



DRAFT
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
FORMER BAY WOOD PRODUCTS SITE
EVERETT, WASHINGTON

Prepared for

Port of Everett
Everett, Washington

Washington Department of Ecology
Olympia, Washington

Prepared by

Anchor QEA, LLC
720 Olive Way, Suite 1900
Seattle, Washington 98101

SLR International Corp
1800 Blankenship Road, Suite 440
West Linn, Oregon 97068

April 2011

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LIST OF ACRONYMS AND ABBREVIATIONS

µg	microgram
2,3,7,8-TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
AFDW	ash free dry weight
ARAR	Applicable or Relevant and Appropriate Requirement
ARI	Analytical Resources, Inc.
AST	aboveground storage tank
bgs	below ground surface
CAP	Cleanup Action Plan
CESCL	Certified Erosion and Sediment Control Lead
CLARC	Cleanup Levels and Risk Calculation
cm	centimeters
COPC	contaminant of potential concern
Corps	U.S. Army Corps of Engineers
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSL	Cleanup Screening Level
CSM	Conceptual Site Model
CWA	Clean Water Act
cy	cubic yard
DCA	MTCA Disproportionate Cost Analysis
DGPS	differential global positioning system
DMMO	Dredged Material Management Office
DMMP	Dredged Material Management Program
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ENR	enhanced natural recovery
EPA	U.S. Environmental Protection Agency
EPH	extractable petroleum hydrocarbons
ESA	Environmental Site Assessment
FIES	Forest Industries Engineering Systems
FRTR	Federal Remediation Technologies Roundtable
FS	Feasibility Study

GE	General Electric
HNO ₃	nitric acid
HPA	Hydraulic Project Approval
Kg	Kilogram
L	liter
Landau	Landau Associates
LDC	Laboratory Data Consultants
MDL	method detection limit
mg	milligrams
MHHW	mean higher high water
MIG	mean individual growth
MLLW	mean lower low water
MNR	monitored natural recovery
MTCA	Model Toxics Control Act
NRCS	National Resource Conservation Service
NWP	Nationwide Permit
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCL	Preliminary Cleanup Level
PHS	Priority Habitat Species
Port	Port of Everett
ppt	parts per trillion
PQL	practical quantitation limit
PSDDA	Puget Sound Dredged Disposal Analysis
PSEP	Puget Sound Estuary Program
RCW	Revised Code of Washington
RI	Remedial Investigation
SAIC	Science Applications International Corporation
SAP	Sampling and Analysis Plan
SEPA	State Environmental Policy Act
SIM	selective ion monitoring
Site	Bay Wood Products Site
SLR	SLR International Corporation

SMARM	sediment management review meetings
SMS	Sediment Management Standards
SMU	Sediment Management Unit
SPI	sediment profile imaging
SQS	Sediment Quality Standard
SVOC	semivolatile organic compound
SY	square yards
TEE	terrestrial ecological evaluation
TEF	toxicity equivalency factor
TEQ	toxicity equivalent quotient
TOC	total organic carbon
TPH	total petroleum hydrocarbon
TVS	total volatile solids
UST	underground storage tank
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbons
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WDNR	Washington Department of Natural Resources
Work Plan	<i>Final Work Plan for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan</i>

EXECUTIVE SUMMARY

This Remedial Investigation/Feasibility Study (RI/FS) has been prepared for the Port of Everett (Port) Bay Wood Products Site (Site) located at 200 West Marine View Drive, Everett, Washington, 98201.

The RI/FS has been conducted according to the requirements promulgated under the state of Washington's Model Toxics Control Act (MCTA), Chapter 173-340 WAC, in accordance with the Agreed Order (No. DE 5490) between the Port and the Washington Department of Ecology (Ecology). The RI sampling and analysis was performed in accordance with the *Final Work Plan for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan* (Work Plan; SLR 2009), *Bay Wood Products Sediment Sampling and Analysis Plan Addendum* (Anchor QEA 2009b), and the *Supplemental Phase II Upland Remedial Investigation Work Plan* (SLR 2010), which were approved by Ecology on May 12, 2009, December 8, 2009, and November 24, 2010, respectively. On behalf of the Port, Anchor QEA, LLC was responsible for the technical evaluation of the in-water areas and SLR International Corporation (SLR) was responsible for the technical evaluation of the upland areas.

The Site consists of a 41.32-acre tract of land owned by the Port with historical sawmill, log processing, and/or lumber storage activities dating back to at least 1948. Areas on the eastern, northern, and southern portions of the Site were filled in various stages beginning in the late 1800s or early 1900s when the adjacent BNSF railroad was laying tracks along Port Gardner Bay. From at least 1946 through 1970, the Site was occupied by Washington Wood Products, who operated a sawmill primarily located on the eastern one-third of the Site. The western two-thirds of the Site were primarily used for lumber and log storage. A log way was located on the southern portion of the Site and large log rafts were located to the northwest and north of the Site.

In 1979, the Site was leased by Bay Wood Products, Inc., who dismantled the sawmill and began using the Site as a log storage and processing yard. In 1994, Bay Wood Products concluded their lease of the Site and the remaining buildings were razed.

Between August and October 1995, contractors working on behalf of the Port removed approximately 130,000 to 140,000 cubic yards (cy) of bark, rock, and wood chips from the Site. A dike constructed of rock and soil was built around the western approximately two-thirds of the Site with the top of the dike approximately 50 feet from the shoreline. Following removal of the wood debris and rock, the area was filled with approximately 200,000 cy of maintenance dredging sand from the Snohomish River Federal Navigation Channel.

The Site has remained vacant since the removal activities in 1995. In 2005 and 2006, soil and sediment from construction of the Port's 14th Street bulkhead replacement project was placed onto the Site. Prior to construction, the volume of material excavated during the 14th Street bulkhead replacement project was estimated to be approximately 4,000 cy. The actual volume of material placed on the Site was not reported. This material is visible as soil piles located across the surface of the Site.

The Port and Ecology entered into an Agreed Order for cleanup of the Site on October 3, 2008.

The uplands RI field activities were conducted between May 20 and June 14, 2009, in accordance with the Ecology-approved Work Plan. Based on the levels discussed in detail in Section 4.3 below, carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were identified in the surface soil stockpiles above preliminary MTCA cleanup standards. The recommended uplands cleanup alternative for the Site consists of the excavation, removal, and off-site disposal of a relatively small volume of soil containing cPAHs above the preliminary MTCA standards.

The sediment RI field activities and analyses were conducted between June 2009 and January 2010 in accordance with the Ecology-approved Work Plan Addendum. No hazardous substances were detected in Site sediments at levels exceeding Washington State Sediment Quality Standards (SQS) chemical criteria. However, concurrent biological testing revealed that surface sediments collected from a single location near the Site's northeastern shoreline exceeded SQS biological criteria. Based on a detailed MTCA evaluation of protective cleanup alternatives for these sediments, including a disproportionate cost analysis (DCA), the

recommended sediment cleanup action for this area of the Site consists of removal of 3 feet of sediment followed by backfill with clean sediment that would be suitable for benthic habitat.

1 INTRODUCTION

This Remedial Investigation/Feasibility Study (RI/FS) has been prepared for the uplands and adjacent marine sediments at the Port of Everett (Port) Bay Wood Products Site (Site) located at 200 West Marine View Drive, Everett, Washington, 98201. The Site location is shown on Figure 1-1, and the Bay Wood Products Inc. Property is shown in Figure 1-2. This RI/FS has been prepared in accordance with the provisions of the Agreed Order (No. DE 5490) between the Port and the Washington Department of Ecology (Ecology). All RI sampling and analysis was performed in accordance with the *Final Work Plan for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan* (Work Plan; SLR 2009), which was submitted to Ecology on May 4, 2009, and approved by Ecology on May 12, and the *Supplemental Phase II Upland Remedial Investigation Work Plan* (Supplemental Work Plan; SLR 2010) which was submitted to Ecology on November 23, 2010, and approved by Ecology on November 24, 2010. Additionally, a second phase of sediment sampling and analysis was conducted under a work plan addendum, *Bay Wood Products Sediment Sampling and Analysis Plan Addendum* (Anchor QEA 2009b).

1.1 Purpose and Objectives

This RI/FS has been prepared to meet the objectives in the Agreed Order for RI/FS of the Site uplands and adjacent sediments. The RI assessed areas identified as potential environmental concerns based on historical activities to identify and quantify contaminants of potential concern (COPCs) in soil, groundwater, and sediment at the Site. The FS develops and evaluates cleanup action alternatives to enable a final cleanup action to be selected by Ecology for both the uplands and marine areas of the Site. In accordance with the Model Toxics Control Act (MTCA) Cleanup Regulation (Washington Administrative Code [WAC] 173-340) and the Sediment Management Standards (SMS; WAC 173-204) for those areas of the Site where concentrations of hazardous or deleterious substances no longer exceed cleanup levels at the point of compliance, no further cleanup actions are necessary. A detailed description of Ecology's selected cleanup remedy for the Site will be provided separately in the forthcoming Cleanup Action Plan (CAP).

The overall objective of the RI/FS is to identify the hazardous substances that have been released to the uplands and adjacent aquatic environment; assess the nature, extent, and

distribution of these substances; identify the potential migration pathways and receptors; assess potential risks to human health and the environment; and evaluate and compare protective cleanup alternatives for the Site.

1.2 Site Setting

The Site is located on an area of fill that extends into Port Gardner Bay at the confluence of the Snohomish River to the north and Port Gardner Bay to the west (Figures 1-1 and 1-2). No structures are present on the Site. Soil piles placed on the property in 2005 and 2006 are located across the upland portion of the Site. The western and southern edges of the Site are covered by riprap and logs that slope moderately down toward the shoreline. Pockets of dune grass are located between the rubble. The riparian zone is composed principally of blackberry with a few willow trees. A wooden seawall extends along the northeastern shoreline of the Site.

1.3 Report Organization

This report is organized as follows:

- **Section 1 – Introduction**, introduces the project and purpose
- **Section 2 – Site Background**, summarizes the Site background
- **Section 3 – Environmental Setting**, summarizes the environmental setting
- **Section 4 – Upland Remedial Investigation Summary and Results**, describes the uplands RI studies completed at the Site, including a summary of the Site environmental conditions (nature and extent of contamination)
- **Section 5 – Sediment Remedial Investigation Summary and Results**, describes the sediment RI studies completed at the Site, including a summary of the nature and extent of contamination
- **Section 6 – Conceptual Site Model**, presents the conceptual site models for the uplands and sediments
- **Section 7 – Basis for Cleanup Action**, describes the basis for the cleanup action, including a summary of cleanup standards
- **Sections 8 – Framework for Cleanup Action Alternative Development and Evaluation and 9 – MTCA Evaluation Criteria**, describe the framework for the development and evaluation of cleanup action alternatives, including the objectives of the cleanup action,

the applicable regulatory requirements

- **Section 10 – Development and Evaluation of Uplands Cleanup Action Alternatives**, presents a summary of recommended uplands cleanup action for the Site
- **Section 11 – Development and Evaluation of Sediment Cleanup Action Alternatives**, presents a summary of recommended sediment cleanup action for the Site (note that discussion of protection of cultural resources, habitat restoration opportunities, and future land use considerations for the recommended Site remedy are currently reserved pending further direction from Ecology)
- **Section 12 – References**, presents the references used in preparing this report.

1.4 General Site Information

Site Name: Port of Everett Bay Wood Products Site

Site Address: 200 West Marine View Drive

City and State: Everett, Washington 98201

County: Snohomish

Township/Range/Section: Section 7, Township 29N, Range 5E of the Willamette Meridian

Latitude: 48° 00' 49.5"

Longitude: 122° 12' 34.5"

Ecology Facility Site ID Number: 2757

Ecology Region: Northwest Region

Ecology Project Manager: Isaac Standen, Ecology, Toxics Cleanup Program

Washington State Department of Ecology

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Port of Everett Project Manager: Erik Gerking, Environmental Cleanup Administrator

Port of Everett

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Project Coordinator for the Port of Everett: R. Scott Miller, Principal Engineer

SLR International Corporation
1800 Blankenship Road, Suite 440
West Linn, OR 97068
(503)-723-4423

Legal Description of Site: The Site consists of three adjoining parcels (29050700100300, 29050700100500, and 29050700101000). These parcels are shown on Figure 1-2. The description of each parcel as provided by Snohomish County is as follows:

Parcel Number: 29050700100300

Reported Parcel Size (in acres): 38.63

County provided property legal description: SEC 07 TWP 29 RGE 05 RT-4) BEG AT 1/4 COR ON E BDY OF SEC TH W 675.81 FT TO W BDY NPRR R/W TPB TH SLY ALG SD R/W LN 75.47FT TH ANG N45*47 22W FOR 549.75FT TH ANG S44*12 38W FOR 49FT TH ANG N45*47 22W FOR 1360.73FT TO E GOVT PIER HEAD LN TH ANG N64*00 00E FOR 744.24FT TH ANG N77*00 00E FOR 380.87FT TH ANG S72*10 22E FOR 944.45FT TH ANG S30*28 38W FOR 670.17FT TH ANG L 76*16 FOR 300FT TO W BDY OF NPRR R/W TH SLY ALG SD R/W LN FOR 615. 03FT TPB LESS ST TO EV ALSO LESS FDP BEG E 1/4 COR SEC 7-29-5 TH S88*58 38W ALG 1/4 LN 675.81FT TO W BDY LN NPRR R/W TH S32*42 38W ALG W BDY LN 75.47FT TH N45*47 22W 40.82 FT TPB TH CONT N45*47 22W 58.51 FT TAP ON A/C C/PT FR WH BEARS N04*05 55W WITH RAD OF 381.17FT TH NELY ALG A/C TO L CONCENTRIC WITH & 8FT SLY FR C/L OF NPRR SPURR AS IT EXISTS ON TH GROUND FOR 78.13 FT TH S32*42 38W FOR 64.54 FT TPB

