracene	0.17		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U	0.020	U	0.020	U
Benzo(g,h,i)perylene	1.5		0.028		0.043		0.02	U	0.021		0.20	U	0.019	U	0.019	U	0.055		0.020	U	0.020	U
Total HPAHs	29.77		2.53		1.98		2.59		1.57		1.11		1.54		1.60		1.47		1.09		1.24	

NOTE: µg/L = micrograms per liter or parts per billion.
B = detected in method blank at sigificant concentration.
J = estimated concentration.
U = not detected at or above the indicated method reporting limit.
i = the MRL/MDL has been elevated due to a chromatographic interference.

BRIX002803

ANCHOR ENVIRONMENTAL, L.L.C.

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-2		MW-2		MW-2		MW-2		MW-2		MW-2		MW-2	
Matrix	Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	02/28/03		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04	
LPAHs							**LPAHs**							
Naphthalene	**0.082**		0.02	U	**0.023**		**0.037**		**0.023**		**0.18**		**0.026**	
Acenaphthylene	**0.023**		0.02	U	0.022	U	0.110	UB	0.020	U	**0.13**		**0.021**	
Acenaphthene	0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	**0.024**		0.020	U
Dibenzofuran	0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	0.019	U	0.020	U
Fluorene	0.02	U	0.02	U	0.022	U	0.020	U	0.020	U	**0.023**		0.020	U
Phenanthrene	**0.15**		0.02	U	**0.031**		0.020	U	0.020	U	**0.31**		**0.026**	
Anthracene	**0.032**		0.02	U	0.022	U	**0.034**		0.036		**0.11**		**0.032**	
2-Methylnaphthalene	0.02	U	0.02	U	0.022	U	**0.022**		0.020	U	**0.03**		0.020	U
Total LPAH	**0.29**				**0.05**		**0.09**		**0.06**		**0.81**		**0.11**	
HPAHs							**HPAHs**							
Fluoranthene	**0.29**		0.02	U	**0.070**		**0.022**		0.02	U	**0.62**		**0.084**	
Pyrene	**0.42**		0.02	U	**0.091**		**0.020**		0.02	U	**0.87**		**0.090**	
Benz(a)anthracene	**0.11**		0.02	U	**0.023**		**0.020**		0.02	U	**0.31**		**0.043**	
Chrysene	**0.17**		0.02	U	**0.042**		0.02	U	0.02	U	**0.48**		**0.060**	
Benzo(b)fluoranthene	**0.14**		0.02	U	**0.036**		**0.020**		0.02	U	**0.48**		**0.080**	
Benzo(k)fluoranthene	**0.13**		0.02	U	**0.035**		**0.023**		0.02	U	**0.42**		**0.061**	
Benzo(a)pyrene	**0.19**		0.02	U	0.022	U	**0.035**		0.02	U	**0.73**		**0.10**	
Indeno(1,2,3-cd)pyrene	**0.20**		0.02	U	**0.073**		**0.022**		0.02	U	**0.88**		**0.14**	
Dibenz(a,h)anthracene	0.02	U	0.02	U	0.022	U	0.020	U	0.02	U	**0.10**	J	0.02	U
Benzo(g,h,i)perylene	**0.22**		0.02	U	**0.090**		**0.020**		0.02	U	**1.10**		**0.18**	
Total HPAHs	**1.87**				**0.46**		**0.18**				**5.99**		**0.84**	

BRIX002804

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-3		MW-3		MW-3		MW-3		MW-3		MW-3		MW-3		MW-3	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	07/30/02		02/28/03		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04		02/25/05	
LPAHs									LPAHs									
Naphthalene	0.36		0.75		0.34		0.34		0.11		0.35		0.28	D	0.040		0.17	
Acenaphthylene	0.02	U	0.22		0.02	U	0.02	U	0.14	UB	0.02	U	0.38	D	0.038		0.022	
Acenaphthene	0.26		1.3		0.16		0.21		0.04		0.13		0.89	D	0.088		0.12	
Dibenzofuran	0.025		0.11		0.02	U	0.021		0.020	U	0.035		0.19	U	0.02		0.022	
Fluorene	0.09		1.0		0.1		0.11		0.037		0.082		0.84	D	0.039		0.063	
Phenanthrene	0.11		2.9		0.2		0.14		0.06		0.12		2.3	D	0.02	U	0.072	
Anthracene	0.02	U	0.55		0.039		0.022		0.032		0.034		0.96	D	0.02	U	0.029	
2-Methylnaphthalene	0.28		1.8		0.34		0.31		0.15		0.34		1.20	D	0.024		0.22	
Total LPAH	1.13		8.63		1.18		1.13		0.43		1.09		6.85		0.25		0.72	
HPAHs									HPAHs									
Fluoranthene	0.056		4.9		0.22		0.077		0.075		0.080		5.8	D	0.050		0.060	
Pyrene	0.058		7.6	D	0.22		0.082		0.090		0.079		7.2	D	0.057		0.056	
Benz(a)anthracene	0.02	U	2.1	D	0.06		0.02	U	0.022		0.02	U	2.3	D	0.020	U	0.020	U
Chrysene	0.02	U	2.3	D	0.071		0.02	U	0.023		0.02	U	2.6	D	0.020	U	0.020	U
Benzo(b)fluoranthene	0.022		1.8	D	0.038		0.02	U	0.02	U	0.02	U	1.90	U	0.020	U	0.020	U
Benzo(k)fluoranthene	0.02	U	1.7	D	0.065		0.02	U	0.02	U	0.02	U	1.90	U	0.020	U	0.020	U
Benzo(a)pyrene	0.02	U	2.3	D	0.053		0.02	U	0.036		0.02	U	3.0	D	0.020	U	0.020	U
Indeno(1,2,3-cd)pyrene	0.02	U	1.5	D	0.041		0.02	U	0.02		0.02	U	1.90	U	0.020	U	0.020	U
Dibenz(a,h)anthracene	0.02	U	0.20	U	0.20	U	0.02	U	0.02	U	0.02	U	1.90	U	0.020	U	0.020	U
Benzo(g,h,i)perylene	0.02	U	1.9	D	0.039		0.02	U	0.02	U	0.02	U	1.90	D	0.020	U	0.020	U
Total HPAHs	0.14		26.10		0.80		0.16		0.27		0.16		22.80		0.11		0.12	

BRIX002805

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-4		MW-4		MW-4		MW-4 Dup		MW-4		MW-4 Dup		MW-4		MW-4		MW-4		MW-4		MW-4 Dup		MW-4	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	07/29/02		02/28/03		07/07/03		07/07/03		10/16/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04		10/29/04		02/25/05	
LPAHs													LPAHs											
Naphthalene	**0.039**		**18**	D	**0.16**		**0.12**		**0.11**		**0.12**		**0.074**		**0.093**		**0.024**		**0.054**		**0.047**		0.020	U
Acenaphthylene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.053	UB	0.02	U	0.019	U	**0.027**		**0.023**		0.020	U
Acenaphthene	**0.51**		**0.60**		**0.11**		**0.11**		**0.36**		**0.40**		**0.16**		**0.061**		**0.096**		**0.860**		**1.100**		**0.11**	
Dibenzofuran	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.020**		0.020	U
Fluorene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Phenanthrene	**0.043**		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.880	Ui	1.100	Ui	0.020	U
Anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	**0.024**		**0.030**		0.020	U
2-Methylnaphthalene	0.02	U	**0.80**		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Total LPAH	**0.59**		**19.40**		**0.27**		**0.23**		**0.47**		**0.52**		**0.23**		**0.15**		**0.12**		**0.97**		**1.22**		**0.11**	
HPAHs													HPAHs											
Fluoranthene	**0.033**		**0.024**		0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	**0.020**		0.020	U	0.020	U
Pyrene	**0.046**		**0.055**		**0.021**		0.02	U	0.02		**0.024**		0.02	U	0.02	U	0.019	U	**0.038**		**0.029**		0.020	U
Benz(a)anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Chrysene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Benzo(b)fluoranthene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Benzo(k)fluoranthene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Benzo(a)pyrene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Indeno(1,2,3-cd)pyrene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Dibenz(a,h)anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Benzo(g,h,i)perylene	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U	0.020	U
Total HPAHs	**0.08**		**0.08**		**0.021**						**0.024**								**0.06**		**0.03**			

BRIX002806

ANCHOR ENVIRONMENTAL, L.L.C.

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-5		MW-5 dup		MW-5		MW-5 dup		MW-6		MW-6		MW-6		MW-6		MW-6		MW-6	
Matrix	Water		Water		Water		Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	02/28/03		02/28/03		01/30/04		01/30/04		07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04	
LPAHs											**LPAHs**									
Naphthalene	19	D	17	D	2.9		2.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Acenaphthylene	0.10		0.40		0.02	U	0.02	U	0.02	U	0.02	U	0.042		0.02	U	0.019	U	0.020	U
Acenaphthene	1.3		1.3		0.6		0.5		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Dibenzofuran	0.2		0.19		0.081		0.057		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Fluorene	1.2		1.3		0.48		0.32		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Phenanthrene	2.3		3.1		1.1		0.8		0.02	U	0.02	U	0.025		0.02	U	0.019	U	0.020	U
Anthracene	0.55		0.93		0.34		0.24		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
2-Methylnaphthalene	31	D	31	D	1.5		1.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Total LPAH	55.64		55.22		7.02		5.02						0.07							
HPAHs											**HPAHs**									
Fluoranthene	3.1	J	6.5	J	1.5		1.1		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Pyrene	4.3	J	9.1	J	1.8		1.4		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.023	
Benz(a)anthracene	0.72	J	2.80	J	0.18		0.14		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Chrysene	0.96	J	3.4	J	0.22		0.17		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(b)fluoranthene	0.44	J	2.2	J	0.046		0.035		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(k)fluoranthene	0.42	J	1.9	J	0.046		0.041		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(a)pyrene	0.65	J	3.6	J	0.061		0.050		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Indeno(1,2,3-cd)pyrene	0.49	J	2.5	J	0.03		0.022		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Dibenz(a,h)anthracene	0.044	J	0.27	J	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Benzo(g,h,i)perylene	0.52	J	2.7	J	0.029		0.024		0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U
Total HPAHs	11.64		34.97		3.91		3.00												0.02	

BRIX002807

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TABLE 3
Polycyclic Aromatic Hydrocarbons
Brix Maritime
Portland, Oregon

Sample Designation	MW-7		MW-7		MW-7		MW-7		MW-7		MW-7		MW-8	
Matrix	Water		Water		Water		Water		Water		Water		Water	
Units	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L	
Date Sampled	07/07/03		10/16/03		01/30/04		04/29/04		07/26/04		10/29/04		02/25/05	
LPAHs							**LPAHs**							
Naphthalene	0.02	U	0.02	U	0.02	U	**0.093**		0.019	U	**0.083**		**0.22**	
Acenaphthylene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U
Acenaphthene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	**0.029**	
Dibenzofuran	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	0.020	U
Fluorene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	**0.029**	
Phenanthrene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	**0.051**	
Anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.019	U	**0.037**	
2-Methylnaphthalene	0.02	U	0.02	U	0.02	U	**0.04**		0.019	U	0.041		**0.22**	
Total LPAH							**0.13**				**0.08**		**0.59**	
HPAHs							**HPAHs**							
Fluoranthene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.032**	
Pyrene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.036**	
Benz(a)anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U
Chrysene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U
Benzo(b)fluoranthene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.020**	
Benzo(k)fluoranthene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U
Benzo(a)pyrene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.024**	
Indeno(1,2,3-cd)pyrene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.023**	
Dibenz(a,h)anthracene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	0.020	U
Benzo(g,h,i)perylene	0.02	U	0.02	U	0.02	U	0.02	U	0.019	U	0.020	U	**0.029**	
Total HPAHs													0.16	

BRIX002808

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Table 4
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	Dichlorodifluoromethane	Chloromethane	Vinyl Chloride	Bromomethane	Chloroethane	Trichlorofluoromethane	Acetone	1,1-Dichloroethene	Methyl tert-Butyl Ether	Carbon Disulfide	Methylene Chloride	trans-1,2-dichloroethene	1,1-Dichloroethane	2-Butanone	2,2-Dichloropropane	cis-1,2-dichloroethene	Chloroform	Bromochloromethane	1,1,1-Trichloroethane	1,1-Dichloropropene	Carbon Tetrachloride
MW-1	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	10/16/03	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-1	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-1	Water	04/29/04	1 U	1 U	1 U	1 U	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-1 Dup	Water	04/29/04	1 U	1 U	1 U	1 U	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	40 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
MW-1	Water	07/26/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-1 Dup	Water	07/26/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-1	Water	10/29/04	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U
MW-1	Water	02/25/05	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
MW-2	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/30/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	02/25/05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/29/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	02/25/05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 UJ	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/25/05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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Table 4
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	1,2-Dichloroethane	Benzene	Trichloroethene	1,2-Dichloropropane	Bromodichloromethane	Dibromomethane	2-Hexanone	cis-1,3-Dichloropropene	Toluene	trans 1,3-Dichloropropene	1,1,2-Trichloroethane	4-Methyl-2-pentanone	1,3 Dichloropropane	Tetrachloroethene	Dibromochloromethane	1,2 Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylenes	o-Xylene	Styrene	Bromoform
MW-1	Water	02/28/03	0.5 U	5.7	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.71	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	37	50	12	0.5 U	0.5 U
MW-1	Water	07/07/03	0.5 U	1.3	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	1.1	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	11	18	2	0.5 U	0.5 U
MW-1	Water	10/16/03	2.5 U	32 D	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	13 D	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	270 D	360 D	110 D	2.5 U	2.5 U
MW-1	Water	01/30/04	0.5 U	4.1	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.96	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	78 D	120	31	0.5 U	0.5 U
MW-1	Water	04/29/04	1 U	5.3 D	1 U	1 U	1 U	1 U	40 U	1 U	2.1 D	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	120 D	160 D	46 D	1 U	1 U
MW-1 Dup	Water	04/29/04	1 U	4.7 D	1 U	1 U	1 U	1 U	40 U	1 U	1.9 D	1 U	1 U	40 U	1 U	1 U	1 U	4 U	1 U	1 U	110 D	150 D	42 D	1 U	1 U
MW-1	Water	07/26/04	1.3 U	4.0 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	93 D	120 D	29 D	1.3 U	1.3 U
MW-1 Dup	Water	07/26/04	1.3 U	3.9 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	89 D	110 D	28 D	1.3 U	1.3 U
MW-1	Water	10/29/04	1.3 U	4.0 D	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	1.3 U	50 U	1.3 U	1.3 U	1.3 U	5 U	1.3 U	1.3 U	82 D	100 D	12 D	1.3 U	1.3 U
MW-1	Water	02/25/05	2.5 U	31 D	2.5 U	2.5 U	2.5 U	2.5 U	100 U	2.5 U	2.7	2.5 U	2.5 U	100 U	2.5 U	2.5 U	2.5 U	10 U	2.5 U	2.5 U	210 D	220 D	26 D	2.5 U	2.5 U
MW-2	Water	02/28/03	0.5 U	0.50 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/07/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/16/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.86	0.5 U	0.5 U	0.5 U
MW-2	Water	01/30/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	04/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	07/26/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-2	Water	10/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-3	Water	07/30/02	0.5 U	0.73	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	14	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.51	3.5	2	0.5 U	0.5 U
MW-3	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.63	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.2	1.2	0.5 U	0.5 U
MW-3	Water	07/07/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.8	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.2	1.1	0.5 U	0.5 U
MW-3	Water	10/16/03	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	1.9	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.51	2.5	1.5	0.5 U	0.5 U
MW-3	Water	01/30/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.63	0.73	0.5 U	0.5 U
MW-3	Water	04/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.20	1.1	0.5 U	0.5 U
MW-3	Water	07/26/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.98	0.98	0.5 U	0.5 U
MW-3	Water	10/29/04	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.10	1.0	0.5 U	0.5 U
MW-3	Water	02/25/05	0.5 U	0.50 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	1.30	1.0	0.5 U	0.5 U
MW-4	Water	07/29/02	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	02/28/03	0.5 U	0.76	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	2.3	1.4	1.2	0.5 U	0.5 U
MW-4	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.93	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.94	0.5 U	0.5 U	0.5 U
MW-4	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5	0.5 U	0.5 U
MW-4	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-4 Dup	Water	02/25/05	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-5	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	15	12	0.97	0.5 U	0.5 U
MW-5 Dup	Water	02/28/03	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	16	14	1.10	0.5 U	0.5 U
MW-5	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	1.8	0.5 U	0.5 U	0.5 U	0.5 U
MW-5 Dup	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	2.0	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.74	0.5 U	0.5 U	0.5 U
MW-6	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-6	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/07/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/16/03	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.82	0.5 U	0.5 U	0.5 U
MW-7	Water	01/30/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	04/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	07/26/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-7	Water	10/29/04	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
MW-8	Water	02/25/05	0.5 U	0.54	0.5 U	0.5 U	0.5 U	0.5 U	20 U	0.5 U	5.8	0.5 U	0.5 U	20 U	0.5 U	0.5 U	0.5 U	2 U	0.5 U	0.5 U	0.5 U	0.86	0.5 U	0.5 U	0.5 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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BRIX002810

Table 4
Volatile Organic Compounds
Brix Maritime
Portland, Oregon

Sample Designation	Matrix	Date Sampled	Isopropylbenzene	1,1,2,2-Tetrachloroethane	1,2,3-Trichloropropane	Bromobenzene	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene	1,3,5-Trimethylbenzene	tert-Butylbenzene	1,2,4-Trimethylbenzene	sec-Butylbenzene	1,3-Dichlorobenzene	4-Isopropyltoluene	1,4-Dichlorobenzene	n-Butylbenzene	1,2-Dichlorobenzene	1,2-Dibromo-3-chloropropane	1,2,4-Trichlorobenzene	1,2,3-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
MW-1	Water	02/28/03	19	0.5 U	0.5 U	0.5 U	65 D	2 U	2 U	26	2 U	140 D	10	0.5 U	2 U	0.5 U	21	0.5 U	0.5 U	2 U	2 U	31	2 U
MW-1	Water	07/07/03	31	0.5 U	0.5 U	0.5 U	64 D	2 U	2 U	9.3	2 U	46	8.2	0.5 U	2 U	0.5 U	14	0.5 U	0.5 U	2 U	2 U	22	2 U
MW-1	Water	10/16/03	75 D	2.5 U	2.5 U	10 U	250 D	10 U	10 U	280 D	10 U	1200 D	28 D	2.5 U	10 U	2.5 U	150 UJ	2.5 U	10 U	10 U	10 U	460 D	10 U
MW-1	Water	01/30/04	36	0.5 U	0.5 U	0.5 U	140 D	2 U	2 U	100 D	2 U	510 D	17	0.5 U	2 U	0.5 U	46	0.5 U	0.5 U	2 U	2 U	210 D	2 U
MW-1	Water	04/29/04	54 D	1 U	1 U	1 U	150 D	4 U	4 U	150 D	4 U	590 D	20 D	1 U	4 U	1 U	43 D	1 U	1 U	4 U	4 U	250 D	4 U
MW-1 Dup	Water	04/29/04	52 D	1 U	1 U	1 U	150 D	4 U	4 U	140 D	4 U	570 D	18 D	1 U	4 U	1 U	39 D	1 U	1 U	4 U	4 U	260 D	4 U
MW-1	Water	07/26/04	47 D	1.3 U	1.3 U	1.3 U	160 D	5 U	5 U	130 D	5 U	610 D	18 D	1.3 U	5 U	1.3 U	40 D	1.3 U	1.3 U	5 U	5 U	270 JD	5 U
MW-1 Dup	Water	07/26/04	46 D	1.3 U	1.3 U	1.3 U	160 D	5 U	5 U	120 D	5 U	640 D	18 D	1.3 U	5 U	1.3 U	40 D	1.3 U	1.3 U	5 U	5 U	280 JD	5 U
MW-1	Water	10/29/04	45 D	1.3 U	1.3 U	1.3 U	140 D	5 U	5 U	110 D	5 U	560 D	16 D	1.3 U	5 U	1.3 U	39 D	1.3 U	1.3 U	5 U	5 U	230 D	5 U
MW-1	Water	02/25/05	89 D	2.5 U	2.5 U	2.5 U	350 D	10 U	10 U	160 D	10 U	870 D	39 D	2.5 U	10 U	2.5 U	90 D	2.5 U	2.5 U	10 U	10 U	470 D	10 U
MW-2	Water	02/28/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-2	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/30/02	0.5 U	0.5 U	0.5 U	0.5 U	2.2	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	02/28/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-3	Water	02/25/05	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	07/29/02	2 U	0.5 U	0.5 U	0.5 U	2.3	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	02/28/03	29	0.5 U	0.5 U	0.5 U	35	2 U	2 U	2.2	2 U	3.8	2 U	0.5 U	2 U	0.5 U	3.1	0.5 U	0.5 U	2 U	2 U	45	2 U
MW-4	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	10/16/03	7.1	0.5 U	0.5 U	0.5 U	5.5	2 U	2 U	2 U	2 U	2 U	4.4	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	10/16/03	7.5	0.5 U	0.5 U	0.5 U	6.3	2 U	2 U	2 U	2 U	2 U	4.8	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-4 Dup	Water	02/25/05	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-5	Water	02/28/03	24	0.5 U	0.5 U	0.5 U	110 D	2 U	2 U	26	2 U	75 D	27	0.5 U	2 U	0.5 U	87 D	0.5 U	0.5 U	2 U	2 U	23	2 U
MW-5 Dup	Water	02/28/03	25	0.5 U	0.5 U	0.5 U	110 D	2 U	2 U	30	2 U	99 D	30	0.5 U	2.3	0.5 U	110 D	0.5 U	0.5 U	2 U	2 U	25	2 U
MW-5	Water	01/30/04	9.7	0.5 U	0.5 U	0.5 U	49	2 U	2 U	2 U	2 U	2 U	38	0.5 U	2 U	0.5 U	82 D	0.5 U	0.5 U	2 U	2 U	2.9	2 U
MW-5 Dup	Water	01/30/04	11	0.5 U	0.5 U	0.5 U	56	2 U	2 U	2 U	2 U	2 U	39	0.5 U	2 U	0.5 U	84 D	0.5 U	0.5 U	2 U	2 U	3.4	2 U
MW-6	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-6	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	07/07/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	10/16/03	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	01/30/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	04/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	07/26/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-7	Water	10/29/04	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U
MW-8	Water	02/25/05	2 U	0.5 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	0.5 U	2 U	0.5 U	2 U	0.5 U	0.5 U	2 U	2 U	2 U	2 U

NOTE: Water concentrations are in µg/L. Soil concentrations are in µg/kg. U = not detected at or above the indicated method reporting limit. J = estimated concentration.

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Table 5
Lead in Groundwater
Brix Maritime
Portland, Oregon

Location	Matrix	Date Sampled	Total Lead (ppb)		Dissolved Lead (ppb)	
MW-1	Water	02/28/03	288		0.03	
MW-1	Water	07/07/03	1.34		0.05	
MW-1	Water	10/16/03	1.41		0.06	
MW-1	Water	01/30/04	0.05		0.02	U
MW-1	Water	04/29/04	0.11		0.02	U
MW-1 Duplicate	Water	04/29/04	0.11		0.04	
MW-1	Water	07/26/04	2.35		2.12	
MW-1 Duplicate	Water	07/26/04	1.81		1.93	
MW-1	Water	10/29/04	0.27		0.03	
MW-1	Water	02/25/05	0.23		0.02	U
MW-1 Duplicate	Water	02/25/05	0.22		0.02	
MW-2	Water	02/28/03	57.6		0.04	
MW-2	Water	07/07/03	0.04		0.05	
MW-2	Water	10/16/03	25.9		0.58	
MW-2	Water	01/13/04	0.03		0.02	U
MW-2	Water	04/29/04	0.02	U	0.02	
MW-2	Water	07/26/04	13		3.39	
MW-2	Water	10/29/04	31.9		0.11	
MW-3	Water	07/30/02	0.88		0.13	
MW-3	Water	02/28/03	65.9		0.05	
MW-3	Water	07/07/03	0.36		0.08	
MW-3	Water	10/16/03	0.22		0.05	
MW-3	Water	01/13/04	0.1		0.05	
MW-3	Water	04/29/04	0.05		0.02	
MW-3	Water	07/26/04	0.13		1.00	
MW-3	Water	10/29/04	0.05		0.06	
MW-3	Water	02/25/05	0.03		0.02	U
MW-4	Water	07/29/02	0.36		0.02	U
MW-4	Water	02/28/03	0.70		0.02	U
MW-4	Water	07/07/03	0.78	J	0.02	
MW-4 Duplicate	Water	07/07/03	0.18	J	0.03	
MW-4	Water	10/16/03	0.46		0.03	
MW-4 Duplicate	Water	10/16/03	0.54		0.02	U
MW-4	Water	01/13/04	0.08		0.03	
MW-4	Water	04/29/04	0.47		0.09	
MW-4	Water	07/26/04	0.04		0.03	
MW-4	Water	10/29/04	0.16		0.02	U
MW-4 Duplicate	Water	10/29/04	0.16		0.02	U
MW-4	Water	02/25/05	0.12		0.02	
MW-5	Water	02/28/03	131		0.06	
MW-5 Duplicate	Water	02/28/03	116		0.03	
MW-5	Water	01/13/04	0.06		0.02	
MW-5 Duplicate	Water	01/13/04	0.08		0.02	
MW-6	Water	07/07/03	0.1		0.02	U
MW-6	Water	10/16/03	0.03		0.07	
MW-6	Water	01/13/04	0.09		0.02	U
MW-6	Water	04/29/04	0.08		0.03	
MW-6	Water	07/26/04	0.51		0.10	
MW-6	Water	10/29/04	0.26		0.03	
MW-7	Water	07/07/03	0.17		0.02	U
MW-7	Water	10/16/03	0.02	U	0.03	
MW-7	Water	01/13/04	0.1		0.02	U
MW-7	Water	04/29/04	0.02	U	0.02	
MW-7	Water	07/26/04	0.18		0.04	
MW-7	Water	10/29/04	0.04		0.03	
MW-8	Water	02/25/05	0.17		0.22	

Note: U = not detected at method reporting limit. ppb = parts per billion. J = estimated
Water concentrations are in µg/L.

BRIX002812

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Table 6
Metals in Groundwater
Brix Maritime
Portland, Oregon

			Arsenic		Barium		Cadmium		Chromium		Copper		Lead		Manganese		Zinc	
Location	Matrix	Date Sampled	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)	Total (ppb)	Dissolved (ppb)
MW-1	Water	02/25/05	12.8	12.0	190	194.0	0.15	0.2	1.4	1.2	0.2	0.1	0.23	0.0 U	5980	6150	2.2	1.5
MW-1 Duplicate	Water	02/25/05	12.2	12.8	194	195.0	0.15	0.1	1.2	1.3	0.3	0.1 U	0.22	0.0	5880	6190	2.3	1.4
MW-3	Water	02/25/05	4.1	4.30	53.8	54.60	0.07	0.06	0.3	0.50	0.1 U	0.10 U	0.03	0.02 U	2230	2130	3.3	1.6
MW-4	Water	02/25/05	1.3	1.1	21.5	18.4	0.1	0.06	0.4	0.3	1.1	0.1	0.1	0.02	558.0	591	5.4	1.7
MW-8	Water	02/25/05	1.3	1.1	87.2	85.1	0.12	0.1	0.8	0.4	0.3	0.1 U	0.17	0.22	3090	3060	20.2	20.0

Note: U = not detected at method reporting limit. ppb = parts per billion. J = estimated
Water concentrations are in µg/L.

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Table 7
Summary of Analytical Results for Soil Samples - Petroleum Constituents
Brix Maritime
Portland, Oregon

Analytical Methods and Parameters	Lowest RBC[1] Occupational Pathway and Construction Worker Pathways		Analytical Results mg/kg (ppm)																											
Boring Number			B-2			B-3		B-4	B-5		B-6		B-7			B-9	B-10	B-11	B-12	B-13	B-16		B-17		B-18		B-19		B-20
Sample Depth (feet bgs)			10.5	20.5	25.5	20.5	25.5	20.5	10.5	20.5	10.5	15.5	10.5	15.5	20.5	20.5	20.5	15.5	15.5	10.5	12	24.5	12	23	15.5	24	15.5	21.5	23.0
Sample Date			4/15/1993			4/15/1993		4/15/1993	4/15/1993		4/15/1993		04/15/93			04/16/93	04/16/93	04/15/93	04/16/93	04/15/93	05/29/01		05/29/01		05/29/01		05/24/01		05/24/01
Northwest Methods																														
Gasoline by NW TPH-Gx	13000	b	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	ND>20	270	2000	13	ND>20	ND>20	ND>20	ND>20	ND>20	-	ND>0.704	-	10.9	ND>0.532	1.14	ND>0.500	ND>0.617	ND>0.641
Diesel by NW TPH-Dx	23000	b	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	ND>50	-	ND>50	ND>50	ND>50	ND>50	ND>50	ND>21.7	ND>28.2	ND>21.5	ND>22	ND>21.3	ND>24.7	-	ND>24.7	ND>26.0
Oil by NW TPH-Dx	46000	b	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	ND>100	-	ND>100	ND>100	ND>100	ND>100	200	ND>54.3	121	ND>53.8	ND>54.9	ND>53.2	ND>61.7	-	ND>61.7	ND>64.9
Total Lead by EPA 6010	750	b,c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VOCs by EPA Method 8260B or 8021			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	1.2	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-
Toluene	35000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-
Ethylbenzene	28000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00309	-
Xylenes	19000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND>0.00926	-
Naphthalene	710	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MTBE (methyl tert-butyl ether)	35	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EDB (1,2-dibromoethane)	0.37	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EDC (1,2-dichloroethane)	0.56	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	24000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
n-Propylbenzene	9300	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	840	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	140	a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
sec-Butylbenzene																													
p-Isopropyltoluene																													
PAHs by EPA 8270																													
Naphthalene	710	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	#		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	16000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	#		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	12000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	#		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	90000	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	#		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	8900	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	6700	b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (a) anthracene	2.7	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	270	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (b) fluoranthene	2.7	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (k) fluoranthene	27	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (a) pyrene	0.27	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno (1,2,3-cd) pyrene	2.7	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo (ah) anthracene	0.27	c	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (ghi) perylene	#		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:

# = reference level not established
bgs = below ground surface
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams/kilogram
- = not analyzed

ND = not detected above detection limit indicated
OAR = Oregon Administrative Rules
PAHs = polynuclear aromatic hydrocarbons
ppm = parts per million
VOCs = volatile organic compounds
Bold and shaded = Concentration in excess of reference level

1 Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, Oregon Department of Environmental Quality, September 22, 2003
a. Occupational RBC for Soil Vapor Intrusion into Buildings
b. Construction Worker RBC for Soil Ingestion, Dermal Contact, and Inhalation
c. Occupational RBC for Soil Ingestion, Dermal Contact, and Inhalation

J = estimated concentration

BRIX002814

ANCHOR ENVIRONMENTAL

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Table 7
Summary of Analytical Results for Soil Samples - Petroleum Constituents
Brix Maritime
Portland, Oregon

Analytical Methods and Parameters		Analytical Results mg/kg (ppm)																								
Boring Number	Lowest RBC[1] Occupational Pathway and Construction Worker Pathways	B-21			B-22			B-23	B-24		B-25		B-26			B-27	B-28			B-29		B-30	B-32		B-33
Sample Depth (feet bgs)		5.0	18.0	23.0	7.0	15.5	22.0	23.0	23.5	27.0	6.0	12.0	5.0	18.0	22.0	3.0	6.0	12.0	23.0	15.0	23.0	5.0	5-6	10-12	20-22
Sample Date		05/24/01			05/24/01			05/24/01	05/25/01		05/25/01		05/25/01			05/25/01	05/25/01			05/25/01		05/24/01	02/18/05		02/18/05
Northwest Methods																										
Gasoline by NW TPH-Gx	13000 b	1370	ND>0.543	ND>0.657	-	61.3	1.31	ND>0.617	ND>0.649	ND>0.756	ND>0.704	ND>0.595	ND>0.568	ND>0.543	ND>0.694	ND>0.562	0.829	4.24	4.61	ND>0.543	ND>0.617	ND>0.543	>20.0	288	28.3
Diesel by NW TPH-Dx	23000 b	ND>25.7	-	ND>26.7	ND>23.5	-	62.6	ND>24.7	ND>26.0	ND>30.3	ND>28.2	ND>23.8	460	ND>21.7	ND>27.8	468	560	2340	2070	ND>21.7	ND>24.7	-	ND>50	159	ND>2500
Oil by NW TPH-Dx	40000 b	ND>61.7	-	ND>66.7	ND>58.8	-	166	ND>61.7	ND>64.9	ND>75.8	ND>70.4	ND>59.5	1360	ND>54.3	ND>69.4	6010	6330	22200	19900	ND>54.3	ND>61.7	-	ND>100	ND>50	28400J
Total Lead by EPA 6010	750 b,c	4.4	-	-	-	-	-	-	-	3.28	3.75	-	-	-	-	-	3.03	-	-	-	-	5.69		ND>2.47	3.35
VOCs by EPA Method 8260B or 8021		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Benzene	1.2 a	5.2	ND>0.00272	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		ND>0.1	ND>0.1
Toluene	35000 b	ND>0.025	ND>0.00272	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		ND>0.1	ND>0.1
Ethylbenzene	28000 b	23.4	ND>0.00272	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		0.326	ND>0.1
Xylenes	19000 b	134.9	ND>0.00815	-	-	-	-	-	-	ND>0.010	ND>0.010	-	-	-	-	ND>0.005	ND>0.010	-	-	-	-	ND>0.010		0.714	ND>0.3
Naphthalene	710 b	11.1	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		6.130	ND>0.2
MTBE (methyl tert-butyl ether)	35 a	ND>0.25	-	-	-	-	-	-	-	ND>0.010	ND>0.010	-	-	-	-	ND>0.01	ND>0.010	-	-	-	-	ND>0.010		ND>0.1	ND>0.1
EDB (1,2-dibromoethane)	0.37 a	ND>0.025	-	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	-	ND>0.005	-	-	-	-	ND>0.005		ND>0.1	ND>0.1
EDC (1,2-dichloroethane)	0.58 a	ND>0.025	-	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	-	ND>0.005	-	-	-	-	ND>0.005		ND>0.1	ND>0.1
Isopropylbenzene	24000 b	2.58	-	-	-	-	-	-	-	ND>0.005	0.013	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		0.379	ND>0.2
n-Propylbenzene	9300 b	11.1	-	-	-	-	-	-	-	ND>0.005	0.021	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		2.320	148
1,2,4-Trimethylbenzene	840 a	59.8	-	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		14.90	ND>0.1
1,3,5-Trimethylbenzene	140 a	18.7	-	-	-	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005	ND>0.005	-	-	-	-	ND>0.005		3.210	ND>0.1
sec-Butylbenzene																								0.662	ND>0.1
p-Isopropyltoluene																								0.215	ND>0.2
PAHs by EPA 8270																									
Naphthalene	710 b	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		2.28	ND>0.268
Acenaphthylene	#	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Acenaphthene	16000 b	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Dibenzofuran	#	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Fluorene	12000 b	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Phenanthrene	#	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		0.0791	ND>0.268
Anthracene	90000 b	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
2-Methylnaphthalene	#	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Fluoranthene	8600 b	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Pyrene	6700 b	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Benzo (a) anthracene	2.7 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Chrysene	270 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Benzo (b) fluoranthene	2.7 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Benzo (k) fluoranthene	27 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Benzo (a) pyrene	0.27 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Indeno (1,2,3-cd) pyrene	2.7 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Dibenzo (ah) anthracene	0.27 c	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268
Benzo (ghi) perylene	#	-	-	-	-	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050	ND>0.050	-	-	-	-	ND>0.050		ND>0.067	ND>0.268

Note:

# = reference level not established
bgs = below ground surface
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
mg/kg = milligrams/kilogram
- = not analyzed

ND = not detected above detection limit indicated
OAR = Oregon Administrative Rules
PAHs = polynuclear aromatic hydrocarbons
ppm = parts per million
VOCs = volatile organic compounds
Bold and shaded = Concentration in excess of reference level

1 Risk Based Decision Making for the Remediation of Petroleum-Contaminated Sites, Oregon Department of Environmental Quality, September 22, 2003
a. Occupational RBC for Soil Vapor Intrusion into Buildings
b. Construction Worker RBC for Soil Ingestion, Dermal Contact, and Inhalation
c. Occupational RBC for Soil Ingestion, Dermal Contact, and Inhalation

J = estimated concentration

BRIX002815

ANCHOR ENVIRONMENTAL LLC

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Table 7
Summary of Analytical Results for Soil Samples - Petroleum Constituents
Brix Maritime
Portland, Oregon

Analytical Methods and Parameters		Analytical Results mg/kg (ppm)							
Boring Number	Lowest RBC [1] Occupational Pathway and Construction Worker Pathways	MW-1	MW-2	MW-4	MW-5			MW-6	MW-7
Sample Depth (feet bgs)		15-16.5	10-11.5	10-11.5	5-6.5	15-16.5	22.5-24	24.5-26	25-26.5
Sample Date		02/11/03	02/11/03	07/17/02	02/11/03	02/11/03	02/11/03	06/19/03	06/19/03
Northwest Methods									
Gasoline by NW TPH-Gx	13000 b	-	-	-	-	-	-	ND>6.6	ND>7.2
Diesel by NW TPH-Dx	23000 b	360	40	ND>35.0	ND>26	ND>27	96	ND>34	ND>36
Oil by NW TPH-Dx	40000 b	ND>110	ND>130	ND>140	ND>110	ND>110	390	ND>140	ND>150
Total Lead by EPA 6010	750 b,c	4.2	15.9	21	5.4	4	32.5	16.3	12.8
VOCs by EPA Method 8260B or 8021		-	-	-	-	-	-	-	-
Benzene	1.2 a	ND>0.110	ND>0.00098	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072
Toluene	39000 b	ND>0.110	ND>0.0011	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072
Ethylbenzene	28000 b	1.	ND>0.00071	ND>0.0068	ND>0.0055	ND>0.0054	2.5	ND>0.0067	ND>0.0072
Xylenes	19000 b	2.04	ND>0.0019	ND>0.0068	ND>0.0065	ND>0.0054	2.733	ND>0.0067	ND>0.0072
Naphthalene	710 b	64.	ND>0.0011	ND>0.027	ND>0.022	ND>0.022	4.9	ND>0.027	ND>0.029
MTBE (methyl tert-butyl ether)	35 a	ND>0.110	ND>0.00079	ND>0.0068	ND>0.0056	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072
EDB (1,2-dibromoethane)	0.37 a	ND>0.420	ND>0.00096	ND>0.027	ND>0.022	ND>0.022	ND>0.030	ND>0.0067	ND>0.0072
EDC (1,2-dichloroethane)	0.56 a	ND>0.110	ND>0.00083	ND>0.0068	ND>0.0055	ND>0.0054	ND>0.0075	ND>0.0067	ND>0.0072
Isopropylbenzene	24000 b	3	ND>0.00084	ND>0.0068	ND>0.0055	ND>0.0054	7	ND>0.027	ND>0.029
n-Propylbenzene	9300 b	18	ND>0.00069	ND>0.027	ND>0.022	ND>0.022	ND>0.030	ND>0.027	ND>0.029
1,2,4-Trimethylbenzene	840 a	59	ND>0.0011	ND>0.027	ND>0.022	ND>0.022	20	ND>0.027	ND>0.029
1,3,5-Trimethylbenzene	140 a	ND>7.8	ND>0.0047	ND>0.027	ND>0.022	ND>0.022	ND>0.970	ND>0.027	ND>0.029
sec-Butylbenzene									
p-Isopropyltoluene									
PAHs by EPA 8270									
Naphthalene	710 b	22	0.026	0.041	ND>0.005	ND>0.0048	1.8	0.083	ND>0.005
Acenaphthylene	#	ND>0.0046	0.011	0.011	ND>0.005	ND>0.0048	0.038	0.039	ND>0.005
Acenaphthene	16000 b	0.052	0.011	ND>0.0071	0.052	ND>0.0048	0.038	0.05	ND>0.005
Dibenzofuran	#	0.014	ND>0.005	ND>0.0071	0.011	ND>0.0048	0.017	0.01	ND>0.005
Fluorene	12000 b	0.11	0.01	0.007	0.053	ND>0.0048	0.051	0.04	ND>0.005
Phenanthrene	#	0.24	0.15	0.055	0.44	0.009	0.49	0.34	0.013
Anthracene	90000 b	0.059	0.048	0.011	0.054	0.006	0.082	0.088	0.0068
2-Methylnaphthalene	#	24	0.011	0.008	ND>0.005	ND>0.0048	0.01	0.029	ND>0.005
Fluoranthene	8900 b	0.12	0.22	0.086	0.076	0.029	0.72	0.5	0.086
Pyrene	6700 b	0.16	0.41	0.063	0.077	0.063	0.85	0.55	0.076
Benzo (a) anthracene	2.7 c	0.054	0.12	0.018	0.009	0.016	0.33	0.29	0.063
Chrysene	270 c	0.06	0.15	0.029	0.014	0.026	0.56	0.38	0.061
Benzo (b) fluoranthene	2.7 c	0.032	0.94	0.023	0.012	0.016	0.63	0.19	0.037
Benzo (k) fluoranthene	27 c	0.039	0.95	0.02	0.013	0.018	0.65	0.28	0.054
Benzo (a) pyrene	0.27 c	0.038	0.15	0.034	0.014	0.023	0.92	0.44	0.066
Indeno (1,2,3-cd) pyrene	2.7 c	0.03	0.12	0.033	0.021	0.023	2	0.33	0.04
Dibenzo (ah) anthracene	0.27 c	ND>0.0048	0.13	ND>0.0071	ND>0.005	ND>0.0048	0.15	0.056	0.0091
Benzo (ghi) perylene	#	0.041	0.12	0.049	0.022	0.025	2.3	0.36	0.034

Note:

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BRIX002816

ANCHOR ENVIRONMENTAL LLC

Table 8
Volatile Petroleum Hydrocarbons and Extractable Petroleum Hydrocarbons
Brix Maritime
Portland, Oregon

Boring	B-32		B-33	
Sample Depth (feet bgs)	10.0 - 12.0		20.0 - 22.0	
Sample Date	2/18/2005		2/18/2005	
VPH				
C5-C6 Aliphatics	50.0	U	1.25	U
C6-C8 Aliphatics	50.0	U	**11.5**	J
C8-C10 Aliphatics	50.0	U	1.25	U
C10-C12 Aliphatics	**164**	J	**2.20**	J
C8-C10 Aromatics	**104**	J	**1.69**	J
C10-C12 Aromatics	**136**	J	**2.26**	J
C12-C13 Aromatics	50.0	U	1.25	U
Total VPH	**404**		**17.7**	
EPH				
C8-C10 Aromatics	5.00	U	100	U
C10-C12 Aromatics	**18.4**	J	100	U
C12-C16 Aromatics	**27.6**		100	U
C16-C21 Aromatics	9.15	U	183	U
C21-C34 Aromatics	7.67	U	**2220**	J
C8-C10 Aliphatics	5.00	U	100	U
C10-C12 Aliphatics	**20.3**		100	U
C12-C16 Aliphatics	**19.1**		100	U
C16-C21 Aliphatics	5.00	U	**404**	
C21-C34 Aliphatics	5.00	U	**16200**	
Total EPH	**85.4**		**18824**	

Note: U = Not detected at method reporting limit.
J = Estimated concentration.