Parcel Number: 29050700100500

Reported Parcel Size (in acres): 2.66

County provided property legal description: SEC 07 TWP 29 RGE 05 RT 5A-) BEG AT E1/4 CN SEC TH S88*58 38 W 675.81FT TH S32*42 38W 75.41FT TH N45*47 22W 121.70FT TO PT 8.0FT NLY OF & PLL WITH C/L OF RR SPUR SD PT BEING ON CRV TPB TH CONT N45*47 22W 428.04FT TH S44* 12 38W 49.0FT TH N45*47 22W 1360.73FT TO INT GOV PIER HEAD LN TH S64*00 00W ALG SD GOV PIER HEAD LN 60.85FT TH S45*47 22E 1631.04FT TO INT LN 8.9FT NLY & PLL WITH C/L OF RR SPUR SD PT BEING ON CRV TO L TH THRU LAST DESC PT ANG L 17*30 00TO PTN TANGENCY OF SD CRV TO L TH ALG TH ARC OF SD CRV TO L

HAV RAD OF 513.67FT & CONS AN ANG 09°13'38" FOR DIST OF 82.75FT TO PT OF COMPOUND WITH CRV TO L TH ALG SD COMP CRV TO L HAV RAD OF 375.06FT & CONS ANG OF 19°25'05" 127.11 TO TPB BEING PTN OF GOV LOT 1 & PTN OF EV IMP TDLES IN SEC 7-29-5 CONT 2.67 AC

Parcel Number: 29050700101000

Reported Parcel Size (in acres): 0.03

County provided property legal description: SEC 07 TWP 29 RGE 05 RT 4-1) TH PTN GOVT LOTS 1 & 2 DAF COM AT E 1/4 COR OF SD SEC TH S88°58'38"W ALG 1/4 LN FOR 675.81FT TO WLY BDY OF OLD NP/RR R/W TH S32°42'38"W ALG SD WLY BDY 75.41FT TH N45°47'22"W 42.86FT TO WLY BDY OF ESE TO CITY OF EV FOR RD & TPB TH CONT N45°47'22"W 57.08FT TAP ON ARC OF CRV SD PT BEING 8FT SLY OF AS MEAS AT R/A TO C/L R/R SPUR TR TH ANG TO R 131°38'41" TO BECOME TANG TO CRV TH ON CRV TO L CONCENTRIC WITH & 8FT SLY OF C/L SD R/R SPUR TR HAV RAD 391.06FT & CONS ANG OF 11°07'05" FOR 75.88FT TO SD WLY BDY ESE TO CITY EV TH S32°42'38"W ALG SD WLY BDY FOR 62.48FT TO TPB

Land Use: The Site is currently vacant of structures and occupants. The current zoning of the Site is Maritime Services (M-S). The Port will be evaluating the best and highest uses for the Site. The evaluation of potential exposure to human and ecological populations provided in this report was based on unrestricted land use. Exposure media, exposure routes, and potential receptors (human and ecological) are discussed in separate sections of this report; specifically, Section 3.4 – Ecology and Section 6 – Conceptual Site Model.

2 SITE BACKGROUND

2.1 Site Description

The Site is located at the confluence of the Snohomish River to the north and Port Gardner Bay (Possession Sound, part of Puget Sound) to the west (Figure 1-2). The Site consists of three adjoining parcels (29050700100300, 29050700100500, and 29050700101000) with a combined land area (both in water and upland) of approximately 41.32 acres, which includes approximately 13 acres of uplands at elevations above the tidal mudflats (Figure 1-2). The northerly 100 feet of the Site are included in an easement to the U.S. Army Corps of Engineers (Corps) for dike maintenance, encompassing a total of 4.12 acres. The three property parcels that make up the Site are shown on Figure 1-2. The Site is bounded to the north by vacant land owned by the Kimberly-Clark Worldwide, Inc.; to the south by the former Nord Door site (JELD-WEN, Inc.); to the east by West Marine View Drive and land owned by the Port, beyond which is the BNSF railway and vacant marshland (Maulsby Marsh, the western portion of which is owned by BNSF); and to the west by Port Gardner Bay.

The upland portion of the Site extends into Port Gardner Bay and is relatively flat, with a maximum elevation of approximately 15 feet above mean sea level. A portion of the Site lies within the most current 100-year floodplain of the Snohomish River; however, the federal, state, and local agencies are in the process of reviewing and updating the floodplain data in this area.

The in-water portion of the Site consists primarily of tideland mudflats ranging in elevation from approximately 0 to 6 feet mean lower low water (MLLW).

2.2 Site History

Historical activities at the Site have consisted primarily of sawmill, log processing, and lumber storage activities dating back to 1946. Areas on the eastern, northern, and southern portions of the Site were filled in various stages beginning in the late 1800s or early 1900s when the adjacent BNSF railroad, formerly Great Northern Railroad, was laying tracks along Port Gardner Bay. In 1946, the eastern portion of the Site was occupied by a sawmill operated by Washington Wood Products (later known as Washington Timber Products). At

this time, the eastern portion of the Site was separated from the western portion of the Site by a channel running roughly through the center of the Site. No activities were apparent on the western portion of the Site at that time. The eastern portion of the Site appeared to be occupied by a series of large buildings in the northeastern corner of the Site, and a smaller building in the southeastern portion of the Site. A rail spur was present along the far southeastern border of the Site, and lumber storage piles were visible across the Site.

By the time of a 1955 aerial photograph, several additional large buildings had been constructed on the Site to the south and southwest of the main sawmill structures in the southwestern corner of the Site. A 1957 Sanborn map identifies on-site buildings including large lumber sheds and dry kilns on the northeastern portion of the Site; an office building in the southeastern corner of the Site; a saw mill, sorting sheds, pre-fabrication shop, and hogged fuel bin in the southwestern portion of the Site; and a lumber transit shed located adjacent to the rail spur on the far southern portion of the Site. The western portion of the Site was still separated from the eastern portion by a channel in 1957. However, by 1965, the channel running through the center of the Site had been filled, and the western two-thirds of the Site were being used for lumber and log storage. The existing buildings on the eastern portion of the Site remained, although several had expanded in size. A 1968 Sanborn map depicts a dip tank located on the south end of the dry kiln building located on the east-central portion of the Site. The Site continued to be occupied by Washington Timber Products in 1968.

The Site was subsequently operated by Publishers Forest Products Company from 1970 to 1976, West Coast Orient Lumber Mills from 1976 through 1978, and West Coast Lumber Operations Company from 1978 through 1979. During this time, operations at the Site appeared to have remained substantially the same, although several additional small storage buildings were visible in aerial photographs to the west of previously existing buildings. Building permits reviewed at the City of Everett indicate a new boiler building was constructed in the central portion of the Site in 1971. These features are shown on Figures 2-1 and 2-2.

In 1979, Bay Wood Products began occupying the Site for use as a log processing yard. Bay Wood Products dismantled the sawmill operation and removed the majority of the buildings

from the Site, including the boiler building, several dry kilns, and several lumber sheds. Prior to Bay Wood Products commencing operations at the Site, the previous tenants apparently placed a geotextile fabric to stabilize rock fill, which was reportedly applied to the working surface of the Site to provide a stable base for heavy log handling equipment operations. At the time of a 1984 aerial photograph, the only buildings that remained on the Site included the office building, one dry kiln building, and one storage building. The dry kiln building and storage buildings were subsequently razed in 1991. Bay Wood Products' lease of the Site was discontinued in approximately 1994.

In 1994, Landau Associates (Landau) estimated the amount of log yard waste material (bark, rock, and wood debris) present on the upland portion of the Site, both above and below the geotextile fabric layer. Material above the geotextile fabric was attributed to activities conducted by Bay Wood Products, while material below was attributed to former lessees. The total estimated volume of log yard wood waste material was approximately 100,000 cubic yards (cy). Given the relatively large quantity of wood waste present on the Site, the material was managed in a manner consistent with wood waste provisions, including WAC 173-304, which provides guidance for handling solid waste and wood waste.

Between August and October 1995, contractors working on behalf of the Port removed approximately 130,000 to 140,000 cy of bark, rock, and wood chips from the Site (the contractor's removal volume was similar to but more accurate than Landau's initial estimate previously summarized). The log yard waste material was removed from the upland areas of the Site. Following removal of the wood debris and rock, a dike created of rock and soil was constructed around the western two-thirds of the Site, with the top of the dike approximately 50 feet from the shoreline. The diked area was subsequently filled with approximately 200,000 cy of relatively clean sand from the maintenance dredging of the Snohomish River Federal Navigation Channel.

The Site has remained vacant since the removal activities in 1995. Between 2005 and 2006, soil and sediment from construction of the Port's 14th Street bulkhead replacement project was placed on the Site. This material was characterized in accordance the Puget Sound Dredged Disposal Analysis (PSDDA) Program for suitability for open-water disposal, as documented in the *Everett Marina PSDDA Sediment Characterization Report* (RETEC 2005).

2.3 Uplands Regulatory History and Previous Investigations

In 1985, the U.S. Environmental Protection Agency (EPA) directed a polychlorinated biphenyl (PCB) cleanup of a portion of the Site, which reportedly resulted from a release from an on-site electrical transformer located along the south edge of the covered shed. General Electric (GE) reportedly removed the transformer along with approximately 10 cy of PCB-contaminated soil (based on visual evidence at the time of the excavation). An area of soil approximately 10 feet square and 10 inches deep was removed. No verification sampling data associated with the removal have been located by the Port.

Beginning in 1989, several environmental assessment events have been completed at the Site. Activities associated with prior investigations and their general findings, including regulatory compliance, are summarized in detail in the Work Plan. Where appropriate and available, the analytical results from soil sampling have been included in Table 2-1. Refer to Figures 2-1 and 2-2 for the locations of Site features described in the following paragraphs.

A Phase I Environmental Site Assessment (ESA) of the Site was performed by GeoEngineers in September 1989. At the time of the assessment, the majority of the Site was covered by logs and several large piles of wood and bark residue. Three main buildings were located on the southeastern portion of the Site, which consisted of an office building with an attached shop area, a large covered shed, and an unused shop building with three large truck bays. All buildings were observed to have concrete floor slabs. Several aboveground storage tanks (ASTs) containing diesel fuel and waste oil and drums containing motor oil and hydraulic oil were reported in and around these buildings. Staining was noted on the gravel and the concrete slab surfaces beneath the tanks. Staining was observed on the gravel and concrete floor surface beneath the drums in the covered shop area attached to the office building. No evidence of current or former underground storage tanks (USTs) was identified at the Site.

A June 1992 letter report was prepared by GeoEngineers as a follow-up to the 1989 Phase I ESA. Based on interviews with Bay Wood Products personnel, the large covered shed and unused shop building were reportedly demolished in August 1991. Stained areas of gravel were removed and the concrete was cleaned when the shed and shop were demolished. GeoEngineers did not observe evidence of staining in the areas of the former buildings. Limited areas of stained gravel, concrete, or wood debris were observed at the Site. The areas

of stained gravel and wood debris were located over concrete or asphalt pavement. The letter report recommended shallow soil sampling in the area of the former PCB transformer, removal of stained gravel in the covered shop, and removal of the limited areas of stained wood debris in the equipment maintenance area.

In February 1993, GeoEngineers performed a follow-on ESA and remedial excavation at the Site. At that time, the Site was operating as a sorting and storing yard for export logs. An investigation of surface soils in the vicinity of the former area of PCB-contaminated soils was conducted as part of the 1993 ESA. Four soil samples were collected from the boundaries of the former excavation at approximately 0.5 feet below ground surface (bgs) for analysis of PCBs. PCBs were identified in all four samples, with concentrations ranging from 0.75 milligrams per kilogram (mg/Kg) to 1.18 mg/Kg. Eleven additional soil samples were collected from depths of 0.5 and 1 foot bgs in October 1992 to identify the lateral and vertical distribution of soil with PCB concentrations greater than 1 mg/Kg (the MTCA Method A soil cleanup standard). PCBs were not detected at concentrations above 1 mg/Kg in the six samples collected from below 1 foot bgs. However, three samples collected from a depth of 0.5 to 1.0 feet bgs contained soil PCB concentrations ranging from 1.27 mg/Kg to 2.32 mg/Kg. Based on these data, approximately 45 cy of soil was excavated from the Site and disposed off-site. Confirmation samples collected from the base of the excavation contained PCB concentrations ranging from 0.068 mg/Kg to 0.49 mg/Kg, below the MTCA Method A soil cleanup standard. The PCB sampling results from this investigation are summarized in Table 2-1. However, these historical soil sampling data were not included in the RI data tables because soils in the area of the former transformer were subsequently excavated during the wood waste removal conducted in 1995 (discussed below). This 1995 excavation resulted in the removal of an average of 4 to 6 feet of material from throughout the upland portions of the Site.

In 1994, Landau was contracted by the Port to conduct an exploration of Site conditions (specifically the depth of bark and wood debris on the uplands portion of the Site). A total of 25 test pits were excavated during this assessment. The approximate locations of these test pits are shown on Figure 2-1.

During August and September 1995, Landau field personnel monitored wood waste excavation activities at the Site. Their observations are summarized in a November 1995 letter report.

Forest Industries Engineering Systems (FIES) was contracted on behalf of Coast Pacific Trading, Inc. (the parent company of Bay Wood Products) to observe the dike construction and excavation of wood waste material from the Site and prepare an analysis of the types and volumes of materials excavated. The inspections were conducted between August 1995 and October 1995. In a letter dated December 29, 1995, FIES estimated that approximately 85,000 to 90,000 cy of material was removed from the central areas of the Site, and 45,000 to 50,000 cy of material was removed from the perimeter areas. The total material removed was estimated to be approximately 130,000 to 140,000 cy.

In February 2005, The RETEC Group, Inc. prepared a letter report for the Port that evaluated sediment dredged from the 14th Street Bulkhead Replacement project relative to PSDDA guidelines. The RETEC report noted that this material did not contain chemical concentrations greater than any of the PSDDA criteria and was suitable for unconfined, open-water disposal. Sediment from the replacement project was subsequently placed onto the Site (note that PSDDA levels and MTCA Method A cleanup levels are not equivalent). Data from this report have been incorporated into the RI data tables.