BRIX002817

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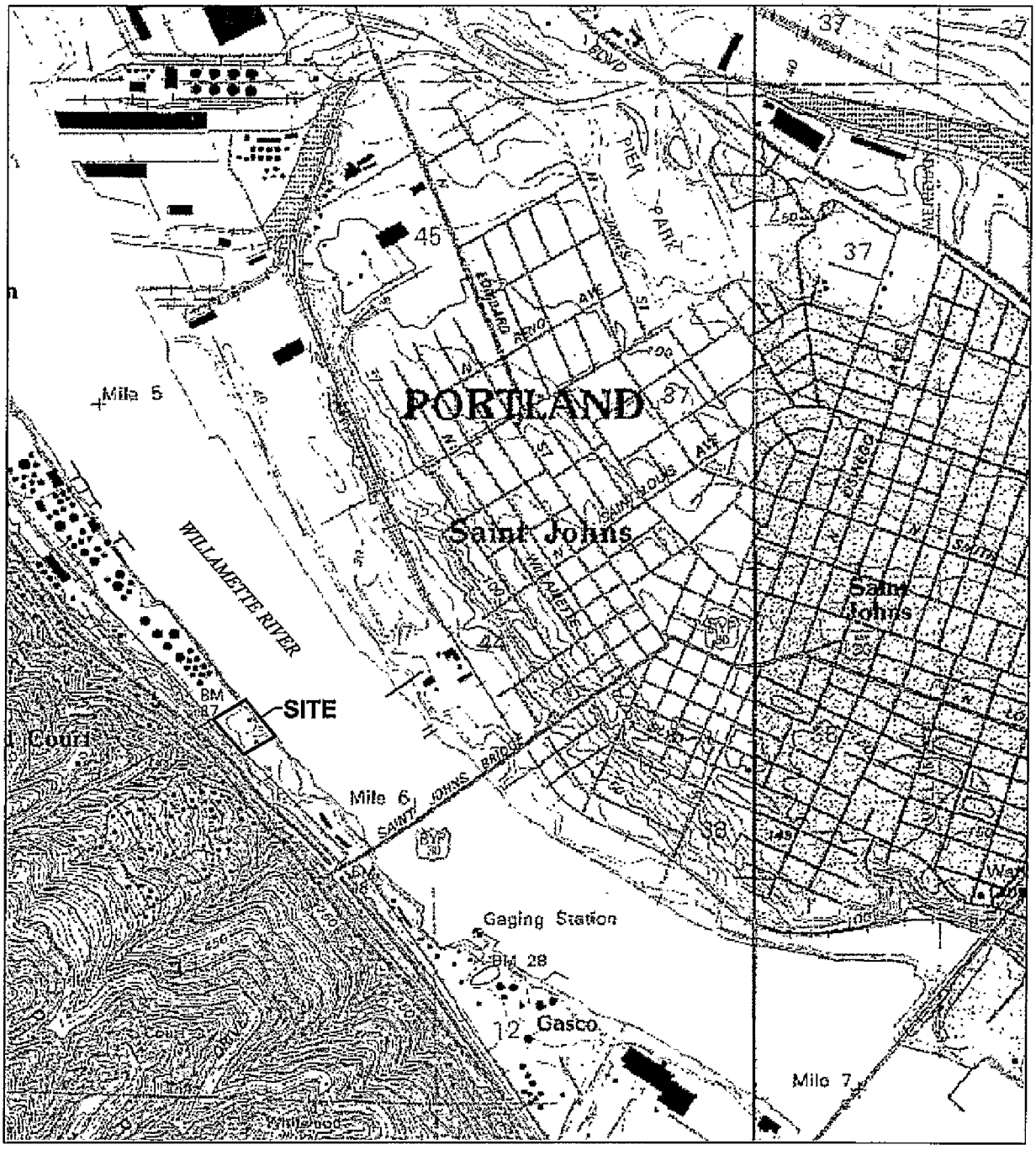
FIGURES

BRIX002818



Apr 01, 2003 4:09pm cdavidson I:\CAD\Jobs\980056-Brix_Maritime\980056011980005601-03.dwg FIG 1

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 1
Site Location Map
Brix Maritime
Portland, Oregon

BRIX002819

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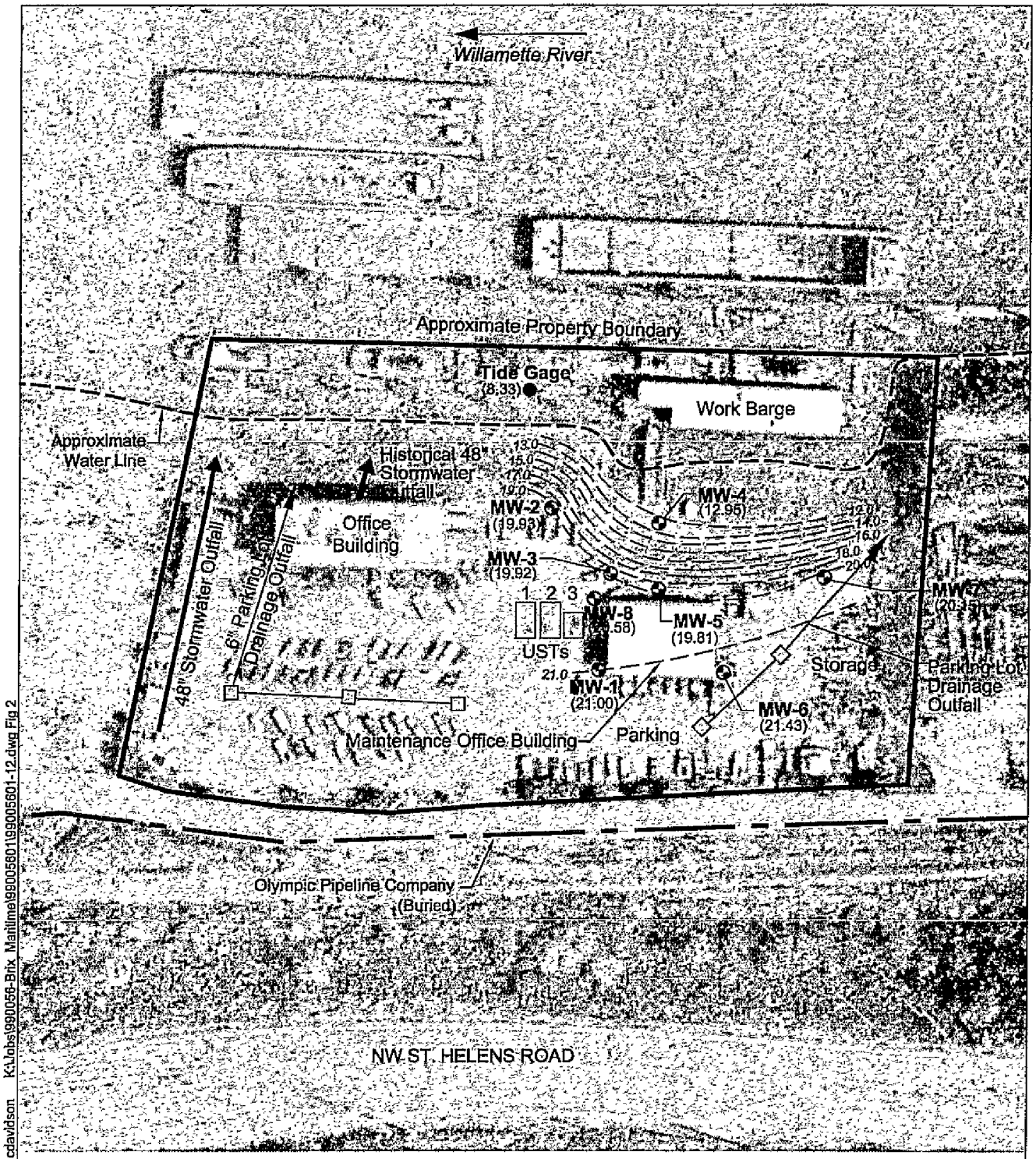

Source: Aerial photograph acquired from WAC, Corp. 1991.

Apr 11, 2005 1:14pm cdavidson K:\Jobs\990056-Brix Maritime\990056\199005601-12.dwg Fig 2

ANCHOR ENVIRONMENTAL, L.L.C.

Figure 2
Well Location and Potentiometric Surface Map (February 25, 2005)
Brix Maritime
Portland, Oregon

BRIX002820

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Appendix A
Field Sampling Data Package

BRIX002821

ANCHOR ENVIRONMENTAL, L.L.C.

Anchor Environmental, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Phone 503.670.1108
Fax 503.670.1128

Memorandum

To: File 990056-01

From: Kelly R. Titkemeier

Date: March 1, 2005

Re: February 2005 Groundwater Sample Collection at Brix Maritime, Portland, Oregon

OVERVIEW

Anchor intalled monitoring well MW-8 on February 18, 2005, and developed the well on February 23, 2005 by a combination of surging with a bailer, bailing, and pumping with a peristaltic pump. On February 25, 2005, Anchor measured groundwater elevations in eight monitoring wells and recorded the river elevation from the staff gauge located at the site. In addition, groundwater samples were collected from four of the eight monitoring wells (MW-5 had insufficient water to sample, and MW-2, MW-6, and MW-7 are now sampled semi-annually instead of quarterly). Five water samples (including one duplicate sample) were submitted for analysis of VOCs by U.S. Environmental Protection Agency (USEPA) Method 8260+MTBE; gasoline by NWTPH-Gx; diesel and heavy oils by NWTPH-Dx; PAHs by USEPA Method 8270-SIM; and total and dissolved arsenic, barium, cadmium, chromium, copper, manganese, lead, and zinc. Trip blanks were submitted for VOC and NWTPH-Gx analyses.

PURGING AND SAMPLING

Before sampling, wells were purged of at least three casing volumes (or until dry), until field parameters (temperature, pH, specific conductivity, and dissolved oxygen) stabilized. Temperature, pH, specific conductivity, and dissolved oxygen values were measured and recorded after each casing volume was removed. Field sampling parameters are presented within the attached table.

The wells were purged using a peristaltic pump equipped with new pump tubing that was connected to polyethylene tubing dedicated to each well. Pumping rates were reduced and samples were then collected directly from the peristaltic pump discharge tubing. Samples for dissolved metals were field-filtered using an in-line high-capacity 0.45 micron filter prior to field preservation with nitric acid.

Quality control consisted of collecting and analyzing one duplicate sample from MW-1. Trip blanks were submitted for VOC analysis by USEPA Method 8260+MTBE and gasoline by NWTPH-Gx.

SAMPLE HANDLING AND SHIPPING

Five samples were placed in iced shipping containers and transported by courier to Columbia Analytical Services (CAS), Kelso, Washington, under chain of custody documentation.

Attachments: Table
Field Sampling Data Sheets
Chain-of-Custody Documentation

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Table
Sampling Field Parameters
Brix Maritime
February 2005

Well	Blind Code	Date Sampled	Depth to Water (feet)	Pore Volumes Purged	Gallons Removed	pH	Specific Conductance µS	Temperature °C	Dissolved Oxygen mg/L
Monitoring Wells									
MW-1	BM-022505-3	2/25/2005	20.81	9	2.0	6.07	986	16.02	0.77
MW-3	BM-022505-1	2/25/2005	22.03	3	1.5	5.90	493	14.96	0.71
MW-4	BM-022505-5	2/25/2005	10.60	4	2.7	4.86	260	12.55	0.50
MW-5	no sample	NA	Dry	NA	NA	NA	NA	NA	NA
MW-8	BM-022505-2	2/25/2005	21.15	1	0.2	5.89	490	14.31	2.44
QA/QC									
MW-1	BM-022505-4	2/25/2005	20.81	9	2.0	6.07	986	16.02	0.77

NA=not applicable

Confidential Business Information

WELL DEVELOPMENT FORM

ANCHOR ENVIRONMENTAL, L.L.C.

Project No.		Date: 12-23-05 Well: MW-8	
Site Location:	BRIX MARITIME	Initial DTB: 22.43	Final DTB: 22.43
Name: ~~Craig Wells~~ Kelly Tittemeier / Tim Stone		Initial DTW: 21.20	Final DTW: DRY
Development Method: Surge/Bail/P-Pump		Pore Volume: 0.20 gallons	
Total Water Removed: 0		Casing Diameter: 2"	
Water Contained ? ~~NO~~ Yes		Meter #: 25431	
Estimate of specific capacity or recharge to well: less than 0.1 GPM			

Time	Cum. Vol. Removed	Sand/Silt (ml/1000ml)	Temp. °C	EC	pH	DTW (TOC)	Appearance/Comments
1016	0	—	—	—	—	21.20	Began surging w/ Bailer
1026	0.2	200	14.04	413	6.53	21.86	END surging / pulled 1 bailer H2O
							- PVC fragments
							- slight petroleum sheen
							- slight petroleum odor
1038	0.2	—	—	—	—	21.86	Begin pumping w/ P-pump
1046	0.4	50	12.96	415	6.78	22.16	Cloudy brown
1052	0.6	25	12.67	422	6.83	22.38	Slightly cloudy, tan
1100	0.8	<10	12.35	420	6.19	22.39	Slight cloudy tan
1104	0.8	—	—	—	—	—	Dry @ 4 volumes - let recharge
1120	0.8					22.08	Restarted pump
1130							DRY - not enough volume to get parameters

22.43
-21.20
1.23 ft
x 0.163 gal/ft

1.23
x.163
1369
7380
12300 ml

~~22.43~~ 21.20
.3

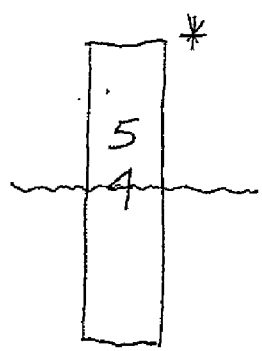
BRIX002825

Confidential Business Information

Depth to Water Measurements
Brix Maritime
Portland, Oregon

Anchor Environmental, L.L.C.				Site: Brix Maritime Project No. : 990056-01
Well	Date (MM/DD/YY)	Time (2400)	DTW (feet)	Comments
MW-1	02/25/2005	1134	20.81	no measurable product
MW-2	02/25/05	1105	22.20	no measurable product
MW-3	02/25/05	1115	22.03	no measurable product, petroleum odor
MW-4	02/25/05	1020	10.60	no measurable product
MW-5	02/25/05	1045	21.85	petroleum odor, no measurable product, bottom of screen, water level below (DRY)
MW-6	02/25/05	0955	19.78	no measurable product
MW-7	02/25/05	1000	20.80	no measurable product
MW-8	02/25/05	1122	21.15	no measurable product
River Gauge	02/25/05	1030	4 ft*	
Note: DTW = Depth to Water; DTP = Depth to Product				

no visible sheen along shoreline
no groundwater seeps noted



BRIX002826

Confidential Business Information

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime **WELL ID:** MW-1
SITE ADDRESS: Portland, Oregon **BLIND ID:** BM-022505-3
DUP ID: BM-022505-4 NA (1450)

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE:	°F 55 . °C					

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
2/25/05	11:34	22.15	.	20.81	.	1.34	X1	.32 (0.2)
/ /	:	.	.	.	.		X3	.96 (0.6)

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	2/25/05	14:45	B	6	40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly.	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): ~~10~~ 20

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease)
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA

Purge Start Time: 14:05 Pump/Bailer Inlet Depth:

Meas. [Casing]	Method § [Select A-G]	Purged (gal) [Cumulative Totals]	pH	E Cond (µS)	°F Temp °C [Circle units]	Other	Diss O_2 (mg/l)	Water Quality [Clarity, Color]
4	B	2.0	6.07	486	16.02	/	0.77	↑
3	B	1.2	6.00	972	16.11	/	0.79	↑
2	B	0.8	5.99	884	16.07	/	1.28	↑
1	B	0.4	6.05	800	15.93	/	2.08	Clear/Colorless *
0		0.00	.	[illegible]	.		.	

* petroleum odor

SAMPLER: TIM STONE (PRINTED NAME) (SIGNATURE)

BRIX002827

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime
WELL ID: MW-3
SITE ADDRESS: Portland, Oregon
BLIND ID: BM-022505-1
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE: °F 55 . °C						

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
2/25/05	11:15	24.69	.	22.03	.	2.66	X1	0.43
/ /	:	.	.	.	.		X3	1.30

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√ [√ if used]
VOA Glass	2/25/05	13:30	B	6	40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		2	250, 500, 1L	None HCl H_2SO_4	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 10

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease)
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA

Purge Start Time: 12:04
Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3	B	1.5	5.90	493	14.96		0.71	↑
2	B	1.0	5.82	488	14.89		0.55	"
1	B	0.5	5.77	485	14.71		0.97	Clear/Colorless *
0		0.00	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

*petroleum odor

SAMPLER: Tim Stone (PRINTED NAME) (SIGNATURE)

BRIX002828

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime **WELL ID:** MW-4
SITE ADDRESS: Portland, Oregon **BLIND ID:** RM-022505-5
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: °F 55. °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
2/25/05	10:20	~~16~~ 14.80 KRT		10.60		5.4 KRT ~~.88~~ KRT	X1	0.68 ~~.88~~ KRT
/ /	:	.		.	.	4.2	X3	2.04 ~~2.64~~ KRT

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = ___

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	2/25/05	15:40	B	6	40 ml	HCl	YES	NO		√
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		√
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:		1	250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		√
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		√
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 10

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease)
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA

Purge Start Time: 14:55 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3	B	2.7	4.86	260	12.55		0.50	Clear + colorless
2	B	1.8	4.84	260	12.52		0.53	Clear + colorless
1	B	0.9	4.82	259	12.51		0.53	Slightly cloudy, yellow tint *
0		0.00	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Tim Stone (PRINTED NAME) [signature] (SIGNATURE)

* bugs/particles

BRIX002829

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime WELL ID: MW-5
SITE ADDRESS: Portland, Oregon BLIND ID: No Sample DRY *
DUP ID: NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?	TEMPERATURE:	°F 55 . °C					

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
2/25/05	10:45	22.3		21.85			X1	
/ /	:						X3	

Gal/ft = (dia./2)^2 x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	/ /	:		6	40 ml	HCl	YES	NO		
Amber Glass	/ /	:		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 0

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil & Grease)
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Kjeldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

No Sample DRY

WATER QUALITY DATA

Purge Start Time: : Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4		.	.		.		.	
3		.	.		.		.	
2		.	.		.		.	
1		.	.		.		.	
0	DRY	~~0.00~~	.		.		.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

* water level below bottom of screen. Water in sump only

SAMPLER: Tim Stone (PRINTED NAME) (SIGNATURE)

BRIX002830

FIELD SAMPLING DATA SHEET

ANCHOR ENVIRONMENTAL, L.L.C.
6650 SW Redwood Lane, Suite 110
Portland, OR 97224
Office: (503) 670-1108 Fax: (503) 670-1128

PROJECT NAME: Brix Maritime WELL ID: MW-8
SITE ADDRESS: Portland, Oregon BLIND ID: BM-022505-2
DUP ID: NA

WIND FROM: N | NE | E | SE | S | SW | W | NW — LIGHT | MEDIUM | HEAVY
WEATHER: SUNNY | CLOUDY | RAIN | ? TEMPERATURE: °F 55. °C
[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		Volume (gal) [Water Column x Gal/ft]
2/25/05	11:22	22.44		21.15		1.29	X1	0.21
/ /	:						X3	0.63

Gal/ft = (dia./2)² x 0.163	1" =	0.041	2" =	0.163	3" =	0.367	4" =	0.653	6" =	1.469	10" =	4.080	12" =	5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other =

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth:

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	2/25/05	14:00	B	6	40 ml	HCl	YES	NO		✓
Amber Glass	/ /	:		2	250, 500, 1L	None HCl H_2SO_4	YES	NO		✓
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	NO		✓
Red Diss. Poly	/ /	:		1	250, 500, 1L	HNO_3	YES	YES		✓
	/ /	:			250, 500, 1L		YES			

Total Bottles (include duplicate count): 10

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8021) (8260B) (BTEX) (NWTPH-G)
	AMBER - Glass	(PAH) (TPH-HCID) (NWTPH-Dx) (TPH-418.1) (Oil &Grease)
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (BOD) (Turbidity) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (NO_3) (NO_2) (F)
	YELLOW - Poly	(COD) (TOC) (Total PO_4) (Total Keldahl Nitrogen) (NH_3) (NO_3/NO_2)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na)
	RED DISSOLVED - Poly	(As) (Sb) (Ba) (Be) (Ca) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mg) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hg) (K) (Na) (Hardness) (Silica)

WATER QUALITY DATA Purge Start Time: 12:30 Pump/Bailer Inlet Depth:

Meas.	Method §	Purged (gal)	pH	E Cond (µS)	°F Temp °C	Other	Diss O_2 (mg/l)	Water Quality
4								
3	B*	~~0.63~~						
2	B*	~~0.42~~	~~5.89~~					
1	B	0.21	5.89	490	14.31		2.44	Clear, colorless
0		0.00						~~Clear, colorless~~ KET

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Tim Stone (PRINTED NAME) (SIGNATURE)

* Dry 6 1 volume. Ld recharge.