2.4 Previous Sediment Investigations

From July to September 2008, Ecology and Science Applications International Corporation (SAIC) collected samples of sediments and biological tissue from numerous locations throughout Port Gardner Bay to help prioritize cleanup and restoration efforts in this area (SAIC 2009). The Ecology/SAIC sampling in Port Gardner Bay included:

- Sediment profile imaging (SPI), in which a camera penetrated the top 20 to 25 centimeters (cm) of sediments and photographed a cross section of the surface sediment layers
- Collection of fish, clam, and crab tissues for chemical analysis
- Collection of surface sediment grab samples from locations throughout Port Gardner Bay for chemical and biological analyses, with specific station locations selected based on

the SPI data

- Video probe and sediment coring at targeted locations for chemical analyses, again based on the SPI data

A total of four surface grabs (Stations A2-23, A2-24, A2-25, and A2-25B; samples collected 0 to 10 cm below mudline) and one core (Station A2-25; samples collected 1 to 3 feet and 3 to 5 feet below mudline) were collected by Ecology/SAIC in the Site area, and the samples were submitted for a wide suite of physical, chemical, and biological analyses. Station locations are depicted on Figure 2-3.

2.4.1 Results from Previous Sediment Investigations

Table 2-2 presents summaries of validated sediment sampling chemistry data, along with comparisons with area background concentrations observed at seven stations collected by Ecology/SAIC roughly 1 to 2 miles from the Site and likely removed from Site influence. All surface and subsurface samples collected within the Site area contained chemical concentrations below sediment quality standards (SQS) chemical criteria. Sediment total volatile solids (TVS) ranged from 4.6 to 8.3 percent, well below site-specific SQS criteria developed at other similar regional wood debris cleanup sites. Sediment TVS results were also consistent with SPI and plan view image results, which estimated that surface sediments in the Site area contained less than 5 percent woody debris. Dioxin/furan concentrations in the Site area were similarly relatively low, and within regional background sediment concentrations previously established by the Dredged Material Management Program (DMMP) for Port Gardner Bay.

SAIC (2009) performed a suite of sediment bioassays on a single sample collected from the Site area (station A2-25). Amphipod survival, polychaete growth, and Microtox luminescence all passed SQS biological criteria. The larval development test, conducted with *Mytilus sp.*, was repeated twice and both tests had matched reference sediment failures (reference sediments were collected from both Carr Inlet and Sequim Bay). The SAIC (2009) report used other reference sample data collected during the study to perform the larval bioassay interpretations, and concluded that station A2-25 (and many other locations in Port Gardner Bay) failed cleanup screening level (CSL) biological criteria, even though bioassay

results at station A2-25 were within the reference area range. Larval bioassay interpretation is discussed in more detail in Section 5.3.4.

3 ENVIRONMENTAL SETTING

This section describes the topography, climate, hydrogeology, and ecology of the Site.

3.1 Topography

The Site is located on an area of fill that extends into Port Gardner Bay. The Site is adjoined by waterways and/or tidal mudflats to the north, south, and west. A narrow channel separates the Site from the adjacent property to the south. The Site is relatively flat, with a maximum elevation of approximately 15 feet above mean sea level. The western and southern edges of the Site are covered by riprap and logs, which slope moderately downward toward the shoreline.

3.2 Climate

The Site is located in the west-central portion of Snohomish County. The climate of Snohomish County area is tempered by winds from the Pacific Ocean. Summers are relatively warm, and winters are cool, but snow and freezing temperatures are uncommon. The average daily temperature in Everett in the summer is 62° Fahrenheit and in the winter is 40° Fahrenheit. During summer, rainfall is extremely light. During the rest of the year, rains are frequent, especially late in fall and in winter. The average annual precipitation in Everett is 36 inches (National Resource Conservation Service [NRCS], dated 1983).

3.3 Geology and Hydrogeology

The Everett area lies within the Puget Sound lowland, a tectonic/geomorphic depression between the Olympic Mountains and the Cascade Range. The north-south trending depression extends from Oregon to southwestern British Columbia. The depression is characterized by relatively thick accumulations of post-glacial and glacial deposits overlying Tertiary sedimentary and igneous rocks. The lowlands area has been influenced by at least five major advances and several lesser advances of Pleistocene continental ice. Glacial deposits consist of a complex sequence of lacustrine deposits, advance outwash, drift, till, and recessional deposits. A variety of river deposits characterize the interglacial periods. The Quaternary glacial and interglacial deposits range in thickness from 0 to 300 feet in the Site

vicinity (Yount et al. 1985). The underlying bedrock consists primarily of Tertiary sedimentary and volcanic rocks.

The Site is underlain by Holocene-age younger alluvial and estuarine deposits (Minard 1985), which consists mostly of stream-laid stratified sediments. These deposits lie in and along the present streams near the water table. The sediment is largely sand, silt, and clay with considerable amounts of organic matter. The thickness of these deposits probably exceeds 90 feet.

According to the Soil Survey of Snohomish County Area, Washington (NRCS 1983), soils at the Site are classified as Urban Land. Urban Land is defined as areas that are covered by streets, buildings, parking lots, and other structures that obscure or alter the soils so that identification is not possible. Soils at the Site are likely classified as Urban Land as a result of the historical filling activities. As discussed in Section 2, in 1995 approximately 130,000 to 140,000 cy of rock and wood debris were removed from the Site and replaced with dredge spoils from the Snohomish River.

Soils encountered during installation of the borings at the Site consisted primarily of sands and silts. An asphalt layer was encountered in borings PB-1B and PB-4A at depths of approximately 7 and 9 feet, respectively. A concrete layer was encountered in boring 3DA at a depth of 8 feet bgs. Other borings contained small quantities of gravel, brick, broken concrete, or wood debris.

Groundwater conditions during this investigation identified the presence of an apparent shallow, unconfined groundwater-bearing zone at depths ranging from 2.5 to 6 feet bgs at the time of the Geoprobe drilling. Groundwater flow is inferred to be generally toward Port Gardner Bay to the west.

3.4 Ecology

Information regarding federal- and state-listed sensitive, monitored, and candidate Endangered Species Act species was sought from the Washington Department of Fish and Wildlife (WDFW) Priority Habitat Species (PHS) list data. Habitats and species maps

obtained from the WDFW are included as Figures 3-1 through 3-4. Bull trout and Chinook salmon are listed as threatened; no federally listed endangered species were identified in the project area.

The purple martin is listed as a State candidate species on state lists. Three nesting pairs were identified at the Everett waterfront, at the confluence with the Snohomish River (ID 70703 on Figure 3-1). These pairs were identified as active in 2004. Purple martins are large insect-eating, colonial nesting swallows that nest in a variety of cavities. Purple martins most commonly feed in flight on insects. Favorable martin foraging habitat includes open areas, often located near moist to wet sites, where flying insects are abundant.

In addition, the bald eagle, which is listed as a federal species of concern and a state sensitive species, may be found near the Site. No nesting bald eagles are located on the Site; however, the Site is located within the 800-foot and shoreline nest buffer. The closest nesting territory (Hale #506-2) is located approximately one-quarter mile southeast of the Site (Figure 3-2). Wintering bald eagles require perch trees for day use and mature/old-growth forest stands for night roosts. Perch trees are typically dominant live or dead trees situated near a shoreline where a nest or defendable territory is evident or a prey source is abundant. Prey items are primarily fish and waterfowl.

Information regarding listed and candidate Endangered Species Act fish species in the project area was sought from the WDFW (Figure 3-1). There are no federally listed endangered fish species identified in the project area. Federally listed threatened species (also noted as State candidate species) that may be found in the Snohomish River near the Site include the coho salmon, Dolly Varden/bull trout, fall Chinook, fall chum, pink salmon, resident cutthroat, sockeye salmon, summer Chinook, and summer steelhead, which may migrate through the area during certain periods of the year.

No surf smelt, sand lance, rock sole, or herring spawning areas were identified in Port Garner Bay or the Snohomish River in the area of the Site (Figure 3-3).

Dungeness crab is included as a priority species in WDFW's PHS list. Dungeness crab habitat was identified in areas surrounding the Site (Figure 3-4).

4 UPLAND REMEDIAL INVESTIGATION SUMMARY AND RESULTS

The following sections present the results from all of upland RI sampling and analysis. All work was performed in accordance with the Work Plan and the Supplemental Work Plan.

4.1 Upland RI Investigations

The purpose of the field investigation was to collect and analyze adequate samples to sufficiently characterize the Site for the purpose of this RI/FS.

Potential contaminant migration pathways and specific areas of interest were assessed to complete the Site characterization. Potential pathways/areas, investigation rationale, and proposed sampling was discussed in the Work Plan and the Supplemental Work Plan. The sampling locations are shown on Figure 4-1. The upland Sampling and Analysis Plan (SAP) detailed the proposed sample collection methods, sample handling, chain-of-custody procedures, sampling equipment, and decontamination procedures.

Specific areas investigated as part of the upland RI included:

- Former Covered Shop attached to the Former Office Building
- Former PCB Transformer Area
- Former Mill Operation Areas
- Former Surface Stain Area at Dry Storage
- Former Dip Tank
- Former Oil Storage Shed
- Soil Stock-Piles from the 14th Street Bulkhead Construction
- Sediments and Channel Segment Sediments

The removal of 130,000 to 140,000 cy of material from the Site resulted in an average of 4 to 6 feet of material depth removed across the approximately 13-acre upland portion of the Site. This removal activity resulted in the removal of Site structures, surface features, and near-surface soil from identified areas of environmental interest. Removed material was replaced with approximately 200,000 cy of relatively clean sand dredged from the Snohomish River Federal Navigation Channel. Accordingly, soil sampling in the areas listed above targeted

the soil below the imported dredged sand placed on the Site following the material removal in 1995.

4.2 Upland Field Activities

On May 20 and 21 and June 1, 2009, SLR International Corporation (SLR) completed 11 Geoprobe borings on the upland areas of the Site for the collection of soil and groundwater samples (PB-1A through PB-6A) at the upland locations depicted on Figure 4-1. Prior to field activities, the locations of public utilities were identified through the Utility Notification Center and the locations of private utilities were identified by APS, a private utility locating company. In addition, SLR field staff worked with Ecology to minimize the potential for encountering cultural resources in the work area. The drilling activities were performed by Cascade Drilling Inc., of Woodinville, Washington. The soil and groundwater samples were collected in general accordance with the Upland Sampling and Analysis Plan (Upland SAP; Work Plan Attachment A), including sample collection methods, sampling locations, sample collection depths, laboratory analyses, and equipment decontamination procedures. All borings were abandoned with bentonite upon completion of groundwater sampling. Specific laboratory analyses performed for each sample are summarized in Table 4-1. The process for selection of the appropriate Site Preliminary Cleanup Levels (PCLs) for soil and groundwater is presented in Tables 4-2 and 4-3 and discussed in detail in Section 4.3 below. Soil and groundwater sampling results for detected constituents and a comparison to Site PCLs are presented in Tables 4-4 and 4-5.

The Geoprobe borings were completed to depths between 8 and 16 feet bgs. Soil samples were collected from the Geoprobe sleeve, labeled, logged onto a chain-of-custody document, and stored on ice in an insulated cooler pending delivery to the laboratory for analysis. Temporary monitoring wells were installed in each of the boreholes for groundwater sampling. The temporary wells were sufficiently purged (typically 2 to 3 temporary well point volumes) until purge water became more clear, to remove as much sediment as possible. Following purging, a water sample was collected using a peristaltic pump and new polyethylene tubing. Saturated soil and apparent shallow groundwater was encountered at depths ranging from 2.5 to 6 feet bgs at the time of the Geoprobe drilling. Boring logs from the Geoprobe borings are presented in Appendix A.

On June 2, 2009, SLR collected 14 composite soil samples from the soil stockpiles located on the Site. The composite samples were composed of subsamples from separate piles. Seven samples were collected from the identified eastern portion of the Site (SP-E1-C through SP-E7-C), five samples collected from the identified middle portion of the Site (SP-M1-C through SP-M5-C), and two samples were collected from the identified western portion of the Site (SP-W1-C and SP-W2-C). The sampling locations are depicted on Figure 4-1. The composite samples were collected using sample collection methods, sample analysis, and equipment decontamination procedures detailed in the Ecology-approved Upland SAP. Specific laboratory analyses performed for each sample is summarized in Table 4-1. Soil stockpile sampling results for detected constituents are summarized in Table 4-6.

On November 23, 2010, groundwater monitoring well MW-3D was completed to a depth of 13 feet bgs near former boring PB-3D. Boring 3DA was initially completed in the proposed location of MW-3D; however, a concrete layer was encountered at a depth of 8 feet bgs, collapsing the well casing and forcing the boring to be moved slightly to the southeast to avoid the concrete layer. Groundwater was encountered at a depth of 3 feet bgs in the monitoring well. Boring logs for borings 3DA and MW-3D are presented in Appendix A. Groundwater sampling results for detected constituents are summarized in Table 4-5.

4.2.1 Modifications and Deviations from Work Plan

The upland RI investigation was conducted in general accordance with the Work Plan and Supplemental Work Plan. Modifications or deviations from the Work Plans are described as follows:

- Soil samples PB-3A-9 and PB-3B-10.5 were inadvertently submitted for analysis of volatile organic compounds (VOCs). VOC analysis of these soil samples was not called for in the Work Plan.
- The dioxins and furans analysis in soil samples from locations PB-3A and PB-3B identified dioxins and furans at concentrations above the laboratory practical quantitation limits (PQLs) but below the preliminary cleanup standards for the Site presented in the Work Plan. Follow up analysis of groundwater samples from these borings for dioxins and furans could not be performed because of an insufficient volume

of groundwater for the laboratory to conduct the analysis. Because dioxins and furans have low solubility, they are not expected to be found in groundwater unless there are high concentrations in soil. As a result, no additional testing for dioxins and furans in groundwater is needed.