BRIX002831

Appendix B
Laboratory Report

BRIX002832

1317 South 13th Avenue P.O. Box 479 Kelso, Washington 98626 (360) 577-7222 ph (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

March 23, 2005 Service Request No: K2501428

John Renda
Anchor Environmental
6650 SW Redwood Lane Suite 110
Portland, OR 97224

RE: BRIX Maritime / 990056-01

Dear John:

Enclosed are the results of the sample(s) submitted to our laboratory on February 28, 2005. For your reference, these analyses have been assigned our service request number K2501428.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAC standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281.

Respectfully submitted,

Columbia Analytical Services, Inc.

Abbie Spielman
Project Chemist

AS/jeb

BRIX002833

Confidential Business Information

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

BRIX002834

00062

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
B	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL has been elevated due to a matrix interference.
X	See case narrative.
*	The duplicate analysis not within control limits. See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i	The MRL/MDL has been elevated due to a chromatographic interference.
X	See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Case Narrative

BRIX002836

00004

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Anchor Environmental	**Service Request No.:**	K2501428
Project:	BRIX Maritime	**Date Received:**	2/28/05
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), and Laboratory Control Sample (LCS).

Sample Receipt

Seven water samples were received for analysis at Columbia Analytical Services on 2/28/05. No discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Metals

No anomalies associated with the analysis of these samples were observed.

Diesel Range Organics by NWTPH-Dx

No anomalies associated with the analysis of these samples were observed.

Gasoline Range Organics by NWTPH-Gx

Elevated Method Reporting Limits:
Samples BM-022505-3 and BM-022505-4 required dilutions due to elevated levels of Gasoline Range Organics. The reporting limits are adjusted to reflect the dilutions.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260B

Elevated Method Reporting Limits:
Samples BM-022505-3 and BM-022505-4 required dilutions due to elevated levels of target analytes reporting limits are adjusted to reflect the dilution.

Initial Calibration Exceptions:
The primary evaluation criterion was exceeded for the following analytes in Initial Calibration (ICAL) ID CAL4199: Bromomethane, 1, 1-Dichloroethene, Methylene Chloride, Dibromochloromethane, Bromoform, and Hexachlorobutadiene. In accordance with CAS standard operating procedures, the alternative evaluation specified in the EPA method was performed using the mean Relative Standard Deviation (RSD) of all analytes in the calibration. The result of the mean RSD calculation was 11.4%. The calibration meets the alternative evaluation criteria. Note that CAS/Kelso policy does not allow the use of averaging if any analyte in the ICAL exceeds 30% RSD.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ Date 3/04/05

BRIX002837

00005

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Elevated Method Reporting Limits:
The reporting limit is elevated for Acenaphthylene in sample BM-022505. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the reporting limit. The result is flagged to indicate the matrix interference.

No other anomalies associated with the analysis of these samples were observed.

Approved by _____ Date _____

BRIX002838

00006

Chain of Custody Documentation

BRIX002839

00007

Columbia Analytical Services INC.
An Employee - Owned Company

CHAIN OF CUSTODY

1317 South 13th Ave. • Kelso, WA 98626 • (360) 577-7222 • (800) 695-7222x07 • FAX (360) 636-1068

SR#: K2501428

PAGE 1 OF 1 COC #

PROJECT NAME: BRIX MARITIME
PROJECT NUMBER: 990056-01
PROJECT MANAGER: JOHN RENDA
COMPANY/ADDRESS: ANCHOR ENV., LLC
6650 SW REDWOOD LN, #110
CITY/STATE/ZIP: PORTLAND, OR 97224
E-MAIL ADDRESS: JRENDA@ANCHORENV.COM
PHONE #: 503-670-1108x12 FAX#: 503-670-1128
SAMPLER'S SIGNATURE: Timothy J. Stone

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625 ☐ 8270 ☐ 8270LL ☐	Volatile Organics 624 ☐ 8260 ☒ 8021 ☐ BTEX ☐	Hydrocarbons (*see below) Gas ☒ Diesel ☒ Oil ☒ ☐ Fuel Fingerprint (FIQ) ☐ NW-HCID Screen	Oil & Grease/TRPH 1664 HEM ☐ 1664 SGT ☐	PCB's Aroclors ☐ Congeners ☐	Pesticides/Herbicides 608 ☐ 8081A ☐ 8141A ☐ 8151A ☐	Chlorophenolics Tri ☐ Tetra ☐ 8151M PCP ☐	PAHS 8310 ☐ SIM ☒	Metals (Total or Dissolved) (See list below)	Cyanide ☐ Hex-Chrom ☐	pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS (circle) NH_3-N, COD, Total-P, TKN, TOC, DOC (circle) NO_2+NO_3	TOX 9020 ☐ AOX 1650 ☐ 506 ☐	NWTPH-GX				REMARKS
BM-022505-1	2/25/05	1330		H_2O	10		X	X					X	X										
- -2		1400			10		X	X					X	X										
- -3		1445			10		X	X					X	X										
- -4		1450			10		X	X					X	X										
- -5		1540			10		X						X	X										
TRIPBLK.		NA			2		X																	
TRIP BLK.		NA			2													X						

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- X II. Report Dup., MS, MSD as required
- ___ III. Data Validation Report (includes all raw data)
- ___ IV. CLP Deliverable Report
- ___ V. EDD

INVOICE INFORMATION

P.O. #
Bill To:

TURNAROUND REQUIREMENTS

- ___ 24 hr. ___ 48 hr.
- ___ 5 Day
- X Standard (10-15 working days)
- ___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER:_____ (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

BRIX002840

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: Tim Stone — Date/Time: 2-28-05/0800	Signature: [illegible] — Date/Time: 2/28/05 1400	Signature — Date/Time	Signature — Date/Time
Printed Name: TIM STONE — Firm: ANCHOR-PDX	Printed Name: [illegible] — Firm: ATS	Printed Name — Firm	Printed Name — Firm

Confidential Business Information

Columbia Analytical Services Inc.
Cooler Receipt and Preservation Form

PC Abbie

Project/Client Anchor Work Order K250 1428

Cooler received on 2-28-05 and opened on 2-28-05 by bw

1. Were custody seals on outside of coolers? Y N
   If yes, how many and where? 2 front
2. Were custody seals intact? Y N
3. Were signature and date present on the custody seals? Y N
4. Is the shipper's airbill available and filed? If no, record airbill number: CAS courier Y N
5. COC#

Temperature of cooler(s) upon receipt: (°C)	1.3	1.7		
Temperature Blank: (°C)	0.8	1.1		

Were samples hand delivered on the same day as collection? ~~Y~~ N

6. Were custody papers properly filled out (ink, signed, etc.)? Y N
7. Type of packing material present ice, foam, styrofoam insert
8. **Did all bottles arrive in good condition (unbroken)?** Y N
9. Were all bottle labels complete (i.e analysis, preservation, etc.)? Y N
10. Did all bottle labels and tags agree with custody papers? Y N
11. **Were the correct types of bottles used for the tests indicated?** Y N
12. Were all of the preserved bottles received at the lab with the appropriate pH? Y N
13. Were VOA vials checked for absence of air bubbles, and if present, noted below? Y N
14. Did the bottles originate from CAS/K or a branch laboratory? Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** ~~Y~~ N
16. Was C12/Res negative? Y N

Explain any discrepancies:

RESOLUTION:

Samples that required preservation or received out of temperature:

BRIX002841

Sample ID	Reagent	Volume	Lot Number	Bottle Type	Rec'd out of Temperature	Initials

00009

Metals

BRIX002842

00010

Confidential Business Information

Columbia Analytical Services

METALS

- Cover Page -

INORGANIC ANALYSIS DATA PACKAGE

Client: Anchor Environmental

Service Request: K2501428

Project No.: 990056-01

Project Name: BRIX Maritime

Sample No.	Lab Sample ID.
BM-022505-1	K2501428-001
BM-022505-1	K2501428-001 DISS
BM-022505-1D	K2501428-001D
BM-022505-1S	K2501428-001S
BM-022505-2	K2501428-002
BM-022505-2	K2501428-002 DISS
BM-022505-3	K2501428-003
BM-022505-3	K2501428-003 DISS
BM-022505-4	K2501428-004
BM-022505-4	K2501428-004 DISS
BM-022505-5	K2501428-005
BM-022505-5	K2501428-005 DISS
Method Blank	K2501428-MB

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: Total and Dissolved Metals

BRIX002843

Signature: Eileen M Arnold

Date: 3/22/05

00011

COVER PAGE - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-1 MW-3 Lab Code: K2501428-001

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	4.1		
Barium	200.8	0.05	1	3/10/05	3/15/05	53.8		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.07		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.3		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1	U	
Lead	200.8	0.02	1	3/10/05	3/15/05	0.03		
Manganese	200.8	2.50	50	3/10/05	3/15/05	2230		
Zinc	200.8	0.5	1	3/10/05	3/15/05	3.3		

% Solids: 0.0

Comments:

BRIX002844

00012

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K2501428
Project No.:	990056-01	Date Collected:	02/25/05
Project Name:	BRIX Maritime	Date Received:	02/28/05
Matrix:	WATER	Units	µG/L
		Basis	NA

Sample Name: BM-022505-1 MW-3 Lab Code: K2501428-001 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	4.3		
Barium	200.8	0.05	1	3/10/05	3/15/05	54.6		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.06		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.5		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1	U	
Lead	200.8	0.02	1	3/10/05	3/15/05	0.02	U	
Manganese	200.8	2.50	50	3/10/05	3/15/05	2130		
Zinc	200.8	0.5	1	3/10/05	3/15/05	1.6		

% Solids: 0.0

Comments: Dissolved Metals

BRIX002845

00013

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-2 MW-8 Lab Code: K2501428-002

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	1.3		
Barium	200.8	0.05	1	3/10/05	3/15/05	87.2		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.12		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.8		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.3		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.17		
Manganese	200.8	2.50	50	3/10/05	3/15/05	3090		
Zinc	200.8	0.5	1	3/10/05	3/15/05	20.2		

% Solids: 0.0

Comments:

BRIX002846

00014

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-2 MW-8 Lab Code: K2501428-002 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	1.1		
Barium	200.8	0.05	1	3/10/05	3/15/05	85.1		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.10		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.4		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1	U	
Lead	200.8	0.02	1	3/10/05	3/15/05	0.22		
Manganese	200.8	2.50	50	3/10/05	3/15/05	3060		
Zinc	200.8	0.5	1	3/10/05	3/15/05	20.0		

% Solids: 0.0

Comments: Dissolved Metals

BRIX002847

00015

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K2501428
Project No.:	990056-01	Date Collected:	02/25/05
Project Name:	BRIX Maritime	Date Received:	02/28/05
Matrix:	WATER	Units	µG/L
		Basis	NA

Sample Name: BM-022505-3 MW-1 Lab Code: K2501428-003

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	12.8		
Barium	200.8	0.05	1	3/10/05	3/15/05	190		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.15		
Chromium	200.8	0.2	1	3/10/05	3/15/05	1.4		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.2		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.23		
Manganese	200.8	12.50	250	3/10/05	3/15/05	5980		
Zinc	200.8	0.5	1	3/10/05	3/15/05	2.2		

% Solids: 0.0

Comments:

BRIX002848

00016

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-3 MW-1 Lab Code: K2501428-003 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	12.0		
Barium	200.8	0.05	1	3/10/05	3/15/05	194		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.15		
Chromium	200.8	0.2	1	3/10/05	3/15/05	1.2		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.02	U	
Manganese	200.8	12.50	250	3/10/05	3/15/05	6150		
Zinc	200.8	0.5	1	3/10/05	3/15/05	1.5		

% Solids: 0.0

Comments: Dissolved Metals

BRIX002849

00017

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K2501428
Project No.:	990056-01	Date Collected:	02/25/05
Project Name:	BRIX Maritime	Date Received:	02/28/05
Matrix:	WATER	Units	µG/L
		Basis	NA

Sample Name: BM-022505-4 MW-1 (DUP) Lab Code: K2501428-004

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	12.2		
Barium	200.8	0.05	1	3/10/05	3/15/05	194		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.15		
Chromium	200.8	0.2	1	3/10/05	3/15/05	1.2		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.3		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.22		
Manganese	200.8	12.50	250	3/10/05	3/15/05	5880		
Zinc	200.8	0.5	1	3/10/05	3/15/05	2.3		

% Solids: 0.0

Comments:

BRIX002850

00018

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-4 MW-1 (DUP) Lab Code: K2501428-004 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	12.8		
Barium	200.8	0.05	1	3/10/05	3/15/05	195		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.13		
Chromium	200.8	0.2	1	3/10/05	3/15/05	1.3		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1	U	
Lead	200.8	0.02	1	3/10/05	3/15/05	0.02		
Manganese	200.8	12.50	250	3/10/05	3/15/05	6190		
Zinc	200.8	0.5	1	3/10/05	3/15/05	1.4		

% Solids: 0.0

Comments: Dissolved Metals

BRIX002851

00019

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: 02/25/05
Date Received: 02/28/05
Units µG/L
Basis NA

Sample Name: BM-022505-5 MW-4 Lab Code: K2501428-005

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	1.3		
Barium	200.8	0.05	1	3/10/05	3/15/05	21.5		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.10		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.4		
Copper	200.8	0.1	1	3/10/05	3/15/05	1.1		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.12		
Manganese	200.8	1.00	20	3/10/05	3/15/05	558		
Zinc	200.8	0.5	1	3/10/05	3/15/05	5.4		

% Solids: 0.0

Comments:

BRIX002852

00020

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client:	Anchor Environmental	Service Request:	K2501428
Project No.:	990056-01	Date Collected:	02/25/05
Project Name:	BRIX Maritime	Date Received:	02/28/05
Matrix:	WATER	Units	µG/L
		Basis	NA

Sample Name: BM-022505-5 MW-4 Lab Code: K2501428-005 DISS

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	1.1		
Barium	200.8	0.05	1	3/10/05	3/15/05	18.4		
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.06		
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.3		
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1		
Lead	200.8	0.02	1	3/10/05	3/15/05	0.02		
Manganese	200.8	1.00	20	3/10/05	3/15/05	591		
Zinc	200.8	0.5	1	3/10/05	3/15/05	1.7		

% Solids: 0.0

Comments: Dissolved Metals

BRIX002853

00021

Form I - IN

METALS

-1-

INORGANIC ANALYSIS DATA SHEET

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Date Collected: NA
Date Received: NA
Units µG/L
Basis NA

Sample Name: Method Blank
Lab Code: K2501428-MB

Analyte	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Arsenic	200.8	0.5	1	3/10/05	3/15/05	0.5	U	
Barium	200.8	0.05	1	3/10/05	3/15/05	0.05	U	
Cadmium	200.8	0.02	1	3/10/05	3/15/05	0.02	U	
Chromium	200.8	0.2	1	3/10/05	3/15/05	0.2	U	
Copper	200.8	0.1	1	3/10/05	3/15/05	0.1	U	
Lead	200.8	0.02	1	3/10/05	3/15/05	0.02	U	
Manganese	200.8	0.05	1	3/10/05	3/15/05	0.05	U	
Zinc	200.8	0.5	1	3/10/05	3/15/05	0.5	U	

% Solids: 0.0

Comments:

BRIX002854

00022

Form I - IN

METALS
-5a-
SPIKE SAMPLE RECOVERY

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: BM-022505-1S
Lab Code: K2501428-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Arsenic	70 - 130	25.2		4.1		20.0	105		200.8
Barium	70 - 130	75.4		53.8		20.0	108		200.8
Cadmium	70 - 130	19.2		0.07		20.0	96		200.8
Chromium	70 - 130	21.9		0.3		20.0	108		200.8
Copper	70 - 130	18.8		0.1	U	20.0	94		200.8
Lead	70 - 130	18.9		0.03		20.0	94		200.8
Manganese		2130		2230		20.0	-500		200.8
Zinc	70 - 130	21.8		3.3		20.0	93		200.8

BRIX002855

An empty field in the Control Limit column indicates the control limit is not applicable.

METALS
-6-
DUPLICATES

Client: Anchor Environmental
Project No.: 990056-01
Project Name: BRIX Maritime
Matrix: WATER

Service Request: K2501428
Units: µg/L
Basis: NA
% Solids: 0.0

Sample Name: BM-022505-1D
Lab Code: K2501428-001D

Analyte	Control Limit(%)	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Arsenic	20	4.1		4.3		4		200.8
Barium	20	53.8		57.2		6		200.8
Cadmium		0.07		0.09		24		200.8
Chromium		0.3		0.5		42		200.8
Copper		0.1	U	0.1	U			200.8
Lead		0.03		0.04		33		200.8
Manganese	20	2230		2140		4		200.8
Zinc	20	3.3		3.5		7		200.8

BRIX002856

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

Confidential Business Information

METALS
-7-
LABORATORY CONTROL SAMPLE

Client: Anchor Environmental

Service Request: K2501428

Project No.: 990056-01

Project Name: BRIX Maritime

Aqueous LCS Source: Inorganic Ventures

Solid LCS Source:

Analyte	Aqueous ug/L True	Aqueous ug/L Found	Aqueous ug/L %R	Solid (mg/kg) True	Solid (mg/kg) Found	C	Limits		%R
Arsenic	20.0	19.7	99						
Barium	20.0	19.8	99						
Cadmium	20.0	20.2	101						
Chromium	20.0	19.8	99						
Copper	20.0	20.7	104						
Lead	20.0	19.1	96						
Manganese	20.0	19.8	99						
Zinc	20.0	19.3	96						

BRIX002857

00025

Confidential Business Information

Diesel & Residual Range Organics

BRIX002858

00026

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Diesel and Residual Range Organics

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	1200	Y	250	1	03/03/05	03/05/05	KWG0503452	
Residual Range Organics (RRO)	1800	O	500	1	03/03/05	03/05/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	83	50-150	03/05/05	Acceptable
n-Triacontane	89	50-150	03/05/05	Acceptable

BRIX002859

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Diesel and Residual Range Organics

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	1000	Y	280	1	03/03/05	03/05/05	KWG0503452	
Residual Range Organics (RRO)	1300	O	560	1	03/03/05	03/05/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	86	50-150	03/05/05	Acceptable
n-Triacontane	93	50-150	03/05/05	Acceptable

BRIX002860

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Diesel and Residual Range Organics

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	1400	L	250	1	03/03/05	03/05/05	KWG0503452	
Residual Range Organics (RRO)	ND	U	500	1	03/03/05	03/05/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	96	50-150	03/05/05	Acceptable
n-Triacontane	102	50-150	03/05/05	Acceptable

BRIX002861

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Diesel and Residual Range Organics

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**1300**	L	250	1	03/03/05	03/05/05	KWG0503452	
Residual Range Organics (RRO)	ND	U	500	1	03/03/05	03/05/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	94	50-150	03/05/05	Acceptable
n-Triacontane	98	50-150	03/05/05	Acceptable

BRIX002862

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Diesel and Residual Range Organics

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	250	1	03/03/05	03/05/05	KWG0503452	
Residual Range Organics (RRO)	ND	U	500	1	03/03/05	03/05/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	103	50-150	03/05/05	Acceptable
n-Triacontane	108	50-150	03/05/05	Acceptable

BRIX002863

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503452-5	**Basis:**	NA
Extraction Method:	EPA 3510C	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	250	1	03/03/05	03/04/05	KWG0503452	
Residual Range Organics (RRO)	ND	U	500	1	03/03/05	03/04/05	KWG0503452	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	87	50-150	03/04/05	Acceptable
n-Triacontane	91	50-150	03/04/05	Acceptable

BRIX002864

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: BRIX Maritime/990056-01
Sample Matrix: Water

Service Request: K2501428

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2
BM-022505-1	K2501428-001	83	89
BM-022505-2	K2501428-002	86	93
BM-022505-3	K2501428-003	96	102
BM-022505-4	K2501428-004	94	98
BM-022505-5	K2501428-005	103	108
Method Blank	KWG0503452-5	87	91
Lab Control Sample	KWG0503452-3	91	103
Duplicate Lab Control Sample	KWG0503452-4	89	95

Surrogate Recovery Control Limits (%)

Sur1 =	o-Terphenyl	50-150
Sur2 =	n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

BRIX002865

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/03/2005
Sample Matrix:	Water	**Date Analyzed:**	03/04/2005

Lab Control Spike/Duplicate Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method:	EPA 3510C	**Units:**	ug/L
Analysis Method:	NWTPH-Dx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503452

	Lab Control Sample KWG0503452-3 Lab Control Spike			Duplicate Lab Control Sample KWG0503452-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	3020	3200	94	2800	3200	87	56-162	8	30
Residual Range Organics (RRO)	1560	1600	98	1400	1600	87	53-143	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BRIX002866

Confidential Business Information

Gasoline Range Organics

BRIX002867

00035

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/10/05	03/10/05	KWG0503941	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	99	50-150	03/10/05	Acceptable

BRIX002868

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/10/05	03/10/05	KWG0503941	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	99	50-150	03/10/05	Acceptable

BRIX002869

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	12000	DY	2500	10	03/11/05	03/11/05	KWG0503958	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	100	50-150	03/11/05	Acceptable

BRIX002870

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	11000	DY	2500	10	03/11/05	03/11/05	KWG0503958	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	101	50-150	03/11/05	Acceptable

BRIX002871

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/10/05	03/10/05	KWG0503941	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	99	50-150	03/10/05	Acceptable

BRIX002872

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Gasoline Range Organics

Sample Name:	Trip Blk.	**Units:**	ug/L
Lab Code:	K2501428-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/10/05	03/10/05	KWG0503941	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	100	50-150	03/10/05	Acceptable

BRIX002873

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503941-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/10/05	03/10/05	KWG0503941	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	101	50-150	03/10/05	Acceptable