- Soil samples PB-5A-9 and PB-5B and groundwater samples PB-5A-GW and PB-5B-GW were analyzed for semivolatile organic compounds (SVOCs) by EPA Method 8270C. Again, an insufficient volume of sample volume remained to achieve the lower PQLs for polycyclic aromatic hydrocarbons (PAHs) established in the Work Plan using EPA Method 8270C – Selective Ion Monitoring (SIM); however, only two constituent PQLs exceeded their respective Work Plan Preliminary Cleanup Levels (PCLs).
- Groundwater was collected from boring PB-5B on May 21, 2009; however, due to the low groundwater flow rate from the temporary well, an insufficient volume of water was obtained to complete all of the requested analyses. SLR returned to the Site on June 1, 2009 and advanced a second boring in the same location for the collection of additional groundwater. Sample PB-5B-GW (collected May 21, 2009) was submitted for analysis of total petroleum hydrocarbon (TPH)-HCID and SVOCs. Sample PB-5B-GW2 (collected June 1, 2009) was submitted for analysis of SVOCs and VOCs.
- Although not specified in the Work Plan, groundwater samples were submitted for analysis of both total metals and dissolved metals; however, this allowed for an evaluation of which value is most representative.
- Soil sample PB-5B was not analyzed for priority pollutant metals (metals); however, metals soil concentrations were very low at locations sampled throughout the Site; therefore, no additional metals testing in soil at this location is needed.
- The groundwater sample from boring PB-5A was not analyzed for metals because insufficient sample volume was available to complete the metals analysis. However, metals concentrations were very low in the soil sample collected from this location and metals in groundwater throughout the Site are relatively well characterized and in most cases below PCLs. Therefore, no additional metals testing in groundwater is necessary at this location.
- Boring 3DA was initially completed in the proposed location of MW-3D; however, a concrete layer was encountered at a depth of 8 feet bgs, collapsing the well casing and forcing the boring to be moved slightly to the southeast to avoid the concrete layer.

4.2.2 Data Quality Summary

The analytical results for detected constituents are summarized in Tables 4-4 through 4-6. The tables in Appendix B present a complete summary of the analytical results and laboratory PQLs for all analysis performed and Appendix C contains complete copies of all associated laboratory reports for the soil and groundwater samples analyzed. The project laboratory for the uplands sampling was ESC Lab Sciences of Mount Juliet, Tennessee, with the exception of the analysis of the groundwater sample from monitoring well MW-3D, which was performed Freemont Analytical. ESC subcontracted the dioxin/furan analysis to Maxxam Analytics Inc. The analytical testing was conducted as outlined in the Ecology-approved Work Plan. The soil and groundwater analytical methods used included Northwest TPH methods (NWTPH-HCID, NWTPH-Gx, NWTPH-Dx), VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, PAHs by EPA Method 8270M-SIM, PCBs by EPA Method 8082, metals using EPA 6000/7000 series methods, and dioxins and furans by EPA Method 1613.

In general, the laboratories met the PQLs and method detection limits (MDLs) outlined in the Work Plan. As is inherent to laboratory analysis, the laboratory PQL and associated MDLs were adjusted as necessary when specific analytes were detected and/or matrix interference occurred.

The PQLs and associated MDLs were at or below the preliminary cleanup standards presented in the Work Plan for the specific analytes. SLR notified Ecology in an email dated April 16, 2009 (prior to the start of the field work), that ESC had identified several analytes for which the laboratory PQLs identified in the SAP were lower than ESC's current method PQLs and MDLs. For these analytes, ESC met the PQLs and MDLs that were specified in the April 16 email. The preliminary cleanup standards for several of these analytes were lower than the revised PQLs provided by ESC. For these analytes, the preliminary cleanup standards are appropriately adjusted to meet the new PQLs.

For the purposes of the RI data presentation, laboratory data qualifiers are not further discussed for analytes that were not identified above the laboratory MDL. Data validation was performed by the project laboratories and internally by Ms. Megan Coracci with SLR. Groundwater samples collected for total metals analysis were preserved in the field with

nitric acid (HNO₃). Groundwater samples collected for dissolved metals analysis were not preserved in the field.

The samples were appropriately preserved and stored in iced coolers until arrival at ESC or Maxxam. Cooler temperatures were within the advisory range of 2° C to 6° C when received by the laboratory. Laboratory qualifiers noted on the attached tables are summarized below:

- Numerous analytes were identified at concentrations above the laboratory MDL but below the laboratory PQL. These analytes are “J” qualified in the attached tables.
- The VOCs cyclohexane, methyl acetate, 1,4-dioxane, and methylcyclohexane were analyzed on a different laboratory instrument than the other VOCs. The extraction for this analysis was conducted out of the laboratory hold time and therefore the findings for these analytes are “Q” qualified.
- The SVOC 2,3,4,6-tetrachlorophenol was analyzed on a different instrument than the other SVOCs. The extraction for this analysis was conducted out of the laboratory hold time for sample PB-5A-9; therefore, the finding for this analyte is “Q” qualified. There was not enough extract available to run this sample on the separate instrument for sample PB-5B; therefore, no results for this analyte are presented on the attached tables.
- In samples PB-1A-GW, PB-1B-GW, and PB-3B-GW, selenium was identified in the method blank as well as in the groundwater sample. This is noted on the attached tables with a “B” qualifier.
- The associated batch quality control was outside the established quality control range for precision for pyrene in soil samples PB-3B-10.5 (acenaphthene and naphthalene), PB-3C-7 (benzo[g,h,i]perylene), and groundwater sample PB-1A-GW (pyrene), resulting in a “J3” qualifier.
- The sample matrix interfered with the ability of the laboratory to make an accurate determination for PAHs in soil sample PB-3C-7; the spike value was low, resulting in a “J6” qualifier.

4.3 Preliminary Upland Site Cleanup Levels

The Work Plan PCLs for soil and groundwater were established for all analytes based on the MTCA Cleanup Regulations (chapter 173-340 WAC). The Work Plan PCLs were developed to be protective of human health and the environment in accordance with MTCA

requirements based on the exposure pathways outlined in the Work Plan. Receptors considered during development of the Work Plan PCLs included humans and land-based plants and animals (terrestrial ecological receptors), and benthic and aquatic organisms. The Site is located within an estuary and may contain both freshwater and marine species.

Soil Work Plan PCLs were calculated by selecting the most stringent value based on protection of human health (under a residential scenario), protection of terrestrial ecological receptors, and protection of groundwater as surface water. Soil Work Plan PCLs that are protective of surface water were calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations that are protective of surface water. In the event that the calculated Work Plan PCLs were below the laboratory PQLs, the Work Plan PCL defaulted to the laboratory PQL.

Groundwater Work Plan PCLs were selected based on the most restrictive level for the protection of marine and freshwater surface water, by selecting the most restrictive cleanup level between surface water applicable or relevant and appropriate requirements (ARARs) and Surface Water Method B values per WAC-173-340-730. If a PCL was not available from the aforementioned sources, the most restrictive cleanup level between MTCA Method A (WAC 173-340-720[3]) and Method B (WAC 173-340-720[4]) for potable groundwater was used. In the event that the selected Work Plan PCLs were below the laboratory PQLs, the Work Plan PCL defaulted to the laboratory PQL.

4.3.1 Soil Preliminary Cleanup Levels

The process for selection of the appropriate Site PCLs for soil was based on potential exposure pathways to Site chemicals as described in the GSM. Table 4-2 presents the PCL selection process for those constituents that were detected above laboratory MDLs in soil. It is possible to make an empirical demonstration, as outlined in WAC 173-340-747(9)(b), that concentrations of SVOCs, PAHs, and VOCs present in soil are not causing groundwater PCLs (based on freshwater and marine surface water criteria) to be exceeded because the concentrations of SVOCs, PAHs, and VOCs identified in Site soils did not result in those constituents being present in groundwater in the corresponding borings above Work Plan PCLs. Accordingly, the PCLs for SVOCs, PAHs, and VOCs in soil are based upon the

protection of human health via direct contact using MTCA Method A or B for unrestricted land use under WAC 173-740(2)(b)(i) and 173-340(3)(b)(iii)(B) and protection of terrestrial ecological receptors as described in WAC 173-340-7490 through 173-340-7494. Toxicity equivalency factors (TEFs) were used to calculate a toxicity equivalency quotient (TEQ) for total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) relative to reference chemical benzo(a)pyrene in accordance with WAC 173-340-708(8)(e) and dioxins and furans relative to reference chemical 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) in accordance with WAC 173-340-708(8)(d). The Method B cleanup levels for benzo(a)pyrene and 2,3,7,8-TCDD were used as the PCLs for the sum of cPAHs and dioxins and furans, respectively.

Of the metals detected above Work Plan PCLs in soil, only arsenic, copper, nickel and silver were also identified in groundwater at concentrations above Work Plan PCLs. Therefore, the soil PCLs for these metals (arsenic, copper, nickel, and silver) were selected to be protective of groundwater as surface water, with adjustments made to consider natural background concentrations for the Puget Sound area, as identified in Table 1: Statewide & Regional 90th Percentile Values (Puget Sound), as presented Ecology Publication Number 94-115 *Natural Soils Background Concentrations in Washington State*, dated October 1994. The MTCA Method A soil cleanup level for unrestricted land use was selected for arsenic because it was established based on background concentrations. Site PCLs for soil are presented in Table 4-2.

4.3.2 Groundwater Preliminary Cleanup Levels

The process for selection of the appropriate Site PCLs for groundwater was based on potential exposure pathways to Site chemicals as described in the CSM. Groundwater at the Site does not meet the definition of potable water as outlined in WAC 173-340-720(2) based on the following factors: a) the groundwater does not serve as a current source of drinking water; and b) the groundwater is not a potential future source of drinking water given the Site's proximity to surface water that is not suitable as a domestic water supply.

Groundwater PCLs are based on the most restrictive level between protection of marine and freshwater surface water. The Site is located within an estuary and may contain both freshwater and marine species. The groundwater PCL selection process for detected

constituents is shown in Table 4-3. The selection process included selecting the most restrictive cleanup level from all the surface water ARARs (both marine and freshwater) and Surface Water Method B values per WAC-173-340-730. If there was no surface water cleanup value available in the Cleanup Levels and Risk Calculation (CLARC) tables, then the most restrictive cleanup level between MTCA Method A (WAC 173-340-720(3)) and Method B (WAC 173-340-720(4)) for potable groundwater was used. In the event that the selected Work Plan PCLs were below the laboratory PQLs, the Work Plan PCL defaulted to the laboratory PQL. TEFs were used to calculate a TEQ for total cPAHs relative to reference chemical benzo(a)pyrene for development of PCLs. The Method A groundwater cleanup level of for arsenic was selected because this cleanup level was developed with consideration for background concentrations (WAC 173-340-900). Site PCLs for groundwater are presented in Table 4-3.

4.4 Soil and Groundwater Results Summary

Sample results for each of the areas of the Site investigated during the upland RI are summarized below. Tables 4-4 through 4-6 present the findings of the soil, groundwater, and soil stockpile results for detected constituents, respectively. The tables in Appendix B present a complete summary of all soil and groundwater analytical data collected. The sample locations are depicted on Figure 4-1.

4.4.1 Former Covered Shop Attached to the Former Office Building

Two Geoprobe borings were advanced at the location of the former covered shop. Two soil samples (PB-1A-8 and PB-1B-13.5) and two groundwater samples (PB-1A-GW and PB-1B-GW) were collected from the borings. Soil samples were submitted for laboratory analysis of TPH-HCID, TPH-Dx (PB-1B-13.5 only), PAHs, VOCs, and metals. No TPH-Dx, PAHs, or VOCs were identified in the soil samples at concentrations above the PCLs.

Silver and thallium were identified in both soil samples at concentrations above PCLs (see Table 4-4). There are no published background levels for silver or thallium in soil in the Puget Sound area. The soil PCL for silver was set at the laboratory PQL and was selected based on the protection of surface water, since groundwater concentrations of silver in these borings also exceeded the PCL for silver. However, the groundwater samples were collected

directly from temporary Geoprobe borings, which have the tendency to be biased high. The groundwater sample from monitoring well MW-3D, which is located between these borings and Port Gardner Bay, did not identify concentrations of silver above laboratory PQLs. Therefore, the concentrations of silver identified in the soil do not appear to be causing groundwater PCLs to be exceeded. A more appropriate PCL for silver in these borings is the MTCA Method B value of 400 mg/Kg, based upon the protection of human health via direct contact. Concentrations of silver in borings PB-1A-8 (0.9 mg/Kg) and PB-1B-13.5 (0.94 mg/Kg) did not exceed the MTCA Method B value.

Thallium was detected at locations PB-1A-8 and PB-1B-13.5 at concentrations of 9.5 mg/Kg and 8.7 mg/Kg, slightly above the PCL of 5.6 mg/Kg (see Table 4-4). These samples were collected at 8 and 13.5 feet below ground surface.

Groundwater samples were analyzed for TPH-HCID, PAHs, VOCs, and metals (total and dissolved). No TPH-HCID, PAHs, or VOCs were identified at concentrations above PCLs. Dissolved arsenic, selenium, and silver were above the PCLs (see Table 4-5). Arsenic was detected PB-1B-GW at concentrations of 5.8 micrograms per liter ($\mu\text{g/L}$), which is only slightly greater than the PCL of 5 $\mu\text{g/L}$, based on background arsenic concentrations in Washington State. Selenium was detected at locations PB-1A-GW and PB-1B-GW at levels slightly greater than the PCLs, at concentrations of 7.8 and 7.8 $\mu\text{g/L}$, which are slightly greater than the PCL of 5.0 $\mu\text{g/L}$. Silver was detected at locations PB-1A-GW and PB-1B-GW at concentrations of 8.2 and 4.7 $\mu\text{g/L}$, which are greater than the PCL of 0.5 $\mu\text{g/L}$. This PCL is based on the laboratory PQL. As noted above, these groundwater samples were collected from temporary well points placed within Geoprobe borings, which can result in artificially elevated metals concentrations. The groundwater sample from monitoring well MW-3D, which is located between these borings and Port Gardner Bay, did not identify concentrations of arsenic, selenium, or silver at concentrations above laboratory PQLs.