BRIX002874

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503958-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	1	03/11/05	03/11/05	KWG0503958	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	101	50-150	03/11/05	Acceptable

BRIX002875

Comments:

00043

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: BRIX Maritime/990056-01
Sample Matrix: Water

Service Request: K2501428

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
BM-022505-1	K2501428-001	99
BM-022505-2	K2501428-002	99
BM-022505-3	K2501428-003	100
BM-022505-4	K2501428-004	101
BM-022505-5	K2501428-005	99
Trip Blk.	K2501428-007	100
BM-022505-1DUP	KWG0503941-1	99
Method Blank	KWG0503941-3	101
Method Blank	KWG0503958-3	101
Lab Control Sample	KWG0503941-2	105
Lab Control Sample	KWG0503958-2	105

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene 50-150

BRIX002876

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00044

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/10/2005
Sample Matrix:	Water	**Date Analyzed:**	03/10/2005

Duplicate Sample Summary
Gasoline Range Organics

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG0503941

Analyte Name	MRL	Sample Result	BM-022505-1DUP KWG0503941-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Gasoline Range Organics-NWTPH	250	ND	ND	ND	-	30

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BRIX002877

00045

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/10/2005
Sample Matrix:	Water	**Date Analyzed:**	03/10/2005

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	NWTPH-Gx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503941

	Lab Control Sample KWG0503941-2 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Gasoline Range Organics-NWTPH	486	500	97	71-128

BRIX002878

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00046

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/11/2005
Sample Matrix:	Water	**Date Analyzed:**	03/11/2005

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	NWTPH-Gx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503958

	Lab Control Sample KWG0503958-2 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Gasoline Range Organics-NWTPH	495	500	99	71-128

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BRIX002879

00047

Confidential Business Information

Volatile Organic Compounds
EPA Method 8260B

BRIX002880

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Benzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Toluene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	

BRIX002881

Comments:

00049

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	**1.3**		0.50	1	03/07/05	03/07/05	KWG0503689	
o-Xylene	**1.1**		0.50	1	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Naphthalene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	

BRIX002882

Comments:

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Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	03/07/05	Acceptable
Toluene-d8	97	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	91	72-114	03/07/05	Acceptable

BRIX002883

Comments:

00051

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Benzene	**0.54**		0.50	1	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Toluene	**5.8**		0.50	1	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	

BRIX002884

Comments:

00052

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	**0.86**		0.50	1	03/07/05	03/07/05	KWG0503689	
o-Xylene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Naphthalene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	

BRIX002885

Comments:

00053

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	80-119	03/07/05	Acceptable
Toluene-d8	99	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	90	72-114	03/07/05	Acceptable

BRIX002886

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Benzene	**31**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Toluene	**2.7**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	

BRIX002887

Comments:

00055

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	**210**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	**220**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
o-Xylene	**26**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	**89**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	**350**	D	100	50	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	**160**	D	10	5	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	**870**	D	100	50	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	**39**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	**90**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
Naphthalene	**470**	D	100	50	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	

BRIX002888

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	03/07/05	Acceptable
Toluene-d8	99	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	93	72-114	03/07/05	Acceptable

BRIX002889

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Benzene	**16**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Toluene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	100	5	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	

BRIX002890

Comments:

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Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	**150**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	**160**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
o-Xylene	**18**	D	2.5	5	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	**70**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	**190**	D	10	5	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	**120**	D	10	5	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	**590**	D	100	50	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	**27**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	**61**	D	10	5	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	2.5	5	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	
Naphthalene	**290**	D	100	50	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	10	5	03/07/05	03/07/05	KWG0503689	

BRIX002891

Comments:

00059

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	80-119	03/07/05	Acceptable
Toluene-d8	98	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	92	72-114	03/07/05	Acceptable

BRIX002892

Comments:

00060

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Benzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Toluene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	

BRIX002893

Comments:

00061

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
o-Xylene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Naphthalene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	

BRIX002894

Comments:

00062

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	03/07/05	Acceptable
Toluene-d8	98	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	90	72-114	03/07/05	Acceptable

BRIX002895

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	Trip Blk.	**Units:**	ug/L
Lab Code:	K2501428-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Benzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Toluene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	

BRIX002896

Comments:

00064

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	Trip Blk.	**Units:**	ug/L
Lab Code:	K2501428-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
o-Xylene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Naphthalene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	

BRIX002897

Comments:

00065

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Volatile Organic Compounds

Sample Name:	Trip Blk.	**Units:**	ug/L
Lab Code:	K2501428-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	03/07/05	Acceptable
Toluene-d8	98	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	89	72-114	03/07/05	Acceptable

BRIX002898

Comments:

00066

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503689-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Vinyl Chloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichlorofluoromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Acetone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methyl tert-Butyl Ether	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Disulfide	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Methylene Chloride	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
trans-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Butanone (MEK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
2,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
cis-1,2-Dichloroethene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Chloroform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Carbon Tetrachloride	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloroethane (EDC)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Benzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Trichloroethene (TCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromodichloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromomethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
2-Hexanone	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
cis-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Toluene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
trans-1,3-Dichloropropene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,2-Trichloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	

BRIX002899

Comments:

00067

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503689-4	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Tetrachloroethene (PCE)	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Dibromochloromethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromoethane (EDB)	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Chlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,1,1,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Ethylbenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
m,p-Xylenes	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
o-Xylene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Styrene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromoform	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Isopropylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,1,2,2-Tetrachloroethane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichloropropane	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
Bromobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
n-Propylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
2-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
4-Chlorotoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3,5-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
tert-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trimethylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
sec-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,3-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
4-Isopropyltoluene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,4-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
n-Butylbenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2-Dichlorobenzene	ND	U	0.50	1	03/07/05	03/07/05	KWG0503689	
1,2-Dibromo-3-chloropropane	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,4-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
1,2,3-Trichlorobenzene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Naphthalene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	
Hexachlorobutadiene	ND	U	2.0	1	03/07/05	03/07/05	KWG0503689	

BRIX002900

Comments:

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503689-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	80-119	03/07/05	Acceptable
Toluene-d8	97	83-113	03/07/05	Acceptable
4-Bromofluorobenzene	89	72-114	03/07/05	Acceptable

BRIX002901

Comments:

00069

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: BRIX Maritime/990056-01
Sample Matrix: Water

Service Request: K2501428

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260B

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
BM-022505-1	K2501428-001	96	97	91
BM-022505-2	K2501428-002	97	99	90
BM-022505-3	K2501428-003	96	99	93
BM-022505-4	K2501428-004	92	98	92
BM-022505-5	K2501428-005	96	98	90
Trip Blk.	K2501428-006	96	98	89
Method Blank	KWG0503689-4	96	97	89
Batch QC	K2501405-003	96	98	89
Batch QCMS	KWG0503689-1	97	97	92
Batch QCDMS	KWG0503689-2	97	98	92
Lab Control Sample	KWG0503689-3	96	97	93

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	80-119	
Sur2 = Toluene-d8	83-113	
Sur3 = 4-Bromofluorobenzene	72-114	

BRIX002902

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

00070

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/07/2005
Sample Matrix:	Water	**Date Analyzed:**	03/07/2005

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K2501405-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260B	**Extraction Lot:**	KWG0503689

		Batch QCMS KWG0503689-1 Matrix Spike			Batch QCDMS KWG0503689-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	21	2170	2000	107	2300	2000	114	76-143	6	30
Benzene	ND	1870	2000	94	1960	2000	98	75-130	5	30
Trichloroethene (TCE)	410	2390	2000	99	2470	2000	103	69-132	3	30
Toluene	ND	1930	2000	96	1990	2000	100	72-132	3	30
Chlorobenzene	ND	1940	2000	97	1990	2000	100	78-117	3	30
1,2-Dichlorobenzene	ND	1960	2000	98	2000	2000	100	77-117	2	30
Naphthalene	ND	2120	2000	106	2260	2000	113	56-155	6	30

BRIX002903

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00071

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/07/2005
Sample Matrix:	Water	**Date Analyzed:**	03/07/2005

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503689

	Lab Control Sample KWG0503689-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	13.5	10.0	135	45-171
Chloromethane	8.88	10.0	89	53-135
Vinyl Chloride	9.52	10.0	95	67-130
Bromomethane	10.5	10.0	105	36-158
Chloroethane	9.46	10.0	95	62-125
Trichlorofluoromethane	11.0	10.0	110	66-126
Acetone	47.6	50.0	95	70-127
1,1-Dichloroethene	11.1	10.0	111	76-129
Methyl tert-Butyl Ether	9.87	10.0	99	63-132
Carbon Disulfide	19.2	20.0	96	62-138
Methylene Chloride	8.79	10.0	88	65-127
trans-1,2-Dichloroethene	10.3	10.0	103	81-121
1,1-Dichloroethane	8.64	10.0	86	76-117
2-Butanone (MEK)	44.8	50.0	90	69-132
2,2-Dichloropropane	12.5	10.0	125	63-142
cis-1,2-Dichloroethene	9.90	10.0	99	83-118
Chloroform	10.0	10.0	100	76-121
Bromochloromethane	10.3	10.0	103	80-125
1,1,1-Trichloroethane (TCA)	12.0	10.0	120	72-132
1,1-Dichloropropene	9.51	10.0	95	72-118
Carbon Tetrachloride	13.0	10.0	130	66-146
1,2-Dichloroethane (EDC)	10.3	10.0	103	74-121
Benzene	9.57	10.0	96	78-121
Trichloroethene (TCE)	10.1	10.0	101	79-119
1,2-Dichloropropane	8.90	10.0	89	76-116
Bromodichloromethane	11.6	10.0	116	74-130
Dibromomethane	9.91	10.0	99	76-123
2-Hexanone	44.0	50.0	88	67-127
cis-1,3-Dichloropropene	10.4	10.0	104	79-123
Toluene	9.79	10.0	98	76-122
trans-1,3-Dichloropropene	9.92	10.0	99	70-117
1,1,2-Trichloroethane	9.46	10.0	95	76-120
4-Methyl-2-pentanone (MIBK)	47.4	50.0	95	70-128
1,3-Dichloropropane	9.25	10.0	93	77-121
Tetrachloroethene (PCE)	9.94	10.0	99	72-124
Dibromochloromethane	11.6	10.0	116	72-133

BRIX002904

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00072

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/07/2005
Sample Matrix:	Water	**Date Analyzed:**	03/07/2005

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503689

	Lab Control Sample KWG0503689-3 Lab Control Spike			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
1,2-Dibromoethane (EDB)	9.64	10.0	96	75-120
Chlorobenzene	9.88	10.0	99	79-113
1,1,1,2-Tetrachloroethane	11.3	10.0	113	72-133
Ethylbenzene	10.3	10.0	103	84-122
m,p-Xylenes	20.3	20.0	102	83-125
o-Xylene	9.95	10.0	100	83-122
Styrene	9.81	10.0	98	83-127
Bromoform	11.7	10.0	117	63-149
Isopropylbenzene	9.36	10.0	94	72-114
1,1,2,2-Tetrachloroethane	9.43	10.0	94	70-122
1,2,3-Trichloropropane	10.2	10.0	102	73-125
Bromobenzene	10.1	10.0	101	80-121
n-Propylbenzene	10.6	10.0	106	78-124
2-Chlorotoluene	10.0	10.0	100	82-126
4-Chlorotoluene	10.0	10.0	100	80-122
1,3,5-Trimethylbenzene	10.5	10.0	105	78-132
tert-Butylbenzene	10.5	10.0	105	76-126
1,2,4-Trimethylbenzene	10.5	10.0	105	74-138
sec-Butylbenzene	10.8	10.0	108	72-133
1,3-Dichlorobenzene	10.5	10.0	105	81-116
4-Isopropyltoluene	10.2	10.0	102	62-132
1,4-Dichlorobenzene	10.1	10.0	101	80-113
n-Butylbenzene	10.1	10.0	101	51-138
1,2-Dichlorobenzene	9.74	10.0	97	81-113
1,2-Dibromo-3-chloropropane	10.6	10.0	106	63-124
1,2,4-Trichlorobenzene	10.6	10.0	106	61-135
1,2,3-Trichlorobenzene	9.92	10.0	99	66-131
Naphthalene	10.7	10.0	107	53-157
Hexachlorobutadiene	10.4	10.0	104	66-132

BRIX002905

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

00073

Confidential Business Information

Polynuclear Aromatic Hydrocarbons
EPA Method 8270C

BRIX002906

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Polynuclear Aromatic Hydrocarbons

Sample Name:	BM-022505-1 MW-3	**Units:**	ug/L
Lab Code:	K2501428-001	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.17**		0.020	1	03/02/05	03/08/05	KWG0503385	
2-Methylnaphthalene	**0.22**		0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthylene	**0.022**		0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthene	**0.12**		0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenzofuran	**0.022**		0.020	1	03/02/05	03/08/05	KWG0503385	
Fluorene	**0.063**		0.020	1	03/02/05	03/08/05	KWG0503385	
Phenanthrene	**0.072**		0.020	1	03/02/05	03/08/05	KWG0503385	
Anthracene	**0.029**		0.020	1	03/02/05	03/08/05	KWG0503385	
Fluoranthene	**0.060**		0.020	1	03/02/05	03/08/05	KWG0503385	
Pyrene	**0.056**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benz(a)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Chrysene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(b)fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(k)fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(a)pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(g,h,i)perylene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	59	37-107	03/08/05	Acceptable
Fluoranthene-d10	60	18-137	03/08/05	Acceptable
Terphenyl-d14	58	18-153	03/08/05	Acceptable

BRIX002907

Comments:

00075

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Polynuclear Aromatic Hydrocarbons

Sample Name:	BM-022505-2 MW-8	**Units:**	ug/L
Lab Code:	K2501428-002	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.22**		0.020	1	03/02/05	03/08/05	KWG0503385	
2-Methylnaphthalene	**0.22**		0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthylene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthene	**0.029**		0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenzofuran	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Fluorene	**0.029**		0.020	1	03/02/05	03/08/05	KWG0503385	
Phenanthrene	**0.051**		0.020	1	03/02/05	03/08/05	KWG0503385	
Anthracene	**0.037**		0.020	1	03/02/05	03/08/05	KWG0503385	
Fluoranthene	**0.032**		0.020	1	03/02/05	03/08/05	KWG0503385	
Pyrene	**0.036**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benz(a)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Chrysene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(b)fluoranthene	**0.020**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(k)fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(a)pyrene	**0.024**		0.020	1	03/02/05	03/08/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	**0.023**		0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(g,h,i)perylene	**0.029**		0.020	1	03/02/05	03/08/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	74	37-107	03/08/05	Acceptable
Fluoranthene-d10	76	18-137	03/08/05	Acceptable
Terphenyl-d14	73	18-153	03/08/05	Acceptable

BRIX002908

Comments:

00076

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Polynuclear Aromatic Hydrocarbons

Sample Name:	BM-022505-3 MW-1	**Units:**	ug/L
Lab Code:	K2501428-003	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**150**	D	0.97	50	03/02/05	03/09/05	KWG0503385	
2-Methylnaphthalene	**46**	D	0.97	50	03/02/05	03/09/05	KWG0503385	
Acenaphthylene	**0.10**		0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthene	**0.33**		0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenzofuran	**0.093**		0.020	1	03/02/05	03/08/05	KWG0503385	
Fluorene	**0.28**		0.020	1	03/02/05	03/08/05	KWG0503385	
Phenanthrene	**0.44**		0.020	1	03/02/05	03/08/05	KWG0503385	
Anthracene	**0.090**		0.020	1	03/02/05	03/08/05	KWG0503385	
Fluoranthene	**0.27**		0.020	1	03/02/05	03/08/05	KWG0503385	
Pyrene	**0.50**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benz(a)anthracene	**0.096**		0.020	1	03/02/05	03/08/05	KWG0503385	
Chrysene	**0.11**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(b)fluoranthene	**0.038**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(k)fluoranthene	**0.034**		0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(a)pyrene	**0.046**		0.020	1	03/02/05	03/08/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(g,h,i)perylene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	56	37-107	03/08/05	Acceptable
Fluoranthene-d10	56	18-137	03/08/05	Acceptable
Terphenyl-d14	73	18-153	03/08/05	Acceptable

BRIX002909

Comments:

00077

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Polynuclear Aromatic Hydrocarbons

Sample Name:	BM-022505-4 MW-1 (DUP)	**Units:**	ug/L
Lab Code:	K2501428-004	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**170**	D	0.97	50	03/02/05	03/09/05	KWG0503385	
2-Methylnaphthalene	**53**	D	0.97	50	03/02/05	03/09/05	KWG0503385	
Acenaphthylene	ND	Ui	0.088	1	03/02/05	03/09/05	KWG0503385	
Acenaphthene	**0.38**		0.020	1	03/02/05	03/09/05	KWG0503385	
Dibenzofuran	**0.10**		0.020	1	03/02/05	03/09/05	KWG0503385	
Fluorene	**0.32**		0.020	1	03/02/05	03/09/05	KWG0503385	
Phenanthrene	**0.53**		0.020	1	03/02/05	03/09/05	KWG0503385	
Anthracene	**0.099**		0.020	1	03/02/05	03/09/05	KWG0503385	
Fluoranthene	**0.31**		0.020	1	03/02/05	03/09/05	KWG0503385	
Pyrene	**0.57**		0.020	1	03/02/05	03/09/05	KWG0503385	
Benz(a)anthracene	**0.11**		0.020	1	03/02/05	03/09/05	KWG0503385	
Chrysene	**0.12**		0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(b)fluoranthene	**0.038**		0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(k)fluoranthene	**0.044**		0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(a)pyrene	**0.048**		0.020	1	03/02/05	03/09/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(g,h,i)perylene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	37-107	03/09/05	Acceptable
Fluoranthene-d10	65	18-137	03/09/05	Acceptable
Terphenyl-d14	77	18-153	03/09/05	Acceptable

BRIX002910

Comments:

00078

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	02/25/2005
Sample Matrix:	Water	**Date Received:**	02/28/2005

Polynuclear Aromatic Hydrocarbons

Sample Name:	BM-022505-5 MW-4	**Units:**	ug/L
Lab Code:	K2501428-005	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
2-Methylnaphthalene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Acenaphthylene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Acenaphthene	**0.11**		0.020	1	03/02/05	03/09/05	KWG0503385	
Dibenzofuran	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Fluorene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Phenanthrene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Anthracene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Fluoranthene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Pyrene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benz(a)anthracene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Chrysene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(b)fluoranthene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(k)fluoranthene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(a)pyrene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	
Benzo(g,h,i)perylene	ND	U	0.020	1	03/02/05	03/09/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	37-107	03/09/05	Acceptable
Fluoranthene-d10	77	18-137	03/09/05	Acceptable
Terphenyl-d14	83	18-153	03/09/05	Acceptable

BRIX002911

Comments:

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Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0503385-3	**Basis:**	NA
Extraction Method:	EPA 3535	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
2-Methylnaphthalene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthylene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Acenaphthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenzofuran	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Fluorene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Phenanthrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benz(a)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Chrysene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(b)fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(k)fluoranthene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(a)pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Dibenz(a,h)anthracene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	
Benzo(g,h,i)perylene	ND	U	0.020	1	03/02/05	03/08/05	KWG0503385	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	70	37-107	03/08/05	Acceptable
Fluoranthene-d10	73	18-137	03/08/05	Acceptable
Terphenyl-d14	93	18-153	03/08/05	Acceptable

BRIX002912

Comments:

00080

Confidential Business Information

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Anchor Environmental
Project: BRIX Maritime/990056-01
Sample Matrix: Water

Service Request: K2501428

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3535
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
BM-022505-1	K2501428-001	59	60	58
BM-022505-2	K2501428-002	74	76	73
BM-022505-3	K2501428-003	56	56	73
BM-022505-4	K2501428-004	65	65	77
BM-022505-5	K2501428-005	71	77	83
Method Blank	KWG0503385-3	70	73	93
Lab Control Sample	KWG0503385-1	63 D	67 D	69 D
Duplicate Lab Control Sample	KWG0503385-2	62 D	65 D	69 D

Surrogate Recovery Control Limits (%)

Sur1 =	Fluorene-d10	37-107
Sur2 =	Fluoranthene-d10	18-137
Sur3 =	Terphenyl-d14	18-153

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

BRIX002913

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COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Anchor Environmental	**Service Request:**	K2501428
Project:	BRIX Maritime/990056-01	**Date Extracted:**	03/02/2005
Sample Matrix:	Water	**Date Analyzed:**	03/09/2005

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3535	**Units:**	ug/L
Analysis Method:	8270C SIM	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0503385

	Lab Control Sample KWG0503385-1 Lab Control Spike			Duplicate Lab Control Sample KWG0503385-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	2.41	2.50	97	2.36	2.50	94	42-108	2	30
2-Methylnaphthalene	2.30	2.50	92	2.25	2.50	90	29-121	2	30
Acenaphthylene	2.43	2.50	97	2.43	2.50	97	40-112	0	30
Acenaphthene	2.53	2.50	101	2.49	2.50	100	42-115	2	30
Dibenzofuran	2.48	2.50	99	2.47	2.50	99	34-121	1	30
Fluorene	2.62	2.50	105	2.65	2.50	106	47-117	1	30
Phenanthrene	2.57	2.50	103	2.66	2.50	106	50-115	3	30
Anthracene	2.69	2.50	108	2.71	2.50	108	54-118	1	30
Fluoranthene	2.76	2.50	110	2.78	2.50	111	50-127	1	30
Pyrene	2.56	2.50	102	2.56	2.50	103	45-133	0	30
Benz(a)anthracene	2.84	2.50	114	2.86	2.50	115	44-127	1	30
Chrysene	2.58	2.50	103	2.66	2.50	106	36-137	3	30
Benzo(b)fluoranthene	2.59	2.50	104	2.67	2.50	107	47-127	3	30
Benzo(k)fluoranthene	2.60	2.50	104	2.62	2.50	105	30-144	0	30
Benzo(a)pyrene	2.76	2.50	110	2.80	2.50	112	36-136	2	30
Indeno(1,2,3-cd)pyrene	2.83	2.50	113	2.82	2.50	113	20-150	0	30
Dibenz(a,h)anthracene	2.70	2.50	108	2.77	2.50	111	50-127	3	30
Benzo(g,h,i)perylene	2.55	2.50	102	2.62	2.50	105	56-119	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