4.4.2 Former PCB Transformer Area

One Geoprobe boring was advanced in the vicinity of the former transformer area. One soil sample (PB-2A-7.5) and one groundwater sample (PB-2A-GW) were collected from this boring. The soil sample was submitted for TPH-HCID and PCBs analysis. The groundwater

sample was submitted for TPH-HCID analysis. No TPH-HCID was identified above laboratory reporting limits in either soil or groundwater from this boring. No PCBs were identified above laboratory reporting limits in soil.

4.4.3 Former Mill Operation Areas

Four Geoprobe borings were advanced in former mill operations areas. Four soil samples (PB-3A-9, PB-3B-10.5, PB-3C-7, and PB-3D-5.5) and four groundwater samples (PB-3A-GW, PB-3B-GW, PB-3C-GW, and PB-3D-GW) were initially collected. Soil samples were submitted for analysis of TPH-HCID, TPH-Dx (PB-3C-7 and PB-3D-5.5 only), PCBs, PAHs, and metals. In addition, soil samples PB-3A-9 and PB-3B-10.5 were also submitted for analysis of VOCs and dioxins and furans. No PCBs, PAHs, VOCs, metals, or dioxins/furans were identified in these soil samples at concentrations above PCLs. Only TPH-Dx in the heavy oil range in sample PB-3C-7 (550 mg/Kg) was identified at a concentration above the PCL (460 mg/Kg), which was based the simplified terrestrial ecological evaluation (TEE) criteria listed in Table 749-2 of WAC 173-340-900. Because the sample was collected at or below 6 feet, and WAC section 173-340-7490(4)(b) assumes the biologically active soil zone extends to a depth of 6 feet bgs, a more appropriate cleanup value for TPH in this area is the MTCA Method A cleanup level of 2,000 mg/Kg; this is discussed further in Section 4.5.1. These soil concentrations do not exceed the applicable cleanup levels.

Groundwater samples were analyzed for TPH-HCID, PAHs, VOCs, and metals (total and dissolved). No TPH-HCID or VOCs were identified in groundwater above PCLs. The cPAH TEQ for groundwater sample PB-3D was 0.070 µg/L, which is slightly greater than the PCL of 0.05 µg/L. Dissolved cadmium, copper, and nickel were detected in groundwater samples at concentrations above the PCLs (see Table 4-5). At location PB-3A-GW, cadmium was detected at a concentration of 1.4 µg/L, slightly above the PCL of 1 µg/L. At location PB-3D-GW, copper was detected at a concentration of 28 µg/L, which is greater than the PCL of 2.4 µg/L. Nickel was greater than the PCL of 8.2 µg/L, at locations PB-3B-GW, PB-3C-GW, PB-3D-GW, detected at concentrations of 12, 13, and 30 µg/L, respectively. These groundwater samples were collected from temporary well points placed within Geoprobe borings, which can result in artificially elevated metals concentrations.

To further evaluate the presence of metals and cPAHs identified in boring PB-3D, groundwater monitoring well MW-3D was completed in November 2010. The boring location was selected based on its proximity to the shoreline and its assumed downgradient location from PB-1A and PB-1B. The groundwater sample from MW-3D was submitted for analysis of select metals (both total and dissolved) and cPAHs. The concentrations of dissolved metals were below the concentrations of total metals for all constituents detected above the laboratory PQLs. No metals were identified above PCLs with the exception of dissolved copper (6.55 µg/L), which slightly exceeded the PCL of 2.4 µg/L. Concentrations of all PAHs, including cPAHs, were below PCLs.

As previously described, none of the soil samples collected from the borings in this area exhibited soil concentrations greater than soil background concentrations (or PCLs). The source of the copper identified in groundwater is unknown but could be related to a variety of factors, including local geochemical conditions.

4.4.4 Former Surface Stain Area at Dry Storage

One Geoprobe boring was advanced at the location of the former dry storage area (lumber storage sheds). One soil sample (PB-4A-9.5) and one groundwater sample (PB-4A-GW) were collected from this boring. The soil sample was submitted for analysis of TPH-HCID, PCBs, PAHs, VOCs, and metals. No TPH-HCID was identified in soil at concentrations above laboratory reporting limits. No PCBs, PAHs, or VOCs were identified at concentrations above the PCL. Of the metals analyzed, only nickel (82 mg/Kg) exceeded the PCL of 48 mg/Kg (see Table 4-4). Nickel was not identified in the groundwater sample from PB-4A; therefore, the concentrations of nickel identified in the soil do not appear to result in groundwater PCLs exceedances. More appropriate PCLs for nickel in this boring would be the MTCA Method B value of 1,600 mg/Kg, based upon the protection of human health via direct contact or the TEE value of 100 mg/Kg. The concentration of nickel did not exceed the MTCA Method B value or the TEE value.

The groundwater sample was submitted for analysis of TPH-HCID, TPH-Dx, PAHs, VOCs, and metals (total and dissolved), none of which were identified at concentrations above the PCLs.

4.4.5 Former Dip Tank

Two Geoprobe borings were advanced in the area of the former dip tank. Two soil samples (PB-5A-9 and PB-5B) and two groundwater samples (PB-5A-GW and PB-5B-GW) were collected from these borings. The soil samples were submitted for analysis of TPH-HCID, TPH-Dx (PB-5A-9 only), SVOCs, VOCs, and metals (PB-5A-9 only). In addition, based on the initial TPH-HCID results, sample PB-5A-9 was also selected for dioxin/furan analysis. TPH-Dx in the heavy oil range was identified in sample PB-5A-9 (620 mg/Kg) at a concentration above the PCL of 460 mg/Kg, but below the more appropriate cleanup level of 2,000 mg/Kg based on the depth of the sample. No SVOCs, VOCs, or dioxins/furans were identified at concentrations above the PCLs. Of the metals analyzed, only nickel (78 mg/Kg), identified in boring PB-5A-9, exceeded the PCL (see Table 4-4). Given the absence of nickel at a concentration above the PCL in MW-3D, located between boring PB-5A and the Bay, the concentrations of nickel identified in the soil do not appear to result in groundwater PCLs exceedances. More appropriate PCLs for nickel in this boring would be the MTCA Method B value of 1,600 mg/Kg or the TEE value of 100 mg/Kg. The concentration of nickel did not exceed the MTCA Method B value or the TEE value.

Groundwater samples from PB-5A-GW, PB-5B-GW, and PB-5B-GW2 were analyzed for TPH-HCID, TPH-Dx (PB-5A-GW only), SVOCs, and VOCs. TPH-Dx, SVOCs, and VOCs were not identified at concentrations above PCLs.

4.4.6 Former Oil Storage Area

One Geoprobe boring was advanced at the location of the former oil storage area. One soil sample (PB-6A-6) and one groundwater sample (PB-6A-GW) were collected from this boring. The soil sample was submitted for analysis of TPH-HCID, TPH-Dx, PCBs, PAHs, VOCs, and metals. PCBs, SVOCs, VOCs, and metals were not identified at concentrations above the PCLs. TPH-Dx in the heavy oil range was identified at a concentration of 490 mg/Kg, slightly above the PCL of 460 mg/Kg, but below the more applicable cleanup level of 2,000 mg/Kg based on the depth of the sample.

The groundwater sample was submitted for analysis of TPH-HCID, PCBs, PAHs, VOC, and metals (total and dissolved). TPH-HCID, PCBs, PAHs, and VOCs were not identified above

the PCLs. Of the tested metals, silver was the only metal detected in the groundwater sample at a concentration above the PCL. Silver was detected at a concentration of 5.1 µg/L, which is greater than the cleanup level of 0.5 µg/L based on a surface water ARAR. Silver was not detected above laboratory PQLs in the corresponding soil sample or in the groundwater monitoring well located nearer to the shoreline. The groundwater sample from location PB-6A was collected from a temporary well point placed within a Geoprobe boring, which can result in artificially elevated metals concentrations. The concentration of silver identified is well below the MTCA Method B groundwater cleanup level of 80 µg/L. The source of the silver identified in groundwater is unknown but could be related to a variety of factors, including local geochemical conditions.

4.4.7 Soil Piles

Fourteen composite soil samples were collected from soil piles located at the Site. The samples included seven composite samples from the eastern portion of the Site (SP-E1-C through SP-E7C), five from the middle portion of the Site (SP-M1-C through SP-M5-C), and three from the western portion of the Site (SP-W1-C through SP-W3-C). The samples were all analyzed for PAHs and metals. The calculated cPAH TEQs in two of the composite samples (SP-E1-C and SP-M2-C) were above the PCL. With the exception of PAHs, no other SVOCs were identified above laboratory reporting limits in the three samples submitted for SVOC analysis. Of the metals analyzed, only copper with concentrations up to 64 mg/Kg exceeded the PCL of 36 mg/Kg, which was based on the protection of surface water. The soil piles are not in contact with groundwater, and therefore a more appropriate PCL for the soil piles would be based on the protection of human health (i.e., direct contact) or ecological receptors. Copper concentrations identified in the soil piles were below the more applicable MTCA Method B soil cleanup level of 3,000 mg/Kg and the TEE value of 100 mg/Kg.

In addition to the samples collected as part of the upland RI, SLR screened the February 2005 RETEC Group, Inc. sample that was collected prior to placing the soil piles (dredge spoils) on the Site. The sample (EC-1A-S1) was initially evaluated by RETEC according PSDDA guidelines, which included analysis for metals, select SVOCs, PAHs, select VOCs, pesticides, and PCBs. No SVOCs, VOCs, pesticides, or PCBs were identified above PCLs. Of the metals

analyzed, only copper with a concentration of 52.4 mg/Kg exceeded the PCL of 36 mg/Kg based on the protection of surface water. Copper concentrations identified in the soil piles are below the more applicable MTCA Method B soil cleanup level of 3,000 mg/Kg and the TEE value of 100 mg/Kg.

4.5 Nature and Extent of Upland Contaminants of Potential Concern

This section presents information for each of the constituents that were detected in soil and groundwater during the RI at levels greater than the associated PCLs. Based on the information provided for each constituent, COPCs are identified.

4.5.1 Nature and Extent of Soil Contamination

cPAHs, TPH-Dx, copper, nickel, silver, and thallium were detected in one or more boring or soil stockpile sample locations at concentrations that were greater than the PCLs. Each of these constituents is explained below:

- **cPAHs.** Concentrations greater than the PCL (0.14 mg/Kg) were identified in two of the 14 stockpile soil composite samples, SP-EI-C (0.314 mg/Kg) and SP-M2-C (0.163 mg/Kg), and in the February 2005 RETEC sample EC-1A-S1 (0.376 mg/Kg). cPAHs in the stockpiled soil is thus a COPC for the Site. The estimated extent of soil stockpiles with cPAHs exceeding the preliminary cleanup standard is depicted on Figure 4-2 and discussed in the uplands FS section of this report.
- **TPH.** Concentrations of TPH in the heavy oil range greater than the PCL were identified in three of the five soil samples submitted for TPH analysis. The concentrations ranged from 490 mg/Kg to 620 mg/Kg, only slightly above the PCL of 460 mg/Kg, which is based on the TEE. However, TPH is not considered a COPC in soil based on the following rationale:
 - The concentrations detected were only slightly above the PCL (less than twice the PCL).
 - The PCL for TPH was developed to be protective of terrestrial ecological receptors. WAC section 173-340-7490(4)(b) assumes the biologically active soil zone for terrestrial ecological receptors extends to a depth of 6 feet bgs. All three samples that exceeded the PCL were collected from depths at or below 6 feet bgs;

beneath the biologically active zone. A more appropriate cleanup level for TPH in these areas is the MTCA Method A cleanup level of 2,000 mg/Kg. These soil concentrations do not exceed the applicable cleanup levels.

- **Copper.** Copper was tested for in a total of 24 soil samples (nine borings, 14 stockpile samples, and 2005 RETEC sample). Concentrations of copper greater than the PCL of 36 mg/Kg were identified in seven soil stockpile samples. The PCL was established at 36 mg/Kg based on background concentrations. None of the nine subsurface soil boring samples collected exceeded the PCL for copper. Of the 14 stockpile soil samples and the RETEC sample, eight slightly exceeded the PCL, and concentrations at the locations that exceeded ranged from 38 to 64 mg/Kg. The average concentration of the samples with copper exceedances was 48 mg/Kg, which is only slightly greater than the PCL of 36 mg/Kg. However, copper is not considered a COPC in soil based on the following rationale:
 - The soil with slightly elevated copper levels is on the surface of the Site and not in contact with groundwater. There appears to be little to no connection between the copper in soil and the elevated copper in groundwater.
 - Copper concentrations identified in the soil piles are below the more applicable MTCA Method B soil direct contact cleanup level of 3,000 mg/Kg and the TEE value of 100 mg/Kg.
 - There are no known or suspected sources of copper at the Site.
 - Copper is not found in the adjacent sediment at concentrations that exceeded sediment screening criteria.
- **Nickel.** Nickel was tested for in a total of 24 soil samples (nine borings, 14 stockpile samples, and 2005 RETEC sample). Concentrations of nickel greater than the PCL of 48 mg/Kg were identified in two soil boring samples at concentrations of 82 and 78 mg/Kg. None of the 14 stockpile soil samples exceeded the PCL. However, nickel is not considered a COPC in soil based on the following rationale:
 - Only two of the 24 samples tested for nickel were greater than the PCL, representing less than 10 percent of the sample locations.
 - The concentrations detected were only slightly above the PCL (less than twice the PCL).
 - There are no known or suspected sources of nickel at the Site.

- The exceedances are below levels that are protective of human health (i.e., direct contact) (1,600 mg/Kg) and ecological receptors (100 mg/Kg).
- The groundwater sample that was collected from one of the two locations with elevated nickel soil concentrations exhibited nickel concentrations below the groundwater PCL (based on protection of surface water), and no nickel above laboratory PQLs was identified in the groundwater monitoring well located nearer to the shoreline.
- Nickel is not found in the adjacent sediment at concentrations that exceeded sediment screening criteria. This further supports that elevated nickel concentrations in groundwater are not associated with a soil contamination source.
- **Silver.** Silver was tested at 24 locations (nine borings, 14 stockpile samples, and 2005 RETEC sample), and only two samples had detectable concentrations. Silver was detected in samples PB-1A-8 and PB-1B-13.5, at concentrations of 0.9 and 0.94 mg/Kg, respectively, which are slightly greater than the PCL of 0.5 mg/Kg, which was selected based on the protection of surface water. Washington State has no published background concentrations for silver. However, silver is not considered a COPC in soil based on the following rationale:
 - Only two of the 24 samples tested for silver were greater than the PCL, representing less than 10 percent of the sample locations.
 - No known or suspected sources of silver have been identified on the Site.
 - The concentrations detected were only slightly above the PCL (less than twice the PCL).
 - The groundwater sample from monitoring well MW-3D, which is located between these borings and Port Gardner Bay, did not identify concentrations of silver above laboratory PQLs. Therefore, the concentrations of silver identified in the soil do not appear to be causing groundwater PCLs to be exceeded. A more appropriate PCL for silver in these borings is the MTCA Method B value of 400 mg/Kg, based upon the protection of human health via direct contact. Concentrations of silver in borings PB-1A-8 (0.9 mg/Kg) and PB-1B-13.5 (0.94 mg/Kg) did not exceed the MTCA Method B value.

- The two samples were collected at 8 and 13.5 feet bgs (respectively), which are well below the biologically active soil zone and the typical work zone and, therefore, present very little risk.
- **Thallium.** Thallium was tested at 24 locations (nine borings, 14 stockpile samples, and 2005 RETEC sample), and only two samples had detectable concentrations. Thallium was detected in samples PB-1A-8 and PB-1B-13.5, at concentrations of 9.5 and 8.7 mg/Kg, respectively, which are slightly greater than the PCL of 5.6 mg/Kg. Washington State has no published background concentrations for thallium. Thallium is not considered a COPC in soil based on the following rationale:
 - Only two of the 24 samples tested for thallium were greater than the PCL, representing less than 10 percent of the sample locations.
 - No known or suspected sources of thallium have been identified on the Site.
 - The concentrations detected were only slightly above the PCL (less than twice the PCL).
 - The two samples were collected at 8 and 13.5 feet bgs (respectively), which are below the biologically active soil zone and the typical work zone and, therefore, present very little direct exposure risk.
 - Thallium was not detected in groundwater samples at concentrations greater than the screening level values.

Based on the analysis previously presented, the only COPCs for soil at the Site are cPAHs.

4.5.2 Nature and Extent of Groundwater Contamination

cPAHs, arsenic, cadmium, copper, selenium, silver, and nickel were detected in one or more boring groundwater sample locations at concentrations that were greater than the PCLs.

Each of these constituents is explained below:

- **cPAHs.** Of the eight boring locations and one groundwater monitoring well tested for cPAHs in groundwater, one sample (PB-3D-GW) exhibited a cPAH TEQ concentration of 0.07 µg/L, which is slightly greater than the PCL of 0.05 µg/L. However, cPAHs are not considered a COPC in groundwater based on the following rationale:

- No sources of cPAH soil contamination were identified in any of the subsurface soil samples.
 - Of the eight locations tested for cPAHs in groundwater, only one exhibited a concentration that was slightly elevated (less than twice the PCL).
 - The detection in groundwater was less than the MTCA Method A Cleanup Level for cPAHs of 0.1 µg/L (based on protection of groundwater as drinking water).
 - The samples were collected from direct push borings, which can result in artificially elevated cPAH concentrations.
 - Groundwater monitoring well MW-3D, installed near the location of boring PB-3D, did not identify cPAHs above laboratory PQLs in groundwater, further demonstrating that the slightly elevated concentration may have been a result of the sampling method.
- **Arsenic.** Of the eight boring locations and one groundwater monitoring well tested for arsenic in groundwater, only one (PB-1B-GW) had a concentration (5.8 µg/L) that was slightly greater than the PCL of 5.0 µg/L. However, arsenic is not considered a COPC in groundwater based on the following rationale:
 - No sources of arsenic soil contamination were identified in any of the soil samples.
 - The concentrations across the Site are much less than the federal drinking water maximum contaminant level of 10 µg/L.
 - There was only one location with (slightly) elevated arsenic concentrations in groundwater (less than twice the PCL).
 - The samples were collected from direct push borings, which can result in artificially elevated metals concentrations.
 - Monitoring well MW-3D, which is located between this boring and Port Gardner Bay, did not identify arsenic at concentrations above laboratory PQLs, demonstrating that that the arsenic concentrations may be artificially elevated as a result of the sampling method.
- **Copper.** Of the eight boring locations and one groundwater monitoring well tested for copper in groundwater, only samples PB-3D-GW and MW-3D-GW contained copper at concentrations above reporting limits. Sample PB-3D-GW identified copper at 28 µg/L and sample MW-3D-GW identified copper at 6.55 µg/L, which are greater than the PCL of 2.4 µg/L. However, copper is not considered a COPC in groundwater based on the

following rationale:

- No sources of copper soil contamination were identified in any of the subsurface soil samples.
 - Subsurface copper soil concentrations are not elevated at any tested boring location (including PB-3D-GW).
 - All copper concentrations that were greater than background levels in soil (previously discussed) occurred in stockpile soil samples, which are surficial and not in direct contact with Site groundwater.
 - The detected concentrations across the Site are much less than the federal drinking water maximum contaminant level of 1,300 µg/L.
- **Selenium.** Of the eight boring locations and one groundwater monitoring well tested for selenium in groundwater, only two samples (PB-1A-GW and PB-1B-GW) exhibited selenium above reporting limits at concentrations of 7.8 µg/L in both samples. These results are slightly greater than the PCL of 5.0 µg/L. However, selenium is not considered a COPC in groundwater based on the following rationale:
 - Selenium was detected in the method blank associated with the groundwater samples PB-1A-GW and PB-1B-GW, so it appears that these samples may have been contaminated with selenium at the laboratory.
 - No sources of selenium soil contamination were identified in any of the soil samples.
 - These locations have only slightly elevated selenium concentrations in groundwater (less than twice the PCL).
 - The detected concentrations across the Site are much less than the federal drinking water maximum contaminant level of 50 µg/L.
 - The samples were collected from direct push borings, which can result in artificially elevated metals concentrations.
 - Monitoring well MW-3D, which is located between these borings and Port Gardner Bay, did not identify selenium at concentrations above laboratory PQLs.
 - **Silver.** Of the eight boring locations and one groundwater monitoring well tested for silver in groundwater, three samples (PB-1A-GW, PB-1B-GW, and PB-6A-GW) exhibited silver above reporting limits at concentrations of 8.2, 4.7, and 5.1 µg/L, respectively, which are greater than the PCL of 0.5 µg/L. However, silver is not

considered a COPC in groundwater based on the following rationale:

- No sources of silver soil contamination were identified in any of the soil samples.
- The samples were collected from direct push borings, which can result in artificially elevated metals concentrations.
- Monitoring well MW-3D, which is located nearer to Port Gardner Bay, did not identify silver at concentrations above laboratory PQLs.

Based on the analysis presented above, there are no COPCs in groundwater.

4.6 Fate and Transport

As previously presented, the only COPCs for the Site are cPAHs in soil. More specifically, the cPAHs were identified only in the soil stockpiles located at the Site, but not in the native or fill soil. No groundwater COPCs were identified. As a result, this section evaluates the fate and transport of upland soil and groundwater cPAHs at the Site. The objective of the evaluation is to identify the primary fate and transport mechanisms affecting the distribution and migration of upland cPAHs.

4.6.1 Primary Fate and Transport Mechanisms

Primary fate and transport mechanisms for migration of upland cPAHs at the Site include the following:

- Volatilization of chemicals
- Fugitive dust generation/wind erosion
- Stormwater runoff/overland flow
- Leaching from soil to groundwater

4.6.2 Volatilization of Chemicals

In general, cPAHs tend to sorb to soil particles and have limited associated volatilization properties. The cPAHs are characterized by a low Henry's constant value (less than 0.01), and therefore volatilization is not expected to significantly impact the fate of these chemicals at the Site.

4.6.3 Fugitive Dust Generation/Wind Erosion

The cPAHs in soil are found in surface soil piles located throughout the upland area of the Site. Fugitive dust generation/wind erosion has the potential to affect the distribution of cPAHs at the Site. However, since only two of the fourteen composite soil samples contained cPAHs concentrations above the PCL, wind erosion is not expected to significantly mobilize cPAHs from the Site.

4.6.4 Stormwater Runoff/Overland Flow

Stormwater runoff/overland flow could influence the distribution of cPAHs in surface soils on a localized basis. Given that only two of the fourteen composite soil samples identified cPAHs at concentrations above the PCL, and that there were no observed signs of overland stormwater flow on the Site (stormwater appears to infiltrate into the ground surface), stormwater runoff/overland flow is not expected to significantly mobilize cPAHs from the Site.

4.6.5 Leaching from Soil to Groundwater

Chemicals in soils have the potential to leach from soil to groundwater. The degree to which a chemical is leached is largely a function of the specific chemical's solubility. In general, the soil cPAHs have very low water solubility, making them unlikely to leach into Site groundwater or surface water. This conclusion is supported by the RI data, which did not reveal evidence of leaching into Site groundwater.

5 SEDIMENT REMEDIAL INVESTIGATION SUMMARY AND RESULTS

The Ecology-approved SAP, including the SAP addendum that describes the second phase of investigation, provides a complete description of the work conducted (Anchor QEA 2009a and b). This section provides an overview of the work conducted in June (Phase 1) and December (Phase 2) of 2009. The scope of these investigations was based on a review of the Ecology data discussed above, and was consistent with the Ecology-approved RI/FS Work Plan (SLR 2009).

Based on an evaluation of historical Site operations and the SAIC (2009) data, the following sediment data gaps were identified:

1. Characterize the volume of significant wood debris accumulations at the Site, particularly at locations close to the former log way on the southern portion of the Site and along the shoreline from the log way around to the western shore where two log transfer facilities were located. The log rafting area to the north and much of the shoreline likely received the greatest log handling activity.
2. Assess Site sediments for diesel and motor oil-range hydrocarbons and Washington State SMS analytes, particularly at locations closest to former oil storage tanks located in the southern portion of the Site.
3. Verify compliance with SMS using bioassays at locations affected by wood debris and/or petroleum hydrocarbons.
4. Collect data as necessary to refine comparative analyses of remedial alternatives, including:
 - Perform a shoreline reconnaissance to assess and map the location of woody debris along the Site shoreline.
 - Log the vertical and horizontal distribution of wood debris at the Site to refine prospective remedial actions in this area, as necessary.
 - Perform selected physical, chemical, and/or biological analyses to assess disposal options (e.g., potential open-water disposal at the DMMP site in Port Gardner Bay) and to evaluate the effectiveness of possible cap designs, as appropriate.

The first phase of the investigation addressed Objectives 1 and 2 and informed the scope of follow-on Phase 2 investigations. The first phase included collection of 12 surface sediment

samples (0 to 10 cm) in areas that were either adjacent to potential upland source areas (BW-01, BW-02, BW-03, BW-04, BW-07, BW-09, BW-11, and BW-12) or located in representative offshore areas (BW-05, BW-06, BW-08, and BW-10). All of these samples were analyzed for wood waste indicators (TVS, and porewater ammonia and sulfide). The full SMS suite of chemicals including dioxins and furans were analyzed at locations potentially influenced by historical uplands operations (BW-01, BW-03, BW-07, BW-09, and BW-11). The results from the first phase of investigation were communicated to Ecology in a technical memorandum (Appendix D).

The second phase of investigation addressed Objectives 1, 3, and 4 and was conducted in December 2009. This investigation included collection of surface sediments from five locations with the highest TVS and/or petroleum concentrations (BW-01, BW-04, BW-05, BW-07, and BW-11). Detailed biological and petroleum/wood waste indicator testing was performed on each surface sediment sample. Sediment cores were also collected at these same locations and analyzed for wood waste indicators.

5.1 Sample Collection and Handling

This section provides an overview of the sample collection and handling procedures. The methods and procedures described herein were followed by Anchor QEA, SLR, and their subcontractors during the June and December 2009 data collection activities. Detailed descriptions are found in the Sediment SAP (Anchor QEA 2009a).

5.1.1 Surface Sediment Collection Procedures

Surface sediment samples were collected with a modified van Veen sampler using a vessel equipped with differential global positioning system (DGPS) and a depth sounder. All surface sediment samples from the 0 to 10 cm biologically active zone were collected in accordance with Puget Sound Estuary Program (PSEP) (1997) and the Ecology Sampling and Analysis Plan Appendix (Ecology 2008) protocols. Prior to deployment at each station, the van Veen sampler was decontaminated and, upon retrieval, samples were evaluated for compliance with PSEP acceptance criteria. If an acceptable sample was collected, sediment from the 0 to 10 cm interval was collected and homogenized in a stainless steel bowl prior to being placed into individual sample containers. All 12 surface sediment samples (0 to 10 cm)

from the Phase 1 investigation were collected on June 2, 2009, and all five Phase 2 surface sediment samples were collected on December 18, 2009 (Figure 2-3). Appendix E provides copies of the field log book and field forms. Table 5-1 presents the coordinates and mudline elevations for actual sampling locations.

5.1.2 Sediment Core Collection Procedures

Sediment cores were collected at each location using an impact coring device. Prior to deployment, a decontaminated aluminum barrel was attached to the coring device and the corer was deployed by winch and sent to the bottom, where the unit was energized and lowered until 10 feet of penetration was achieved or refusal was encountered. All five sediment cores were collected on December 17, 2009. Appendix F provides copies of the recovery-corrected core logs and the field log book, and field core collection forms are presented in Appendix G. Table 5-1 presents the coordinates and mudline elevations for actual sampling locations.