BRIX002914

00062

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April 04, 2005

John Renda
Anchor Environmental, L.L.C.-Portland
6650 SW Redwood Lane - Suite 110
Portland, OR 97224

RE: Brix Maritime

Enclosed are the results of analyses for samples received by the laboratory on 02/18/05 13:45.
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
P5B0702	Brix Maritime	990056-01

Thank You,

Joy D. Chang, 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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Environmental Laboratory Network

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-32 (5-6)	P5B0702-01	Soil	02/18/05 09:40	02/18/05 13:45
B-32 (10-12)	P5B0702-02	Soil	02/18/05 09:55	02/18/05 13:45
B-33 (20-22)	P5B0702-03	Soil	02/18/05 11:00	02/18/05 13:45

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Hydrocarbon Identification per NW-TPH Methodology

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-01 Soil	**B-32 (5-6)**	**Sampled: 02/18/05 09:40**								
Gasoline Range Hydrocarbons	NWTPH HCID	**DET**	—	20.0	mg/kg dry	1x	5020799	02/21/05	02/21/05 17:32	
Diesel Range Hydrocarbons	"	ND	—	50.0	"	"	"	"	"	
Heavy Oil Range Hydrocarbons	"	ND	—	100	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 131%*		*Limits: 50 - 150 %*		"			"	
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
Gasoline Range Hydrocarbons	NWTPH HCID	**DET**	—	20.0	mg/kg dry	1x	5020799	02/21/05	02/21/05 18:06	
Diesel Range Hydrocarbons	"	**DET**	—	50.0	"	"	"	"	"	**A-01a**
Heavy Oil Range Hydrocarbons	"	ND	—	100	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 135%*		*Limits: 50 - 150 %*		"			"	

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Joy D. Chang, Project Manager

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Gasoline Hydrocarbons per NW TPH-Gx Method

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
Gasoline Range Hydrocarbons	NW TPH-Gx	288	----	40.0	mg/kg dry	10x	5020999	02/24/05	02/25/05 06:10	
Surrogate(s): a,a,a-TFT		*Recovery: 88.0%*		*Limits: 50 - 150 %*		"			"	
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
Gasoline Range Hydrocarbons	NW TPH-Gx	26.3	----	4.00	mg/kg dry	1x	5020836	02/21/05	02/22/05 13:33	
Surrogate(s): a,a,a-TFT		*Recovery: 118%*		*Limits: 50 - 150 %*		"			"	

BRIX002918

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>y D. Chang, Project Manager

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
Diesel Range Organics	NWTPH-Dx	159	—	25.0	mg/kg dry	1x	5020974	02/24/05	02/24/05 20:13	A-01
Heavy Oil Range Hydrocarbons	"	ND	—	50.0	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 119%*		*Limits: 50 - 150 %*		"			"	
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
Diesel Range Organics	NWTPH-Dx	ND	—	2500	mg/kg dry	100x	5020780	02/18/05	02/23/05 02:19	R-05
Heavy Oil Range Hydrocarbons	"	28400	—	5000	"	"	"	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: NR*		*Limits: 50 - 150 %*		"			"	*S-01*

BRIX002919

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Anchor Environmental, L.L.C.-Portland	Project Name:	**Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Extractable Petroleum Hydrocarbons per Washington DOE

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02RE1 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								**A-03, O-07**
C8-C10 Aromatics	WDOE EPH	ND	-----	5.00	mg/kg dry	1x	5030372	03/09/05	03/11/05 22:40	**A-04**
C10-C12 Aromatics	"	**18.4**	-----	5.00	"	"	"	"	"	**A-04**
C12-C16 Aromatics	"	**27.6**	-----	5.00	"	"	"	"	"	
C16-C21 Aromatics	"	ND	-----	9.15	"	"	"	"	"	
C21-C34 Aromatics	"	ND	-----	7.67	"	"	"	"	"	
C8-C10 Aliphatics	"	ND	-----	5.00	"	"	"	"	"	**A-04**
C10-C12 Aliphatics	"	**20.3**	-----	5.00	"	"	"	"	"	
C12-C16 Aliphatics	"	**19.1**	-----	5.00	"	"	"	"	"	
C16-C21 Aliphatics	"	ND	-----	5.00	"	"	"	"	"	
C21-C34 Aliphatics	"	ND	-----	5.00	"	"	"	"	"	
Total EPH	"	**85.4**	-----	9.15	"	"	"	"	"	
Surrogate(s): Squalane		*Recovery: 123%*		*Limits: 60 - 140 %*		"			"	
o-Terphenyl		*118%*		*60 - 140 %*		"			"	
P5B0702-03RE1 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								**A-03, O-07**
C8-C10 Aromatics	WDOE EPH	ND	-----	100	mg/kg dry	20x	5030372	03/09/05	03/11/05 21:34	**A-04, R-05**
C10-C12 Aromatics	"	ND	-----	100	"	"	"	"	"	**A-04, R-05**
C12-C16 Aromatics	"	ND	-----	100	"	"	"	"	"	**R-05**
C16-C21 Aromatics	"	ND	-----	183	"	"	"	"	"	**R-05**
C21-C34 Aromatics	"	**2220**	-----	153	"	"	"	"	"	
C8-C10 Aliphatics	"	ND	-----	100	"	"	"	"	"	**A-04, R-05**
C10-C12 Aliphatics	"	ND	-----	100	"	"	"	"	"	**R-05**
C12-C16 Aliphatics	"	ND	-----	100	"	"	"	"	"	**R-05**
C16-C21 Aliphatics	"	**404**	-----	100	"	"	"	"	"	
C21-C34 Aliphatics	"	**16200**	-----	100	"	"	"	"	"	
Total EPH	"	**18800**	-----	183	"	"	"	"	"	
Surrogate(s): Squalane		*Recovery: >300%*		*Limits: 60 - 140 %*		"			"	*S-02*
o-Terphenyl		*121%*		*60 - 140 %*		"			"	

BRIX002920

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Petroleum Hydrocarbons per Washington DOE

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
C5-C6 Aliphatics	WDOE VPH	ND	-----	50.0	mg/kg dry	40x	5020922	02/23/05	02/24/05 17:28	
C6-C8 Aliphatics	"	ND	-----	50.0	"	"	"	"	"	
C8-C10 Aliphatics	"	ND	-----	50.0	"	"	"	"	"	
C10-C12 Aliphatics	"	**164**	-----	50.0	"	"	"	"	"	
C8-C10 Aromatics	"	**104**	-----	50.0	"	"	"	"	"	
C10-C12 Aromatics	"	**136**	-----	50.0	"	"	"	"	"	
C12-C13 Aromatics	"	ND	-----	50.0	"	"	"	"	"	
Total VPH	"	**403**	-----	50.0	"	"	"	"	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery: 70.2%*		*Limits: 60 - 130 %*		"			"	
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
C5-C6 Aliphatics	WDOE VPH	ND	-----	1.25	mg/kg dry	1x	5020922	02/23/05	02/24/05 12:33	
C6-C8 Aliphatics	"	**11.5**	-----	1.25	"	"	"	"	"	
C8-C10 Aliphatics	"	ND	-----	1.25	"	"	"	"	"	
C10-C12 Aliphatics	"	**2.20**	-----	1.25	"	"	"	"	"	
C8-C10 Aromatics	"	**1.69**	-----	1.25	"	"	"	"	"	
C10-C12 Aromatics	"	**2.26**	-----	1.25	"	"	"	"	"	
C12-C13 Aromatics	"	ND	-----	1.25	"	"	"	"	"	
Total VPH	"	**17.7**	-----	1.25	"	"	"	"	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery: 82.5%*		*Limits: 60 - 130 %*		"			"	

BRIX002921

North Creek Analytical - Portland

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Joy D. Chang, Project Manager

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Total Metals per EPA 6000/7000 Series Methods

North Creek Analytical - Portland

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02	**Soil**	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
Lead		EPA 6020	ND	----	2.47	mg/kg dry	4.94x	5030154	03/03/05	03/05/05 06:55	R-03
P5B0702-03	**Soil**	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
Lead		EPA 6020	**3.35**	----	0.500	mg/kg dry	1x	5021121	02/28/05	03/02/05 02:07	

BRIX002922

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
Acetone	EPA 8260B	ND	-----	2500	ug/kg dry	1x	5020930	02/23/05	02/24/05 20:51	
Benzene	"	ND	-----	100	"	"	"	"	"	
Bromobenzene	"	ND	-----	100	"	"	"	"	"	
Bromochloromethane	"	ND	-----	100	"	"	"	"	"	
Bromodichloromethane	"	ND	-----	100	"	"	"	"	"	
Bromoform	"	ND	-----	100	"	"	"	"	"	
Bromomethane	"	ND	-----	500	"	"	"	"	"	
2-Butanone	"	ND	-----	1000	"	"	"	"	"	
n-Butylbenzene	"	ND	-----	3300	"	"	"	"	"	R-03
sec-Butylbenzene	"	**662**	-----	100	"	"	"	"	"	
tert-Butylbenzene	"	ND	-----	100	"	"	"	"	"	
Carbon disulfide	"	ND	-----	1000	"	"	"	"	"	
Carbon tetrachloride	"	ND	-----	100	"	"	"	"	"	
Chlorobenzene	"	ND	-----	100	"	"	"	"	"	
Chloroethane	"	ND	-----	100	"	"	"	"	"	
Chloroform	"	ND	-----	100	"	"	"	"	"	
Chloromethane	"	ND	-----	500	"	"	"	"	"	
2-Chlorotoluene	"	ND	-----	100	"	"	"	"	"	
4-Chlorotoluene	"	ND	-----	100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	-----	500	"	"	"	"	"	
Dibromochloromethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dibromoethane	"	ND	-----	100	"	"	"	"	"	
Dibromomethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	-----	500	"	"	"	"	"	
1,1-Dichloroethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	-----	100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
1,2-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
1,3-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
2,2-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
1,1-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
Ethylbenzene	"	**326**	-----	100	"	"	"	"	"	
Hexachlorobutadiene	"	ND	-----	400	"	"	"	"	"	
2-Hexanone	"	ND	-----	1000	"	"	"	"	"	
Isopropylbenzene	"	**379**	-----	200	"	"	"	"	"	

North Creek Analytical - Portland

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
p-Isopropyltoluene	EPA 8260B	**215**	-----	200	ug/kg dry	1x	5020930	02/23/05	02/24/05 20:51	
4-Methyl-2-pentanone	"	ND	-----	500	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	-----	100	"	"	"	"	"	
Methylene chloride	"	ND	-----	500	"	"	"	"	"	
Naphthalene	"	**6130**	-----	200	"	"	"	"	"	
n-Propylbenzene	"	**2320**	-----	100	"	"	"	"	"	
Styrene	"	ND	-----	100	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	-----	100	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	-----	100	"	"	"	"	"	
Tetrachloroethene	"	ND	-----	100	"	"	"	"	"	
Toluene	"	ND	-----	100	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	-----	100	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	-----	100	"	"	"	"	"	
Trichloroethene	"	ND	-----	100	"	"	"	"	"	
Trichlorofluoromethane	"	ND	-----	100	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	-----	100	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	**14900**	-----	100	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	**3210**	-----	100	"	"	"	"	"	
Vinyl chloride	"	ND	-----	100	"	"	"	"	"	
o-Xylene	"	**110**	-----	100	"	"	"	"	"	
m,p-Xylene	"	**604**	-----	200	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 97.1%*		*Limits: 42.6 - 130 %*	"				"	
1,2-DCA-d4		*111%*		*57.3 - 144 %*	"				"	
Dibromofluoromethane		*100%*		*45.5 - 130 %*	"				"	
Toluene-d8		*107%*		*42.1 - 144 %*	"				"	

BRIX002924

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
Acetone	EPA 8260B	ND	-----	2500	ug/kg dry	1x	5020852	02/22/05	02/23/05 20:17	
Benzene	"	ND	-----	100	"	"	"	"	"	
Bromobenzene	"	ND	-----	100	"	"	"	"	"	
Bromochloromethane	"	ND	-----	100	"	"	"	"	"	
Bromodichloromethane	"	ND	-----	100	"	"	"	"	"	
Bromoform	"	ND	-----	100	"	"	"	"	"	
Bromomethane	"	ND	-----	500	"	"	"	"	"	
2-Butanone	"	ND	-----	1000	"	"	"	"	"	
n-Butylbenzene	"	ND	-----	500	"	"	"	"	"	
sec-Butylbenzene	"	ND	-----	100	"	"	"	"	"	
tert-Butylbenzene	"	ND	-----	100	"	"	"	"	"	
Carbon disulfide	"	ND	-----	1000	"	"	"	"	"	
Carbon tetrachloride	"	ND	-----	100	"	"	"	"	"	
Chlorobenzene	"	ND	-----	100	"	"	"	"	"	
Chloroethane	"	ND	-----	100	"	"	"	"	"	
Chloroform	"	ND	-----	100	"	"	"	"	"	
Chloromethane	"	ND	-----	500	"	"	"	"	"	
2-Chlorotoluene	"	ND	-----	100	"	"	"	"	"	
4-Chlorotoluene	"	ND	-----	100	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	"	ND	-----	500	"	"	"	"	"	
Dibromochloromethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dibromoethane	"	ND	-----	100	"	"	"	"	"	
Dibromomethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,3-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
1,4-Dichlorobenzene	"	ND	-----	100	"	"	"	"	"	
Dichlorodifluoromethane	"	ND	-----	500	"	"	"	"	"	
1,1-Dichloroethane	"	ND	-----	100	"	"	"	"	"	
1,2-Dichloroethane	"	ND	-----	100	"	"	"	"	"	
1,1-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
cis-1,2-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
trans-1,2-Dichloroethene	"	ND	-----	100	"	"	"	"	"	
1,2-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
1,3-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
2,2-Dichloropropane	"	ND	-----	100	"	"	"	"	"	
1,1-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
cis-1,3-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
trans-1,3-Dichloropropene	"	ND	-----	100	"	"	"	"	"	
Ethylbenzene	"	ND	-----	100	"	"	"	"	"	
Hexachlorobutadiene	"	ND	-----	400	"	"	"	"	"	
2-Hexanone	"	ND	-----	1000	"	"	"	"	"	
Isopropylbenzene	"	ND	-----	200	"	"	"	"	"	

North Creek Analytical - Portland

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Anchor Environmental, L.L.C.-Portland	Project Name:	**Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
p-Isopropyltoluene	EPA 8260B	ND	----	200	ug/kg dry	1x	5020852	02/22/05	02/23/05 20:17	
4-Methyl-2-pentanone	"	ND	----	500	"	"	"	"	"	
Methyl tert-butyl ether	"	ND	----	100	"	"	"	"	"	
Methylene chloride	"	ND	----	500	"	"	"	"	"	
Naphthalene	"	ND	----	200	"	"	"	"	"	
n-Propylbenzene	"	**148**	----	100	"	"	"	"	"	
Styrene	"	ND	----	100	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	"	ND	----	100	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	"	ND	----	100	"	"	"	"	"	
Tetrachloroethene	"	ND	----	100	"	"	"	"	"	
Toluene	"	ND	----	100	"	"	"	"	"	
1,2,3-Trichlorobenzene	"	ND	----	100	"	"	"	"	"	
1,2,4-Trichlorobenzene	"	ND	----	100	"	"	"	"	"	
1,1,1-Trichloroethane	"	ND	----	100	"	"	"	"	"	
1,1,2-Trichloroethane	"	ND	----	100	"	"	"	"	"	
Trichloroethene	"	ND	----	100	"	"	"	"	"	
Trichlorofluoromethane	"	ND	----	100	"	"	"	"	"	
1,2,3-Trichloropropane	"	ND	----	100	"	"	"	"	"	
1,2,4-Trimethylbenzene	"	ND	----	100	"	"	"	"	"	
1,3,5-Trimethylbenzene	"	ND	----	100	"	"	"	"	"	
Vinyl chloride	"	ND	----	100	"	"	"	"	"	
o-Xylene	"	ND	----	100	"	"	"	"	"	
m,p-Xylene	"	ND	----	200	"	"	"	"	"	
Surrogate(s): 4-BFB		*Recovery: 93.4%*		*Limits: 42.6 - 130 %*		"			"	
1,2-DCA-d4		*123%*		*57.3 - 144 %*		"			"	
Dibromofluoromethane		*104%*		*45.5 - 130 %*		"			"	
Toluene-d8		*105%*		*42.1 - 144 %*		"			"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-02 Soil	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								**R-05**
Acenaphthene	EPA 8270m	ND	-----	67.0	ug/kg dry	5x	5021065	02/25/05	02/28/05 21:58	
Acenaphthylene	"	ND	-----	67.0	"	"	"	"	"	
Anthracene	"	ND	-----	67.0	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	67.0	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	67.0	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	67.0	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	67.0	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	67.0	"	"	"	"	"	
Chrysene	"	ND	-----	67.0	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	67.0	"	"	"	"	"	
Fluoranthene	"	ND	-----	67.0	"	"	"	"	"	
Fluorene	"	ND	-----	67.0	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	67.0	"	"	"	"	"	
Naphthalene	"	**2280**	-----	67.0	"	"	"	"	"	
Phenanthrene	"	**79.1**	-----	67.0	"	"	"	"	"	
Pyrene	"	ND	-----	67.0	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 94.3%*		*Limits: 40 - 150 %*		"			"	
Pyrene-d10		*122%*		*40 - 150 %*		"			"	
Benzo (a) pyrene-d12		*129%*		*40 - 150 %*		"			"	

BRIX002927

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Anchor Environmental, L.L.C.-Portland	Project Name:	**Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Polynuclear Aromatic Compounds per EPA 8270M-SIM

North Creek Analytical - Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-03 Soil	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								**R-05**
Acenaphthene	EPA 8270m	ND	-----	268	ug/kg dry	20x	5020794	02/21/05	02/22/05 16:40	
Acenaphthylene	"	ND	-----	268	"	"	"	"	"	
Anthracene	"	ND	-----	268	"	"	"	"	"	
Benzo (a) anthracene	"	ND	-----	268	"	"	"	"	"	
Benzo (a) pyrene	"	ND	-----	268	"	"	"	"	"	
Benzo (b) fluoranthene	"	ND	-----	268	"	"	"	"	"	
Benzo (ghi) perylene	"	ND	-----	268	"	"	"	"	"	
Benzo (k) fluoranthene	"	ND	-----	268	"	"	"	"	"	
Chrysene	"	ND	-----	268	"	"	"	"	"	
Dibenzo (a,h) anthracene	"	ND	-----	268	"	"	"	"	"	
Fluoranthene	"	ND	-----	268	"	"	"	"	"	
Fluorene	"	ND	-----	268	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	"	ND	-----	268	"	"	"	"	"	
Naphthalene	"	ND	-----	268	"	"	"	"	"	
Phenanthrene	"	ND	-----	268	"	"	"	"	"	
Pyrene	"	ND	-----	268	"	"	"	"	"	
Surrogate(s): Fluorene-d10		*Recovery: 118%*		*Limits: 40 - 150 %*		"			"	
Pyrene-d10		*118%*		*40 - 150 %*		"			"	
Benzo (a) pyrene-d12		*136%*		*40 - 150 %*		"			"	

BRIX002928

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Percent Dry Weight (Solids) per Standard Methods

North Creek Analytical - Portland

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
P5B0702-01	**Soil**	**B-32 (5-6)**	**Sampled: 02/18/05 09:40**								
% Solids		NCA SOP	**79.1**	----	1.00	% by Weight	1x	5020824	02/21/05	02/22/05 10:50	
P5B0702-02	**Soil**	**B-32 (10-12)**	**Sampled: 02/18/05 09:55**								
% Solids		NCA SOP	**91.9**	----	1.00	% by Weight	1x	5020824	02/21/05	02/22/05 10:50	
P5B0702-03	**Soil**	**B-33 (20-22)**	**Sampled: 02/18/05 11:00**								
% Solids		NCA SOP	**86.7**	----	1.00	% by Weight	1x	5020824	02/21/05	02/22/05 10:50	