5.1.3 Sediment Core Processing Procedures

Aluminum core tubes were cut length-wise with an electric saw. Each core section was logged throughout the full penetration depth and a description the sediment was recorded. The cores were sectioned in representative intervals based on core lithology starting at the mudline, and up to four samples representing non-native material per core were collected. When present, one sample of the native material (Z-layer samples) was also collected. The upper two samples collected from each core were submitted to Analytical Resources, Inc. (ARI) in Tukwila, Washington, for testing. Appendix F provides copies of the core log forms, which describe sediment lithology.

5.1.4 Deviation from the Sampling and Analysis Plan

There were no deviations from the SAP and all sample handling and processing procedures described in the SAP were followed.

5.2 Chemical Testing Results

Chemical analysis requirements for sediment samples are summarized in the SAP (Anchor QEA 2009a), approved by Ecology. As described in the SAP, most chemical analyses were performed by ARI in Tukwila, Washington, with the exception of dioxin/furan analyses. Dioxin/furan analyses were performed by Analytical Perspectives in Wilmington, North Carolina. All samples were preserved in accordance with the analytical method and stored at a temperature of 4°C.

5.2.1 Summary of Data Quality/Validation Results

The following section details the assessment and validation of analytical data reported by ARI and Analytical Perspectives. Complete data packages are presented in Appendix H. Data validation was performed by Laboratory Data Consultants (LDC) and Appendix I contains the validation reports.

Chemical data were validated in accordance with the analytical methods and the following guidance:

- *EPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (EPA 1999)
- *EPA Analytical Operations/Data Quality Center National Functional Guidelines for Chlorinated Dioxin/Furan Data Review* (EPA 2002)
- *EPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 2004)
- Sediment SAP (Anchor QEA 2009a)

Full Contract Laboratory Program equivalent raw data deliverables were provided by ARI and Analytical Perspectives. All samples were analyzed within acceptable holding times. Level 3 validation was performed on the data, and all data were determined to be usable for Site characterization.

5.2.2 Surface Sediment Chemistry Results

The following text summarizes the results of the chemical testing of surface sediment samples.

5.2.2.1 *Comparison to Sediment Management Standards*

Tables 5-2 and 5-3 present results for the complete SMS target analyte list for surface sediment samples from stations BW-01, BW-03, BW-07, BW-09, and BW-11, as well as results from the June 2009 samples (BW-02, BW-04, BW-05, BW-06, BW-08, BW-10, and BW-12). Significantly, none of the results exceeded SMS chemical criteria. These five samples also contained relatively low dioxin/furan concentrations, with TEQ concentrations ranging from 4 to 9 parts per trillion (ppt), which is within the regional background concentration range reported by the DMMP in Port Gardner.

5.2.2.2 *Petroleum Hydrocarbon and Wood Waste Indicators*

Petroleum product indicators analyzed at the Site included extractable petroleum hydrocarbons (EPH), volatile petroleum hydrocarbons (VPH), diesel- and motor oil-range TPH, and total PAHs. The results for petroleum hydrocarbon indicators are presented in Table 5-2, and are summarized as follows:

- VPH were not detected.
- EPH concentrations in surface sediments ranged from 5.6 to 23.6 (mg/Kg) and were dominated by C21-C34 aliphatics and also contained C21-C34 aromatics.
- Diesel-range TPH concentrations in surface sediments ranged from non-detected up to 22 mg/Kg; the maximum concentration was below the MTCA soil screening level of 200 mg/Kg.
- Motor oil-range TPH concentrations in surface sediments ranged from 25 to 120 mg/Kg; again, the maximum concentration was below the MTCA soil screening level of 200 mg/Kg.
- Total PAH concentrations in surface sediments ranged from 17 to 73 mg/Kg; both individual and cumulative PAH concentrations were below SMS chemical criteria (organic carbon normalized basis).

Wood debris indicators include TVS, total organic carbon (TOC), porewater ammonia and sulfide, phenol, methylated phenols, benzyl alcohol, and benzoic acid. The results for woody debris indicators are presented in Table 5-2, and are summarized as follows:

- Surface sediment woody debris by volume (visual determination) ranged from 0 to 15 percent, below the reported DMMP/SMS screening criterion of 25 percent (Kendall and

Michelsen 1997).

- Surface sediment TVS concentrations ranged from 3 to 18 percent, with the highest concentrations detected at nearshore stations BW-07 (18 percent), BW-11 (16 percent), and BW-04 (14 percent).
- Surface sediment TOC concentrations were relatively low, ranging from 1.1 to 2.7 percent, within the Puget Sound regional background range (0.5 to 3 percent; Michelsen 1992).
- Porewater sulfide concentrations were all not detected (less than 0.05 milligrams per liter [mg/L]), and well below the reported the no effects threshold of 3.4 mg/L established by the DMMP for *Neanthes* testing (Kendall and Barton 2004).
- Porewater ammonia concentrations ranged from 0.8 to 3.4 mg/L, well below the 10 and 40 mg/L effects levels range reported in the DMMP User's Manual.
- Other chemical indicators (e.g., phenolics, benzyl alcohol, and benzoic acid) were generally not detected.

Based on these data, areas of potential concern for wood waste (as evidenced by elevated surface sediment TVS concentrations) are restricted to limited nearshore areas (i.e., stations BW-04, BW-07, and BW-11), consistent with historical upland uses. Surface sediments throughout the Site contain relatively low concentrations of TPH and other SMS chemicals.

5.2.3 Subsurface Sediment Chemistry Results

Subsurface sediment analyses were focused on wood debris indicators, which included analysis of TVS, TOC, and porewater ammonia and sulfide. The results for all parameters measured in cores as well as the wood debris indicators, are presented in Table 5-4 and 5-5, and are summarized as follows:

- Subsurface sediment woody debris by volume (visual determination) ranged from 0 to 95 percent, and subsurface intervals up to 9 feet below the mudline exceeded the DMMP/SMS screening criterion of 50 percent by volume (Kendall and Michelsen 1997).
- Subsurface sediment TVS concentrations were also elevated within these buried wood waste deposits and ranged from 8 to 39 percent, and subsurface intervals up to 4.4 feet below the mudline exceeded the DMMP/SMS screening criterion of 25 percent by dry weight (Kendall and Michelsen 1997). The highest concentrations were measured in

- subsurface sediment intervals that were more than 1.5 feet below the mudline.
- Subsurface sediment TOC ranged from 2.8 to 9.6 percent (there is no DMMP/SMS screening criterion of TOC in marine sediments).
 - Porewater sulfide was typically not detected (less than 0.05 mg/L) and in two subsurface sediment samples was detected at low concentrations (up to 0.5 mg/L), well below the reported no effects threshold of 3.4 mg/L established by the DMMP based on *Neanthes* testing (Kendall and Barton 2004).
 - Porewater ammonia concentrations ranged from 5 to 31 mg/L, and subsurface core intervals collected from stations BW-05, BW-07, and BW-11 contained concentrations above the 10 mg/L potential effects threshold reported in the DMMP User's Manual. However, porewater ammonia concentrations in surface sediments were well below this potential effects threshold.

The results for sample BW-07-SC-COMP-100726, which are presented in Table 5-5, represent a composite sample representative of the non-native sediment (i.e., characteristic of dredged sediments; see below) at location BW-07. Elevated dioxin concentrations (TEQ of approximately 62 ppt) were detected in this sample and all other chemicals were either not detected or were at levels well below SMS chemical criteria. This is not surprising given known historic sources of dioxins to Port Gardner, particularly from former pulp mill operations upstream of the Bay Wood Products Site. Surface sediment at BW-07 contained relatively low dioxin concentrations (TEQ of 9 ppt), within the DMMP's regional background concentration range in Port Gardner Bay. The vertical profile of declining TEQ concentrations from subsurface to surface sediments at BW-07 is consistent with the implementation of source controls (e.g., pulp mill closures) and natural recovery (e.g., sedimentation) processes that occur in Port Gardner Bay.

5.3 Biological Testing

Biological testing was performed on samples collected in December 2009 by NewFields Northwest following the standard suite of SMS bioassays as described in the SAP and SAP Addendum (Anchor QEA 2009a and b): the 2-day larval development test, the 10-day amphipod mortality test, and the 20-day juvenile polychaete growth test. Species were selected based on seasonality and grain size. All biological testing was performed in

accordance with *Recommended Protocols for Conducting Laboratory Bioassays on Puget Sound Sediments* (PSEP 1995), the Ecology Sampling and Analysis Plan Appendix (Ecology 2008), and the various updates presented during the annual sediment management review meetings (SMARM). All bioassay analyses were performed well within the 56-day holding time requirement. The bioassay results are summarized in Table 5-6 and are discussed in the sections below. Table 5-6 includes both the results from this study as well as results for samples collected in the Site area during Ecology's 2008 Port Gardner and Lower Snohomish Estuary study (SAIC 2009). NewFields Northwest's report for the 2009 testing is included as Appendix J.

Bioassay testing requires that test sediments be matched and conducted simultaneously with appropriate reference sediment in order to factor out sediment grain size effects on bioassay organisms. Due to the wide range of fines anticipated in these samples based on the June 2009 samples, two reference locations from Carr Inlet were sampled. One station was located in an area of relatively low fines (36 percent), while the second sample was collected from an area of relatively high fines (97 percent). There was also seasonal variability in grain size at the Site. For example, surface sediment at nearshore station BW-05 contained 86 percent fines in June 2009 and 40 percent fines in December 2009.

5.3.1 Biological Test Interpretation

Bioassay test interpretations under SMS consist of point-by-point comparisons of test sediments to the measurements observed in reference sediments, including statistical comparisons between the test and reference endpoints. As recommended by Ecology (MacLachlan 2010), bioassay test interpretation was performed as described in the SAP addendum (Anchor QEA 2009b) and the samples stations with high fines (BW-01, BW-04, BW-05, and BW-11) were compared to the high fine reference sediment (CR-Ref 95%). Similarly, sample stations with low fines (BW-07) were compared the low fine reference sediment (CR-Ref 22%). Following Ecology's recommendation, these comparisons are slightly different than those in NewFields Northwest's report (Appendix J) due to the seasonal variability in grain size as discussed above. Summary interpretations of the point-by-point SMS bioassay data for the amphipod, PSEP larval, and *Neanthes* bioassay tests are presented in Table 5-6.

5.3.2 Amphipod Survival Bioassay

As described in the SAP Addendum, amphipod bioassay testing was performed using *Ampelisca abdita* at stations with high fines (BW-01, BW-04, BW-05, and BW-11) and using *Eohaustorius estaurius* at stations with low fines (BW-07). All control and reference sediments met SMS amphipod performance requirements, and short-term adverse effects were evaluated by measuring survival of the amphipods. Amphipods were exposed to the test sediments and reference sediment for a 10-day period and at the end of the exposure period, surviving animals were counted. Daily emergence data and the number of amphipods failing to rebury at the end of the test were recorded as well. Amphipod test results are summarized in Table 5-7 and all of the five test sediment samples passed both SQS and CSL biological criteria in the amphipod tests.

5.3.3 Juvenile Polychaete Growth Bioassay

The juvenile polychaete sublethal bioassay was used to characterize the toxicity of marine sediments based on worm growth. Parameters measured after the 20-day sediment exposure included survival and growth in juvenile polychaetes (*Neanthes arenaceodenta*, Los Angeles Karyotype). Polychaete growth was evaluated using standard mean individual growth (MIG) calculated on a dry weight as well as ash free dry weight (AFDW) basis. The AFDW measurement provides a more accurate measurement of organic tissue weight by ashing the organisms in a muffle furnace at 550°C for 2 hours, allowing for measurement (and subtraction) of non-organic material present in the organisms intestines (e.g., sand), which can contribute to errors in the standard dry weight measurement. For this test, both controls failed performance criteria for MIG when using standard dry weights and both references passed performance criteria for MIG when the AFDW measurement of MIG was used. All other test performance criteria were met. Station BW-07 failed both SQS and CSL biological criteria whether it was compared to the standard dry weight measurement or to the AFDW value. All other stations passed criteria regardless of the MIG measurement applied; results are summarized in Table 5-8.

5.3.4 Larval Development Bioassay

The larval bioassay tests were performed using *Mytilus sp.* The high fines reference sample failed SMS performance criteria for survival slightly and due to the marginal nature of this

failure, Ecology approved use of this reference sample (MacLachlan 2010). To pass reference performance criteria, normalized survival must be within 65 percent of the control normal survival. The high fines reference for this test had 64.3 percent normalized survival, just below the acceptance criterion, but was used following Ecology's recommendation. All other control and reference sediments met larval performance requirements, and the PSEP tests were run until the appropriate stage of development was reached in the seawater control.

At the end of the tests, larvae from each test sediment exposure were examined to quantify abnormality and mortality. Larval bioassay interpretations under SMS are initially based on point-by-point interpretations of bioassay data collected at the Site. The point-by-point interpretations are based on comparisons of test results with matched reference samples meeting acceptance criteria that were collected during the same sampling event. The results of the point-by-point comparison are summarized in Table 5-9 and surface sediment samples collected from station BW-07 failed CSL biological criteria (note that this same sample also failed CSL biological criteria in the juvenile polychaete growth bioassay; see Section 5.3.3). Surface sediment samples from all other stations passed SQS biological criteria.

5.4 Sediment Cleanup Standards

Cleanup standards for sediments that are protective of benthic infauna were developed in accordance with MTCA and SMS requirements and direction provided by Ecology. Two SMS criteria are promulgated by Ecology (WAC 173-204-320). These include the SQS, the concentration below which effects to benthos are unlikely, and the CSL, the concentration above which more than minor adverse biological effects may be expected. The SQS and CSL values have been developed for a suite of hazardous substances. The SQS are the most stringent SMS criteria and are used in the FS as sediment cleanup standards for the SMS constituents detected in sediment at the Site. From Tables 5-2, 5-3, and 5-4, it can be seen that none of the data collected during this RI exceeded the SQS chemical criteria.