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Anchor Environmental, L.L.C.-Portland	Project Name:	**Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Hydrocarbon Identification per NW-TPH Methodology – Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020799 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020799-BLK1)								Extracted: 02/21/05 09:33						
Gasoline Range Hydrocarbons	NWTPH HCID	ND	—	20.0	mg/kg	1x	—	—	—	—	—	—	02/21/05 16:58	
Diesel Range Hydrocarbons	"	ND	—	50.0	"	"	—	—	—	—	—	—	"	
Heavy Oil Range Hydrocarbons	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 130%*		*Limits: 50-150%*	"								*02/21/05 16:58*	
Duplicate (5020799-DUP1)							QC Source: P5B0588-21	Extracted: 02/21/05 09:33						
Gasoline Range Hydrocarbons	NWTPH HCID	ND	—	20.0	mg/kg dry	1x	ND	—	—	—	NR	(50)	02/21/05 17:32	
Diesel Range Hydrocarbons	"	ND	—	50.0	"	"	ND	—	—	—	NR	"	"	
Heavy Oil Range Hydrocarbons	"	ND	—	100	"	"	ND	—	—	—	NR	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 118%*		*Limits: 50-150%*	"								*02/21/05 17:32*	
Duplicate (5020799-DUP2)							QC Source: P5B0611-01	Extracted: 02/21/05 09:33						
Gasoline Range Hydrocarbons	NWTPH HCID	ND	—	20.0	mg/kg dry	1x	ND	—	—	—	NR	(50)	02/21/05 18:06	
Diesel Range Hydrocarbons	"	ND	—	50.0	"	"	ND	—	—	—	NR	"	"	
Heavy Oil Range Hydrocarbons	"	ND	—	100	"	"	ND	—	—	—	NR	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 113%*		*Limits: 50-150%*	"								*02/21/05 18:06*	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Gasoline Hydrocarbons per NW TPH-Gx Method - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5020836 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020836-BLK1)								Extracted: 02/21/05 13:21						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	—	1.97	mg/kg	1x	—	—	—	—	—	—	02/21/05 14:08	
Surrogate(s): a,a,a-TFT		*Recovery:*	*137%*		*Limits:*	*50-150%*	"						*02/21/05 14:08*	
LCS (5020836-BS2)								Extracted: 02/21/05 13:21						
Gasoline Range Hydrocarbons	NW TPH-Gx	22.5	—	1.99	mg/kg	1x	—	24.9	90.4%	(70-130)	—	—	02/21/05 14:43	
Surrogate(s): a,a,a-TFT		*Recovery:*	*133%*		*Limits:*	*50-150%*	"						*02/21/05 14:43*	
Duplicate (5020836-DUP1)					QC Source:	P5B0388-01		Extracted: 02/21/05 13:21						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	—	1.98	mg/kg dry	1x	ND	—	—	—	NR	(40)	02/21/05 15:52	
Surrogate(s): a,a,a-TFT		*Recovery:*	*93.5%*		*Limits:*	*50-150%*	"						*02/21/05 15:52*	
Duplicate (5020836-DUP2)					QC Source:	P5B0702-03		Extracted: 02/21/05 13:21						
Gasoline Range Hydrocarbons	NW TPH-Gx	24.0	—	4.00	mg/kg dry	1x	26.3	—	—	—	9.15%	(40)	02/22/05 14:04	
Surrogate(s): a,a,a-TFT		*Recovery:*	*110%*		*Limits:*	*50-150%*	"						*02/22/05 14:04*	

QC Batch: 5020999 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020999-BLK1)								Extracted: 02/24/05 12:53						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	—	4.00	mg/kg	1x	—	—	—	—	—	—	02/24/05 14:52	
Surrogate(s): a,a,a-TFT		*Recovery:*	*105%*		*Limits:*	*50-150%*	"						*02/24/05 14:52*	
LCS (5020999-BS1)								Extracted: 02/24/05 12:53						
Gasoline Range Hydrocarbons	NW TPH-Gx	37.7	—	4.00	mg/kg	1x	—	48.0	78.5%	(70-130)	—	—	02/24/05 15:29	
Surrogate(s): a,a,a-TFT		*Recovery:*	*112%*		*Limits:*	*50-150%*	"						*02/24/05 15:29*	
Duplicate (5020999-DUP1)					QC Source:	P5B0702-02		Extracted: 02/24/05 12:53						
Gasoline Range Hydrocarbons	NW TPH-Gx	304	—	40.0	mg/kg dry	10x	288	—	—	—	5.41%	(40)	02/25/05 07:11	
Surrogate(s): a,a,a-TFT		*Recovery:*	*77.1%*		*Limits:*	*50-150%*	"						*02/25/05 07:11*	
Duplicate (5020999-DUP2)					QC Source:	P5B0923-07		Extracted: 02/24/05 13:37						
Gasoline Range Hydrocarbons	NW TPH-Gx	ND	—	4.00	mg/kg dry	1x	ND	—	—	—	41.2%	(40)	02/24/05 16:34	Q-06
Surrogate(s): a,a,a-TFT		*Recovery:*	*98.1%*		*Limits:*	*50-150%*	"						*02/24/05 16:34*	
Matrix Spike (5020999-MS1)					QC Source:	P5B0801-01		Extracted: 02/24/05 12:53						
Gasoline Range Hydrocarbons	NW TPH-Gx	68.6	—	4.00	mg/kg dry	1x	7.46	62.4	98.0%	(65-130)	—	—	02/25/05 08:12	
Surrogate(s): a,a,a-TFT		*Recovery:*	*106%*		*Limits:*	*50-150%*	"						*02/25/05 08:12*	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020780 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020780-BLK1)								Extracted: 02/18/05 15:58						
Diesel Range Organics	NWTPH-Dx	ND	—	25.0	mg/kg	1x	—	—	—	—	—	—	02/19/05 04:20	
Heavy Oil Range Hydrocarbons	"	ND	—	50.0	"	"	—	—	—	—	—	—	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*105%*		*Limits:*	*50-150%*	"						*02/19/05 04:20*	
LCS (5020780-BS1)								Extracted: 02/18/05 15:58						
Diesel Range Organics	NWTPH-Dx	134	—	25.0	mg/kg	1x	—	125	107%	(50-150)	—	—	02/19/05 04:55	
Heavy Oil Range Hydrocarbons	"	66.5	—	50.0	"	"	—	75.2	88.4%	"	—	—	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*134%*		*Limits:*	*50-150%*	"						*02/19/05 04:55*	
Duplicate (5020780-DUP1)					QC Source: P5B0414-01			Extracted: 02/18/05 15:58						
Diesel Range Organics	NWTPH-Dx	49000	—	500	mg/kg dry	20x	45800	—	—	—	6.75%	(50)	02/21/05 15:08	
Heavy Oil Range Hydrocarbons	"	ND	—	1000	"	"	ND	—	—	—	NR	"	"	R-05
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*NR*		*Limits:*	*50-150%*	"						*02/21/05 15:08*	*S-01*
Duplicate (5020780-DUP2)					QC Source: P5B0702-03			Extracted: 02/18/05 15:59						
Diesel Range Organics	NWTPH-Dx	ND	—	2500	mg/kg dry	100x	ND	—	—	—	NR	(50)	02/23/05 01:44	R-05
Heavy Oil Range Hydrocarbons	"	28100	—	5000	"	"	28400	—	—	—	1.06%	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*NR*		*Limits:*	*50-150%*	"						*02/23/05 01:44*	*S-01*

QC Batch: 5020974 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020974-BLK1)								Extracted: 02/24/05 09:51						
Diesel Range Organics	NWTPH-Dx	ND	—	25.0	mg/kg	1x	—	—	—	—	—	—	02/24/05 19:03	
Heavy Oil Range Hydrocarbons	"	ND	—	50.0	"	"	—	—	—	—	—	—	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*132%*		*Limits:*	*50-150%*	"						*02/24/05 19:03*	
LCS (5020974-BS1)								Extracted: 02/24/05 09:51						
Diesel Range Organics	NWTPH-Dx	132	—	25.0	mg/kg	1x	—	125	106%	(50-150)	—	—	02/24/05 19:38	
Heavy Oil Range Hydrocarbons	"	79.3	—	50.0	"	"	—	75.2	105%	"	—	—	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*138%*		*Limits:*	*50-150%*	"						*02/24/05 19:38*	
Duplicate (5020974-DUP1)					QC Source: P5B0702-02			Extracted: 02/24/05 09:51						
Diesel Range Organics	NWTPH-Dx	113	—	25.0	mg/kg dry	1x	159	—	—	—	33.8%	(50)	02/24/05 19:03	
Heavy Oil Range Hydrocarbons	"	ND	—	50.0	"	"	ND	—	—	—	NR	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery:*	*123%*		*Limits:*	*50-150%*	"						*02/24/05 19:03*	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Diesel and Heavy Range Hydrocarbons per NWTPH-Dx Method - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020974 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Duplicate (5020974-DUP2)					QC Source: P5B0898-07						Extracted: 02/24/05 09:51			
Diesel Range Organics	NWTPH-Dx	184	—	25.0	mg/kg dry	1x	153	—	—	—	18.4%	(50)	02/24/05 19:38	
Heavy Oil Range Hydrocarbons	"	ND	—	50.0	"	"	ND	—	—	—	NR	"	"	
Surrogate(s): 1-Chlorooctadecane		*Recovery: 126%*			*Limits: 50-150%*	"							*02/24/05 19:38*	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Extractable Petroleum Hydrocarbons per Washington DOE - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5030372 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5030372-BLK1)									Extracted: 03/09/05 10:16					
C8-C10 Aromatics	WDOE EPH	ND	—	5.00	mg/kg	1x	—	—	—	—	—	—	03/11/05 18:51	
C10-C12 Aromatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C12-C16 Aromatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C16-C21 Aromatics	"	ND	—	9.15	"	"	—	—	—	—	—	—	"	
C21-C34 Aromatics	"	ND	—	7.67	"	"	—	—	—	—	—	—	"	
C8-C10 Aliphatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C10-C12 Aliphatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C12-C16 Aliphatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C16-C21 Aliphatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
C21-C34 Aliphatics	"	ND	—	5.00	"	"	—	—	—	—	—	—	"	
Total EPH	"	ND	—	9.15	"	"	—	—	—	—	—	—	"	
Surrogate(s): Squalane		*Recovery:*	*130%*		*Limits:*	*60-140%*	"						*03/11/05 18:51*	
o-Terphenyl			*112%*			*60-140%*	"						"	
LCS (5030372-BS1)									Extracted: 03/09/05 10:16					
C8-C10 Aromatics	WDOE EPH	ND	—	5.00	mg/kg	1x	—	5.00		(70-130)	—	—	03/11/05 19:23	A-02
C10-C12 Aromatics	"	1.81	—	1.80	"	"	—	"	36.2%	"	—	—	"	A-02
C12-C16 Aromatics	"	14.2	—	5.00	"	"	—	15.0	94.7%	"	—	—	"	
C16-C21 Aromatics	"	29.3	—	9.15	"	"	—	25.0	117%	"	—	—	"	
C21-C34 Aromatics	"	44.5	—	7.67	"	"	—	35.0	127%	"	—	—	"	
C8-C10 Aliphatics	"	10.4	—	5.00	"	"	—	15.0	69.3%	"	—	—	"	A-02
C10-C12 Aliphatics	"	9.55	—	5.00	"	"	—	9.95	96.0%	"	—	—	"	
C12-C16 Aliphatics	"	20.7	—	5.00	"	"	—	19.8	105%	"	—	—	"	
C16-C21 Aliphatics	"	37.6	—	5.00	"	"	—	34.9	108%	"	—	—	"	
C21-C34 Aliphatics	"	72.7	—	5.00	"	"	—	64.9	112%	"	—	—	"	
Surrogate(s): Squalane		*Recovery:*	*133%*		*Limits:*	*60-140%*	"						*03/11/05 19:23*	
o-Terphenyl			*123%*			*70-130%*	"						"	
LCS (5030372-BS2)									Extracted: 03/09/05 10:17					
C8-C10 Aromatics	WDOE EPH	4.39	—	4.30	mg/kg	1x	—	5.00	87.8%	(70-130)	—	—	03/11/05 19:56	
C10-C12 Aromatics	"	4.28	—	4.20	"	"	—	"	85.6%	"	—	—	"	
C12-C16 Aromatics	"	14.5	—	5.00	"	"	—	15.0	96.7%	"	—	—	"	
C16-C21 Aromatics	"	25.8	—	9.15	"	"	—	25.0	103%	"	—	—	"	
C21-C34 Aromatics	"	38.9	—	7.67	"	"	—	35.0	111%	"	—	—	"	
C8-C10 Aliphatics	"	10.4	—	5.00	"	"	—	15.0	69.3%	"	—	—	"	A-02
C10-C12 Aliphatics	"	9.56	—	5.00	"	"	—	9.95	96.1%	"	—	—	"	
C12-C16 Aliphatics	"	21.0	—	5.00	"	"	—	19.8	106%	"	—	—	"	
C16-C21 Aliphatics	"	38.2	—	5.00	"	"	—	34.9	109%	"	—	—	"	
C21-C34 Aliphatics	"	73.7	—	5.00	"	"	—	64.9	114%	"	—	—	"	
Surrogate(s): Squalane		*Recovery:*	*136%*		*Limits:*	*60-140%*	"						*03/11/05 19:56*	
o-Terphenyl			*123%*			*70-130%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Extractable Petroleum Hydrocarbons per Washington DOE - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5030372 **Soil Preparation Method: EPA 3550 Fuels**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (5030372-BS3)								Extracted: 03/09/05 10:17						
C8-C10 Aromatics	WDOE EPH	4.63	—	4.60	mg/kg	1x	—	5.00	92.6%	(70-130)	—	—	03/11/05 20:29	
C10-C12 Aromatics	"	4.47	—	4.40	"	"	—	"	89.4%	"	—	—	"	
C12-C16 Aromatics	"	15.2	—	5.00	"	"	—	15.0	101%	"	—	—	"	
C16-C21 Aromatics	"	26.9	—	9.15	"	"	—	25.0	108%	"	—	—	"	
C21-C34 Aromatics	"	40.9	—	7.67	"	"	—	35.0	117%	"	—	—	"	
C8-C10 Aliphatics	"	11.4	—	5.00	"	"	—	15.0	76.0%	"	—	—	"	
C10-C12 Aliphatics	"	10.2	—	5.00	"	"	—	9.95	103%	"	—	—	"	
C12-C16 Aliphatics	"	22.3	—	5.00	"	"	—	19.8	113%	"	—	—	"	
C16-C21 Aliphatics	"	40.6	—	5.00	"	"	—	34.9	116%	"	—	—	"	
C21-C34 Aliphatics	"	77.0	—	5.00	"	"	—	64.9	119%	"	—	—	"	
Surrogate(s): Squalane		*Recovery:*	*143%*		*Limits:*	*60-140%*	"						*03/11/05 20:29*	*S-07*
o-Terphenyl			*127%*			*70-130%*	"						"	
LCS (5030372-BS4)								Extracted: 03/09/05 10:17						
C8-C10 Aromatics	WDOE EPH	5.00	—	5.00	mg/kg	1x	—	5.00	100%	(70-130)	—	—	03/11/05 21:02	
C10-C12 Aromatics	"	4.89	—	4.80	"	"	—	"	97.8%	"	—	—	"	
C12-C16 Aromatics	"	16.1	—	5.00	"	"	—	15.0	107%	"	—	—	"	
C16-C21 Aromatics	"	27.7	—	9.15	"	"	—	25.0	111%	"	—	—	"	
C21-C34 Aromatics	"	41.2	—	7.67	"	"	—	35.0	118%	"	—	—	"	
C8-C10 Aliphatics	"	10.2	—	5.00	"	"	—	15.0	68.0%	"	—	—	"	A-02
C10-C12 Aliphatics	"	9.45	—	5.00	"	"	—	9.95	95.0%	"	—	—	"	
C12-C16 Aliphatics	"	20.6	—	5.00	"	"	—	19.8	104%	"	—	—	"	
C16-C21 Aliphatics	"	37.2	—	5.00	"	"	—	34.9	107%	"	—	—	"	
C21-C34 Aliphatics	"	70.8	—	5.00	"	"	—	64.9	109%	"	—	—	"	
Surrogate(s): Squalane		*Recovery:*	*130%*		*Limits:*	*60-140%*	"						*03/11/05 21:02*	
o-Terphenyl			*130%*			*70-130%*	"						"	
Duplicate (5030372-DUP1)					QC Source: P5B0702-02RE1			Extracted: 03/09/05 10:16						
C8-C10 Aromatics	WDOE EPH	ND	—	5.00	mg/kg dry	1x	ND	—	—	—	NR	(50)	03/11/05 22:07	
C10-C12 Aromatics	"	11.3	—	5.00	"	"	18.4	—	—	—	47.8%	"	"	
C12-C16 Aromatics	"	21.2	—	5.00	"	"	27.6	—	—	—	26.2%	"	"	
C16-C21 Aromatics	"	ND	—	9.15	"	"	ND	—	—	—	NR	"	"	
C21-C34 Aromatics	"	ND	—	7.67	"	"	ND	—	—	—	NR	"	"	
C8-C10 Aliphatics	"	ND	—	5.00	"	"	ND	—	—	—	39.8%	"	"	
C10-C12 Aliphatics	"	30.6	—	5.00	"	"	20.3	—	—	—	40.5%	"	"	
C12-C16 Aliphatics	"	21.7	—	5.00	"	"	19.1	—	—	—	12.7%	"	"	
C16-C21 Aliphatics	"	5.01	—	5.00	"	"	ND	—	—	—	2.63%	"	"	
C21-C34 Aliphatics	"	ND	—	5.00	"	"	ND	—	—	—	NR	"	"	
Total EPH	"	89.7	—	9.15	"	"	85.4	—	—	—	4.91%	(200)	"	
Surrogate(s): Squalane		*Recovery:*	*129%*		*Limits:*	*60-140%*	"						*03/11/05 22:07*	
o-Terphenyl			*113%*			*60-140%*	"						"	

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Joy D. Chang, Project Manager

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Petroleum Hydrocarbons per Washington DOE - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020922 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020922-BLK1)								Extracted: 02/23/05 10:58						
C5-C6 Aliphatics	WDOE VPH	ND	—	1.25	mg/kg	1x	—	—	—	—	—	—	02/24/05 10:49	
C6-C8 Aliphatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
C8-C10 Aliphatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
C10-C12 Aliphatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
C8-C10 Aromatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
C10-C12 Aromatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
C12-C13 Aromatics	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
Total VPH	"	ND	—	1.25	"	"	—	—	—	—	—	—	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery:*	*73.9%*		*Limits:*	*60-130%*	"						*02/24/05 10:49*	
LCS (5020922-BS1)								Extracted: 02/23/05 10:58						
C5-C6 Aliphatics	WDOE VPH	1.21	—	1.25	mg/kg	1x	—	1.48	81.8%	(70-130)	—	—	02/24/05 11:24	
C6-C8 Aliphatics	"	1.83	—	1.25	"	"	—	1.97	92.9%	"	—	—	"	
C8-C10 Aliphatics	"	1.82	—	1.25	"	"	—	"	92.4%	"	—	—	"	
C10-C12 Aliphatics	"	1.01	—	1.25	"	"	—	0.984	103%	"	—	—	"	
C8-C10 Aromatics	"	2.17	—	1.25	"	"	—	2.46	88.2%	"	—	—	"	
C10-C12 Aromatics	"	0.458	—	1.25	"	"	—	0.492	93.1%	"	—	—	"	
C12-C13 Aromatics	"	0.407	—	1.25	"	"	—	"	82.7%	"	—	—	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery:*	*75.4%*		*Limits:*	*60-130%*	"						*02/24/05 11:24*	
LCS Dup (5020922-BSD1)								Extracted: 02/23/05 10:58						
C5-C6 Aliphatics	WDOE VPH	1.23	—	1.25	mg/kg	1x	—	1.50	82.0%	(70-130)	1.64%	(20)	02/24/05 11:58	
C6-C8 Aliphatics	"	1.86	—	1.25	"	"	—	2.00	93.0%	"	1.63%	"	"	
C8-C10 Aliphatics	"	1.90	—	1.25	"	"	—	"	95.0%	"	4.30%	"	"	
C10-C12 Aliphatics	"	1.07	—	1.25	"	"	—	0.999	107%	"	5.77%	"	"	
C8-C10 Aromatics	"	2.31	—	1.25	"	"	—	2.50	92.4%	"	6.25%	"	"	
C10-C12 Aromatics	"	0.503	—	1.25	"	"	—	0.500	101%	"	9.37%	"	"	
C12-C13 Aromatics	"	0.471	—	1.25	"	"	—	"	94.2%	"	14.6%	"	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery:*	*74.9%*		*Limits:*	*60-130%*	"						*02/24/05 11:58*	
Matrix Spike (5020922-MS1)				QC Source: P5B0702-03				Extracted: 02/23/05 10:58						
C5-C6 Aliphatics	WDOE VPH	1.07	—	1.25	mg/kg dry	1x	0.118	1.73	55.0%	(65-130)	—	—	02/24/05 13:08	Q-01
C6-C8 Aliphatics	"	12.5	—	1.25	"	"	11.5	2.31	43.3%	"	—	—	"	Q-01
C8-C10 Aliphatics	"	2.82	—	1.25	"	"	0.00	"	122%	"	—	—	"	
C10-C12 Aliphatics	"	4.87	—	1.25	"	"	2.20	1.16	230%	"	—	—	"	Q-01
C8-C10 Aromatics	"	3.55	—	1.25	"	"	1.69	2.89	64.4%	"	—	—	"	Q-01
C10-C12 Aromatics	"	2.45	—	1.25	"	"	2.26	0.578	32.9%	"	—	—	"	Q-01
C12-C13 Aromatics	"	1.06	—	1.25	"	"	0.585	"	82.2%	"	—	—	"	
Surrogate(s): a,a,a-TFT (PID)		*Recovery:*	*75.9%*		*Limits:*	*60-130%*	"						*02/24/05 13:08*	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Petroleum Hydrocarbons per Washington DOE - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5020922 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (5020922-MSD1)				QC Source: P5B0702-03				Extracted: 02/23/05 10:58						
C5-C6 Aliphatics	WDOE VPH	0.943	—	1.25	mg/kg dry	1x	0.118	1.71	48.2%	(65-130)	12.6%	(20)	02/24/05 13:42	Q-01
C6-C8 Aliphatics	"	11.1	—	1.25	"	"	11.5	2.27	NR	"	11.9%	"	"	Q-01
C8-C10 Aliphatics	"	2.65	—	1.25	"	"	0.00	"	117%	"	6.22%	"	"	
C10-C12 Aliphatics	"	4.85	—	1.25	"	"	2.20	1.14	232%	"	0.412%	"	"	Q-01
C8-C10 Aromatics	"	3.51	—	1.25	"	"	1.69	2.84	64.1%	"	1.13%	"	"	Q-01
C10-C12 Aromatics	"	2.56	—	1.25	"	"	2.26	0.569	52.7%	"	4.39%	"	"	Q-01
C12-C13 Aromatics	"	0.981	—	1.25	"	"	0.585	"	69.6%	"	7.74%	"	"	

Surrogate(s): a,a,a-TFT (PID) *Recovery: 73.9%* *Limits: 60-130%* " *02/24/05 13:42*

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Total Metals per EPA 6000/7000 Series Methods - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5021121 **Soil Preparation Method: EPA 3050**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5021121-BLK1)								Extracted: 02/28/05 12:37						
Lead	EPA 6020	ND	—	0.500	mg/kg	1x	—	—	—	—	—	—	03/02/05 00:06	
LCS (5021121-BS1)								Extracted: 02/28/05 12:37						
Lead	EPA 6020	10.3	—	0.500	mg/kg	1x	—	10.0	103%	(80-120)	—	—	03/02/05 00:12	
LCS Dup (5021121-BSD1)								Extracted: 02/28/05 12:37						
Lead	EPA 6020	9.50	—	0.500	mg/kg	1x	—	9.52	99.8%	(80-120)	8.08%	(20)	03/02/05 00:31	
Duplicate (5021121-DUP1)				QC Source: P5B0415-01				Extracted: 02/28/05 12:37						
Lead	EPA 6020	35.3	—	0.500	mg/kg dry	1x	27.7	—	—	—	24.1%	(40)	03/02/05 00:44	
Matrix Spike (5021121-MS1)				QC Source: P5B0415-01				Extracted: 02/28/05 12:37						
Lead	EPA 6020	47.2	—	0.500	mg/kg dry	1x	27.7	11.3	173%	(75-125)	—	—	03/02/05 01:03	Q-14
Matrix Spike (5021121-MS2)				QC Source: P5B0740-06				Extracted: 02/28/05 12:37						
Lead	EPA 6020	18.0	—	0.500	mg/kg dry	1x	6.40	13.1	88.5%	(75-125)	—	—	03/02/05 03:05	

QC Batch: 5030154 **Soil Preparation Method: EPA 3050**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5030154-BLK1)								Extracted: 03/03/05 15:21						
Lead	EPA 6020	ND	—	0.500	mg/kg	1x	—	—	—	—	—	—	03/05/05 06:29	
LCS (5030154-BS1)								Extracted: 03/03/05 15:21						
Lead	EPA 6020	9.90	—	0.500	mg/kg	1x	—	9.52	104%	(80-120)	—	—	03/05/05 06:35	
LCS Dup (5030154-BSD1)								Extracted: 03/03/05 15:21						
Lead	EPA 6020	9.82	—	0.500	mg/kg	1x	—	9.52	103%	(80-120)	0.811%	(20)	03/05/05 06:42	
Duplicate (5030154-DUP1)				QC Source: P5B0702-02				Extracted: 03/03/05 15:21						
Lead	EPA 6020	2.83	—	0.500	mg/kg dry	1x	2.19	—	—	—	25.5%	(40)	03/05/05 07:01	
Matrix Spike (5030154-MS1)				QC Source: P5B0702-02				Extracted: 03/03/05 15:21						
Lead	EPA 6020	11.7	—	2.42	mg/kg dry	4.84x	2.19	10.8	88.1%	(75-125)	—	—	03/05/05 07:21	
Matrix Spike (5030154-MS2)				QC Source: P5B0745-19				Extracted: 03/03/05 15:21						
Lead	EPA 6020	20.7	—	0.500	mg/kg dry	1x	10.5	11.1	91.9%	(75-125)	—	—	03/05/05 20:11	

BRIX002938

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Anchor Environmental, L.L.C.-Portland	Project Name:	Brix Maritime	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5020852 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020852-BLK1)								Extracted: 02/22/05 09:59						
Acetone	EPA 8260B	ND	—	2500	ug/kg	1x	—	—	—	—	—	—	02/23/05 14:24	
Benzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromochloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromodichloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromoform	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromomethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
2-Butanone	"	ND	—	1000	"	"	—	—	—	—	—	—	"	
n-Butylbenzene	"	ND	—	500	"	"	—	—	—	—	—	—	"	
sec-Butylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
tert-Butylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Carbon disulfide	"	ND	—	1000	"	"	—	—	—	—	—	—	"	
Carbon tetrachloride	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloroform	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloromethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
2-Chlorotoluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
4-Chlorotoluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dibromo-3-chloropropane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Dibromochloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dibromoethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Dibromomethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,4-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Dichlorodifluoromethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
1,1-Dichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
cis-1,2-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
trans-1,2-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
2,2-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
cis-1,3-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
trans-1,3-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Ethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Hexachlorobutadiene	"	ND	—	400	"	"	—	—	—	—	—	—	"	
2-Hexanone	"	ND	—	1000	"	"	—	—	—	—	—	—	"	

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Anchor Environmental, L.L.C.-Portland	Project Name:	**Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number:	990056-01	Report Created:
Portland, OR 97224	Project Manager:	John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020852 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020852-BLK1)									Extracted: 02/22/05 09:59					
Isopropylbenzene	EPA 8260B	ND	—	200	ug/kg	1x	—	—	—	—	—	—	02/23/05 14:24	
p-Isopropyltoluene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
4-Methyl-2-pentanone	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Methyl tert-butyl ether	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Methylene chloride	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Naphthalene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
n-Propylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Styrene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,1,2-Tetrachloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,2,2-Tetrachloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Tetrachloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Toluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,3-Trichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,4-Trichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,1-Trichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,2-Trichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Trichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Trichlorofluoromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,3-Trichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,4-Trimethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3,5-Trimethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Vinyl chloride	"	ND	—	100	"	"	—	—	—	—	—	—	"	
o-Xylene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
m,p-Xylene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
Surrogate(s): 4-BFB		*Recovery:*	*94.5%*		*Limits:*	*42.6-130%*	"						*02/23/05 14:24*	
1,2-DCA-d4			*115%*			*57.3-144%*	"						"	
Dibromofluoromethane			*105%*			*45.5-130%*	"						"	
Toluene-d8			*109%*			*42.1-144%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5020852 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (5020852-BS1)									Extracted: 02/22/05 09:59					
Benzene	EPA 8260B	1890	—	100	ug/kg	1x	—	2000	94.5%	(81.9-125)	—	—	02/23/05 09:53	
Chlorobenzene	"	1840	—	100	"	"	—	"	92.0%	(79.2-125)	—	—	"	
1,1-Dichloroethene	"	1840	—	100	"	"	—	"	92.0%	(66.1-125)	—	—	"	
Toluene	"	1830	—	100	"	"	—	"	91.5%	(80-125)	—	—	"	
Trichloroethene	"	1840	—	100	"	"	—	"	92.0%	(76-125)	—	—	"	
Surrogate(s): 4-BFB		*Recovery:*	*97.5%*		*Limits:*	*42.6-130%*	"						*02/23/05 09:53*	
1,2-DCA-d4			*132%*			*57.3-144%*	"						"	
Dibromofluoromethane			*124%*			*45.5-130%*	"						"	
Toluene-d8			*114%*			*42.1-144%*	"						"	
Matrix Spike (5020852-MS1)					QC Source: P5B0582-01				Extracted: 02/22/05 09:59					
Benzene	EPA 8260B	2100	—	100	ug/kg dry	1x	ND	2290	91.7%	(68.5-125)	—	—	02/23/05 10:20	
Chlorobenzene	"	2130	—	100	"	"	ND	"	93.0%	(65.9-125)	—	—	"	
1,1-Dichloroethene	"	2010	—	100	"	"	ND	"	87.8%	(55.8-125)	—	—	"	
Toluene	"	2080	—	100	"	"	ND	"	90.8%	(70.3-125)	—	—	"	
Trichloroethene	"	2070	—	100	"	"	ND	"	90.4%	(65.5-125)	—	—	"	
Surrogate(s): 4-BFB		*Recovery:*	*91.7%*		*Limits:*	*42.6-130%*	"						*02/23/05 10:20*	
1,2-DCA-d4			*117%*			*57.3-144%*	"						"	
Dibromofluoromethane			*112%*			*45.5-130%*	"						"	
Toluene-d8			*106%*			*42.1-144%*	"						"	
Matrix Spike Dup (5020852-MSD1)					QC Source: P5B0582-01				Extracted: 02/22/05 09:59					
Benzene	EPA 8260B	2160	—	100	ug/kg dry	1x	ND	2290	94.3%	(68.5-125)	2.82%	(25)	02/23/05 10:47	
Chlorobenzene	"	2190	—	100	"	"	ND	"	95.6%	(65.9-125)	2.78%	"	"	
1,1-Dichloroethene	"	2040	—	100	"	"	ND	"	89.1%	(55.8-125)	1.48%	"	"	
Toluene	"	2150	—	100	"	"	ND	"	93.9%	(70.3-125)	3.31%	"	"	
Trichloroethene	"	2200	—	100	"	"	ND	"	96.1%	(65.5-125)	6.09%	"	"	
Surrogate(s): 4-BFB		*Recovery:*	*91.7%*		*Limits:*	*42.6-130%*	"						*02/23/05 10:47*	
1,2-DCA-d4			*113%*			*57.3-144%*	"						"	
Dibromofluoromethane			*111%*			*45.5-130%*	"						"	
Toluene-d8			*103%*			*42.1-144%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020930 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020930-BLK1)								Extracted: 02/23/05 11:03						
Acetone	EPA 8260B	ND	—	2500	ug/kg	1x	—	—	—	—	—	—	02/24/05 13:08	
Benzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromochloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromodichloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromoform	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Bromomethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
2-Butanone	"	ND	—	1000	"	"	—	—	—	—	—	—	"	
n-Butylbenzene	"	ND	—	500	"	"	—	—	—	—	—	—	"	
sec-Butylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
tert-Butylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Carbon disulfide	"	ND	—	1000	"	"	—	—	—	—	—	—	"	
Carbon tetrachloride	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloroform	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Chloromethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
2-Chlorotoluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
4-Chlorotoluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dibromo-3-chloropropane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Dibromochloromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dibromoethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Dibromomethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,4-Dichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Dichlorodifluoromethane	"	ND	—	500	"	"	—	—	—	—	—	—	"	
1,1-Dichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
cis-1,2-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
trans-1,2-Dichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
2,2-Dichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
cis-1,3-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
trans-1,3-Dichloropropene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Ethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Hexachlorobutadiene	"	ND	—	400	"	"	—	—	—	—	—	—	"	
2-Hexanone	"	ND	—	1000	"	"	—	—	—	—	—	—	"	

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6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020930 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020930-BLK1)								Extracted: 02/23/05 11:03						
Isopropylbenzene	EPA 8260B	ND	—	200	ug/kg	1x	—	—	—	—	—	—	02/24/05 13:08	
p-Isopropyltoluene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
4-Methyl-2-pentanone	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Methyl tert-butyl ether	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Methylene chloride	"	ND	—	500	"	"	—	—	—	—	—	—	"	
Naphthalene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
n-Propylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Styrene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,1,2-Tetrachloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,2,2-Tetrachloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Tetrachloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Toluene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,3-Trichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,4-Trichlorobenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,1-Trichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,1,2-Trichloroethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Trichloroethene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Trichlorofluoromethane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,3-Trichloropropane	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,2,4-Trimethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
1,3,5-Trimethylbenzene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
Vinyl chloride	"	ND	—	100	"	"	—	—	—	—	—	—	"	
o-Xylene	"	ND	—	100	"	"	—	—	—	—	—	—	"	
m,p-Xylene	"	ND	—	200	"	"	—	—	—	—	—	—	"	
Surrogate(s): 4-BFB		*Recovery:*	*95.0%*		*Limits:*	*42.6-130%*	"						*02/24/05 13:08*	
1,2-DCA-d4			*118%*			*57.3-144%*	"						"	
Dibromofluoromethane			*110%*			*45.5-130%*	"						"	
Toluene-d8			*113%*			*42.1-144%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Volatile Organic Compounds per EPA Method 8260B - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020930 **Soil Preparation Method: EPA 5035 Modified**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC (Limits)	% RPD (Limits)	Analyzed	Notes
LCS (5020930-BS1)								Extracted: 02/23/05 11:03				
Benzene	EPA 8260B	1780	—	100	ug/kg	1x	—	1990	89.4% (81.9-125)	— —	02/24/05 09:57	
Chlorobenzene	"	1740	—	100	"	"	—	"	87.4% (79.2-125)	— —	"	
1,1-Dichloroethene	"	1780	—	100	"	"	—	"	89.4% (66.1-125)	— —	"	
Toluene	"	1720	—	100	"	"	—	"	86.4% (80-125)	— —	"	
Trichloroethene	"	1750	—	100	"	"	—	"	87.9% (76-125)	— —	"	
Surrogate(s): 4-BFB		*Recovery:*	*97.0%*		*Limits:*	*42.6-130%*	"				*02/24/05 09:57*	
1,2-DCA-d4			*123%*			*57.3-144%*	"				"	
Dibromofluoromethane			*117%*			*45.5-130%*	"				"	
Toluene-d8			*108%*			*42.1-144%*	"				"	
Matrix Spike (5020930-MS1)					QC Source: P5B0634-03			Extracted: 02/23/05 11:03				
Benzene	EPA 8260B	2420	—	100	ug/kg dry	1x	ND	2600	93.1% (68.5-125)	— —	02/24/05 10:24	
Chlorobenzene	"	2440	—	100	"	"	ND	"	93.8% (65.9-125)	— —	"	
1,1-Dichloroethene	"	2280	—	100	"	"	ND	"	87.7% (55.8-125)	— —	"	
Toluene	"	2400	—	100	"	"	ND	"	92.3% (70.3-125)	— —	"	
Trichloroethene	"	2410	—	100	"	"	ND	"	92.7% (65.5-125)	— —	"	
Surrogate(s): 4-BFB		*Recovery:*	*88.5%*		*Limits:*	*42.6-130%*	"				*02/24/05 10:24*	
1,2-DCA-d4			*108%*			*57.3-144%*	"				"	
Dibromofluoromethane			*107%*			*45.5-130%*	"				"	
Toluene-d8			*100%*			*42.1-144%*	"				"	
Matrix Spike Dup (5020930-MSD1)					QC Source: P5B0634-03			Extracted: 02/23/05 11:03				
Benzene	EPA 8260B	2260	—	100	ug/kg dry	1x	ND	2550	88.6% (68.5-125)	6.84% (25)	02/24/05 10:52	
Chlorobenzene	"	2270	—	100	"	"	ND	"	89.0% (65.9-125)	7.22% "	"	
1,1-Dichloroethene	"	2230	—	100	"	"	ND	"	87.5% (55.8-125)	2.22% "	"	
Toluene	"	2210	—	100	"	"	ND	"	86.7% (70.3-125)	8.24% "	"	
Trichloroethene	"	2240	—	100	"	"	ND	"	87.8% (65.5-125)	7.31% "	"	
Surrogate(s): 4-BFB		*Recovery:*	*89.8%*		*Limits:*	*42.6-130%*	"				*02/24/05 10:52*	
1,2-DCA-d4			*104%*			*57.3-144%*	"				"	
Dibromofluoromethane			*103%*			*45.5-130%*	"				"	
Toluene-d8			*96.1%*			*42.1-144%*	"				"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5020794 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5020794-BLK1)								Extracted: 02/21/05 08:17						
Acenaphthene	EPA 8270m	ND	—	13.4	ug/kg	1x	—	—	—	—	—	—	02/22/05 17:41	
Acenaphthylene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (a) anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (a) pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (b) fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (ghi) perylene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (k) fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Chrysene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Dibenzo (a,h) anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Fluorene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Naphthalene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Phenanthrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*91.3%*		*Limits:*	*40-150%*	"						*02/22/05 17:41*	
Pyrene-d10			*107%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*120%*			*40-150%*	"						"	
LCS (5020794-BS1)								Extracted: 02/21/05 08:17						
Acenaphthene	EPA 8270m	163	—	13.4	ug/kg	1x	—	165	98.8%	(33-139)	—	—	02/22/05 13:08	
Benzo (a) pyrene	"	193	—	13.4	"	"	—	"	117%	(45-149)	—	—	"	
Pyrene	"	174	—	13.4	"	"	—	"	105%	(39-138)	—	—	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*96.4%*		*Limits:*	*40-150%*	"						*02/22/05 13:08*	
Pyrene-d10			*113%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*125%*			*40-150%*	"						"	
Matrix Spike (5020794-MS1)				QC Source: P5B0414-01				Extracted: 02/21/05 08:17						R-05
Acenaphthene	EPA 8270m	3280	—	2680	ug/kg dry	200x	1970	213	>300%	(33-139)	—	—	02/23/05 17:11	Q-01
Benzo (a) pyrene	"	254	—	268	"	20x	ND	"	119%	(45-149)	—	—	02/23/05 16:41	
Pyrene	"	1740	—	268	"	"	1370	"	174%	(39-138)	—	—	"	Q-01
Surrogate(s): Fluorene-d10		*Recovery:*	*NR*		*Limits:*	*40-150%*	*200x*						*02/23/05 17:11*	*S-01*
Pyrene-d10			*NR*			*40-150%*	*20x*						*02/23/05 16:41*	*S-01*
Benzo (a) pyrene-d12			*125%*			*40-150%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results

North Creek Analytical - Portland

QC Batch: 5020794 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (5020794-MSD1)				QC Source: P5B0414-01				Extracted: 02/21/05 08:17						R-05
Acenaphthene	EPA 8270m	4350	—	2680	ug/kg dry	200x	1970	212	>300%	(33-139)	28.0%	(60)	02/23/05 19:13	Q-01
Benzo (a) pyrene	"	223	—	268	"	20x	ND	"	105%	(45-149)	13.0%	"	02/23/05 18:43	
Pyrene	"	1550	—	268	"	"	1370	"	84.9%	(39-138)	11.6%	"	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*NR*		*Limits:*	*40-150%*	*200x*						*02/23/05 19:13*	*S-01*
Pyrene-d10			*NR*			*40-150%*	*20x*						*02/23/05 18:43*	*S-01*
Benzo (a) pyrene-d12			*115%*			*40-150%*	"						"	

QC Batch: 5021065 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (5021065-BLK1)								Extracted: 02/25/05 15:15						
Acenaphthene	EPA 8270m	ND	—	13.4	ug/kg	1x	—	—	—	—	—	—	02/28/05 16:25	
Acenaphthylene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (a) anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (a) pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (b) fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (ghi) perylene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Benzo (k) fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Chrysene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Dibenzo (a,h) anthracene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Fluoranthene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Fluorene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Indeno (1,2,3-cd) pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Naphthalene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Phenanthrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Pyrene	"	ND	—	13.4	"	"	—	—	—	—	—	—	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*91.9%*		*Limits:*	*40-150%*	"						*02/28/05 16:25*	
Pyrene-d10			*102%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*125%*			*40-150%*	"						"	

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Anchor Environmental, L.L.C.-Portland	Project Name: **Brix Maritime**	
6650 SW Redwood Lane - Suite 110	Project Number: 990056-01	Report Created:
Portland, OR 97224	Project Manager: John Renda	04/04/05 15:44

Polynuclear Aromatic Compounds per EPA 8270M-SIM - Laboratory Quality Control Results
North Creek Analytical - Portland

QC Batch: 5021065 **Soil Preparation Method: EPA 3550**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
LCS (5021065-BS1)								Extracted: 02/25/05 15:15						
Acenaphthene	EPA 8270m	160	—	13.4	ug/kg	1x	—	165	97.0%	(33-139)	—	—	02/28/05 14:25	
Benzo (a) pyrene	"	226	—	13.4	"	"	—	"	137%	(45-149)	—	—	"	
Pyrene	"	160	—	13.4	"	"	—	"	97.0%	(39-138)	—	—	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*109%*		*Limits:*	*40-150%*	"						*02/28/05 14:25*	
Pyrene-d10			*118%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*150%*			*40-150%*	"						"	
Matrix Spike (5021065-MS1)					QC Source: P5B0727-06			Extracted: 02/25/05 15:15						R-05
Acenaphthene	EPA 8270m	231	—	67.0	ug/kg dry	5x	ND	241	95.9%	(33-139)	—	—	02/28/05 22:58	
Benzo (a) pyrene	"	263	—	67.0	"	"	ND	"	109%	(45-149)	—	—	"	
Pyrene	"	257	—	67.0	"	"	ND	"	107%	(39-138)	—	—	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*93.4%*		*Limits:*	*40-150%*	"						*02/28/05 22:58*	
Pyrene-d10			*99.2%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*99.2%*			*40-150%*	"						"	
Matrix Spike Dup (5021065-MSD1)					QC Source: P5B0727-06			Extracted: 02/25/05 15:15						R-05
Acenaphthene	EPA 8270m	214	—	67.0	ug/kg dry	5x	ND	241	88.8%	(33-139)	7.64%	(60)	02/28/05 23:29	
Benzo (a) pyrene	"	236	—	67.0	"	"	ND	"	97.9%	(45-149)	10.8%	"	"	
Pyrene	"	241	—	67.0	"	"	ND	"	100%	(39-138)	6.43%	"	"	
Surrogate(s): Fluorene-d10		*Recovery:*	*97.5%*		*Limits:*	*40-150%*	"						*02/28/05 23:29*	
Pyrene-d10			*109%*			*40-150%*	"						"	
Benzo (a) pyrene-d12			*106%*			*40-150%*	"						"	

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