There is no promulgated SMS criterion or accepted sediment screening level for dioxins and furans, and cleanup levels for this group of compounds are currently under further evaluation by Ecology and other regulatory agencies. However, because dioxin/furan TEQ

concentrations in surface sediments at the Site in the same range as the regional sediment background concentration developed by the DMMP, no cleanup standard is needed for dioxins/furans.

There is also no promulgated SMS criterion for wood waste in sediment. However, bioassay data can be used as an appropriate basis to delineate potential sediment management areas at the Site. Bioassay responses are also co-located with the highest wood waste indicator measurement (TVS of 18.4 percent at BW-07).

5.5 Shoreline Survey Results and Cross Sections

Figure 5-1 depicts the locations of the shoreline visual assessment performed at the Site in June 2009 by SLR, along with the four geologic cross sections developed to combine this assessment with subsurface soil and sediment strata from the sediment core logs. This section first discusses the results of the shoreline survey and then discusses the geologic cross sections.

Figure 5-2 presents the results of the southern shoreline visual assessment. The purpose of the assessment was to generally delineate the extent of wood waste along the face of the Site shoreline. Where needed, surface material was removed using hand tools to observe the underlying conditions. In general, soil, rock, and woody material were observed in various thicknesses along the shoreline. As shown on Figure 5-2, west of the log pile wall, a mixture of woody debris, bark, and large wood pieces were observed. East of the log pile wall, wood debris, and bark were not found, but there were logs and other large pieces of wood.

Figures 5-3, 5-4, 5-5, and 5-6 present cross sections depicting the shoreline configuration and subsurface soil and sediment strata found in uplands and in-water borings. As shown on the cross sections, the extent of the wood waste in the shoreline/upland is limited to an approximately 50-foot-wide area that represents the limits of the 1995 wood removal project (permit conditions prohibited work with 50 feet of the shoreline). Post-construction drawings reveal that soils were excavated to an elevation of approximately 12 to 13 feet above MLLW on the western portion of the Site, which represents the elevation at which a clean material (i.e., sand) was encountered. These drawings also show that areas adjacent to

the shoreline (i.e., those within the 50-foot construction buffer) were only excavated to an elevation of approximately 16 to 18 feet above MLLW, suggesting that several feet of woody debris likely remains on site within the 50-foot construction buffer zone. On the eastern portion of the Site, post-construction elevations were generally between 13 and 14 feet above MLLW, but were more variable (i.e., depending on the depth of excavation necessary to remove all wood debris). The wood material along the shoreline appears to extend into the in-water portion of the Site, but is buried under recent sediment deposits of variable thickness.

6 CONCEPTUAL SITE MODEL

A CSM incorporates physical and chemical information to understand potential fate and transport mechanisms at the Site. The CSM considers contaminant sources, release mechanisms, transport and exposure pathways, and potential receptors.

6.1 Uplands Conceptual Site Model

As summarized in Section 4.5, the RI identified only localized areas of cPAH TEQ concentrations greater than the PCL (0.14 mg/Kg) at three former soil stockpile locations: 1) SP-EI-C (0.314 mg/Kg); 2) SP-M2-C (0.163 mg/Kg); and 3) EC-1A-S1 (0.376). The estimated extent of soil stockpiles with cPAHs exceeding the PCL is depicted on Figure 4-2.

The CSM developed for the Bay Wood Products Site uplands (Figure 6-1) describes the potential release mechanisms from the potential primary sources of hazardous substances to potential secondary and tertiary sources, the exposure media and routes, and the potential human receptors. This model reflects current conditions and possible future development in assessing exposure pathways. The future use of the Site is unknown; however, the Port will be evaluating the best and highest uses for the Site over the coming years consistent with its current zoning of Maritime Services. The CSM is based on available historical information and site-specific information gathered during sampling activities. A summary of the CSM including potential primary sources, release/transport mechanisms, primary exposure media, and routes of exposure, and potential receptors are presented below. These pathways were evaluated in the upland RI.

Ingestion and dermal contact with soil containing elevated cPAH concentrations are the major routes of potential exposure through which human receptors may potentially contact contaminated media associated with the Bay Wood Site.

Groundwater at the Site does not meet the definition of potable water as outlined in WAC173-340-720(2) based on the following factors: a) the groundwater does not serve as a current source of drinking water; and b) the groundwater is not a potential future source of drinking water given the Site's proximity to surface water that is not suitable as a domestic water supply.

6.2 Sediment Conceptual Site Model

For sediment sites, perhaps even more so than for other types of sites, the CSM can be an important element for evaluating risk reduction approaches. The sediment CSM is typically derived from existing Site data and knowledge gained from other sites, providing both a simple understanding of the Site based on available data and a valuable tool to evaluate the potential effectiveness of remedial alternatives. The sediment data summarized above support the following CSM summary:

- Historical sawmill and log transfer operations released sawdust, wood chips, and bark and were the primary source of wood waste in sediment; operations ceased in 1994 and the sources were removed and have been controlled for more than 15 years.
- Deposition of wood waste immediately adjacent to the Site has historically occurred along the shoreline areas, and the current extent of wood waste in upland areas is confined to a band approximately 50 feet wide along the shoreline.
- Offshore wood waste deposits extending up to 80 feet offshore are presently buried at least a few feet below mudline beneath clean sediment deposited since 1994 (e.g., see Figure 5-5).
- The bioassay test results revealed that surface sediments collected from one shoreline location (BW-07) are potentially toxic in laboratory exposures to SMS test organisms. The bioassay exceedance is correlated with elevated concentrations of wood waste indicator parameters, as summarized below:
 - Two different chronic toxicity bioassay tests have been performed on Site sediments: the juvenile polychaete growth bioassay and the larval development test. The polychaete growth test and the larval development test results both exceed CSL biological criteria at a single location in a nearshore region of the Site (station BW-07), which also contained the highest surface sediment TVS concentration (18.4 percent).

7 BASIS FOR CLEANUP ACTION

This section presents the basis for the Site cleanup action. There are two distinct elements that form the basis for the cleanup action: 1) the site-specific cleanup standards; and 2) the locations and media requiring cleanup action evaluation.

7.1 Cleanup Standards

Cleanup standards consist of: 1) cleanup levels that are protective of human health and the environment; and 2) the point of compliance at which the cleanup levels must be met. Site-specific cleanup standards were developed in the RI for soil, groundwater, and sediment. Detailed information regarding the derivation of these cleanup levels is presented in earlier sections of this RI/FS report. The PCLs for soil and groundwater are adopted in this FS for the purpose of developing cleanup action objectives for the Site, which are presented in Section 4.3.

Sediment cleanup standards based on SMS bioassays performed within wood waste areas were developed for this FS based on failures of SMS criteria for bioassay performance. The proposed media-specific cleanup levels and points of compliance are summarized in the sections below.

7.1.1 Cleanup Levels

Site-specific cleanup levels for soil that are protective of human health and terrestrial ecological receptors, and cleanup levels for groundwater that are protective of marine surface water, were developed in accordance with MTCA requirements. To be consistent with MTCA requirements, the RI developed soil cleanup levels based on unrestricted land use, including the more stringent MTCA Method B cleanup levels that assume ground floor residential land use [WAC 173 340 740(3)]. Under MTCA Method B, soil cleanup levels must be as stringent as:

- Concentrations established under applicable state and federal laws
- Concentrations protective of terrestrial ecological receptors
- Concentrations protective of direct human contact with soil
- Concentrations protective of groundwater

Each of these criteria was considered during the development of soil cleanup levels, as detailed in the RI report. The PCL for cPAHs is 0.14 mg/Kg.

Because Site groundwater is not a current or reasonably likely future source of drinking water, cleanup levels for Site soil need not be protective of groundwater as drinking water. Additionally, an empirical demonstration was used in the RI to show that existing chemical concentrations in Site soil are protective of groundwater as marine surface water.

Cleanup levels for sediments that are protective of benthic infauna were developed in accordance with MTCA and SMS requirements and direction provided by Ecology. Two SMS criteria are promulgated by Ecology (WAC 173-204-320). These include the SQS, the concentration below which effects to benthos are unlikely, and the CSL, the concentration above which more than minor adverse biological effects may be expected. The SQS and CSL values have been developed for a suite of hazardous substances. The SQS are the most stringent SMS criteria and are used in this FS as sediment cleanup levels for the SMS constituents detected in sediment at the Site.

7.1.2 Points of Compliance

Under MTCA, the point of compliance is the point or location on a site where the cleanup levels must be attained. The points of compliance for affected media will be approved by Ecology and presented in a forthcoming CAP for the Site. However, it is necessary to identify proposed points of compliance in order to develop and evaluate cleanup action alternatives in the FS. This section describes the proposed points of compliance for soil and sediment.

The standard point of compliance for the soil cleanup levels will be throughout the soil column from the ground surface to 15 feet bgs, in accordance with WAC 173-340-740(6)(d) and WAC 173-340-7490(4)(b). For potential terrestrial ecological exposures, MTCA regulations allow a conditional point of compliance to be established from the ground surface to 6 feet bgs (the biologically active zone according to MTCA default assumptions), provided that institutional controls are used to prevent excavation of deeper soil [WAC 173-340-7490(4)(a)]. Accordingly, in areas of the Site where potential ecological exposures are a

concern, and where appropriate institutional controls can be implemented, a conditional point of compliance for soil concentrations protective of terrestrial ecological receptors may be proposed throughout the soil column from the ground surface to 6 feet bgs.

For marine sediments potentially affected by deleterious wood waste, the point of compliance for protection of the environment is surface sediments within the biologically active surface water habitat zone, represented by samples collected across the top 10 cm below the mudline.

7.2 Locations and Media Requiring Cleanup Action Evaluation

This section identifies the locations and environmental media (soil, groundwater, and sediment) at the Site that require cleanup action evaluation.

7.2.1 Uplands Area

Based on the previous investigation results, the media of concern at the Site is the on-site soil stockpiles. As discussed in Section 4.3, cPAHs were identified in the on-site soil stockpiles at concentrations above PCLs. No other COPCs were identified in soil or groundwater at the Site.

7.2.2 Marine Area/Sediment

Because there is no promulgated SMS criterion for wood waste, sediment cleanup requirements at the Site were determined based on interpretations of a suite of confirmatory biological tests performed on surface sediment samples collected in wood waste areas at the Site with the potential for deleterious effects. Bioassay test interpretations under SMS consist of endpoint comparisons of test sediments to the measurements observed in reference sediments, including statistical comparisons between the test and reference endpoints. As discussed in the Section 5, the bioassay tests revealed that surface sediments collected from location BW-07 were potentially toxic in laboratory exposures to SMS test organisms.

8 FRAMEWORK FOR CLEANUP ACTION ALTERNATIVE DEVELOPMENT AND EVALUATION

This section presents cleanup action objectives, applicable regulatory requirements for the cleanup action, and a screening evaluation of general response actions and remediation technologies that are potentially applicable to the Site.

8.1 Cleanup Action Objectives

Cleanup action objectives consist of chemical- and medium-specific goals for protecting the environment. The cleanup action objectives specify the media and contaminants of interest, potential exposure routes and receptors, and proposed cleanup goals.

8.1.1 Uplands Area

Cleanup alternatives were screened to meet the threshold requirements of WAC-173-340-160, to comply with cleanup standards (WAC 173-340-700 through 173-340-760), and comply with applicable state and federal laws. Cleanup alternatives were screened to be protective of human health and the environment and to take into account current and proposed future land uses. The Port will be evaluating the best and highest uses for the Site over the coming years consistent with its current zoning of Maritime Services. When selecting from cleanup action alternatives that fulfill the threshold requirements, the selected action uses permanent solutions (as outlined in WAC 173-340-360[3]) to the maximum extent practicable, provides for a reasonable restoration timeframe (as outlined in WAC 173-340-360[4]), and considers public concerns (as outlined in WAC 173-340-600).

8.1.2 Marine Area/Sediment

The objective of the marine area/sediment cleanup action is to eliminate, reduce, or otherwise control to the extent feasible and practicable, unacceptable risks to the environment posed by deleterious wood waste in marine sediment in accordance with SMS. Specifically, the objective of the marine area cleanup is to mitigate risks associated with exposure of benthic organisms to deleterious wood waste in the biologically active zone of sediment (the upper 10 cm below the mudline).

8.2 Applicable Regulatory Requirements

In addition to the cleanup standards developed through the MTCA process, other regulatory requirements must be considered in the selection and implementation of a cleanup action. MTCA requires that cleanup standards be “at least as stringent as all applicable state and federal laws” [WAC 173-340-700(6)(a)]. Besides establishing minimum requirements for cleanup standards, applicable state and federal laws may also impose certain technical and procedural requirements for performing cleanup actions. These requirements are described in WAC 173-340-710. Applicable state and federal laws are discussed below.

While implementation plans are still under development, the cleanup action at the Site will likely be performed pursuant to MTCA under the terms of a Consent Decree between Ecology and one or more implementing parties. Accordingly, the anticipated cleanup action will likely meet the permit exemption provisions of MTCA, obviating the need to follow procedural requirements of the various local and state regulations that would otherwise apply to the action. Similarly, the anticipated cleanup action also qualifies for a Corps Nationwide Permit 38 (NWP 38). Nevertheless, federal consultation under the Endangered Species Act, Section 401 Water Quality Certification, and other substantive requirements must still be met by the cleanup action. Ecology will be responsible for issuing the final approval for the cleanup action, following consultation with other state and local regulators. The Corps will separately be responsible for issuing approval of the project under NWP 38, following Endangered Species Act consultation with the federal Natural Resource Trustees, and also incorporating Ecology’s 401 Water Quality Certification.

8.2.1 MTCA and SMS Requirements

The primary law that governs the cleanup of contaminated sites in the state of Washington is MTCA. The MTCA cleanup regulation (WAC 173-340) specifies criteria for the evaluation and conduct of a cleanup action, including criteria for developing cleanup standards for soil. When contaminated sediments are involved, the cleanup levels and other procedures are also regulated by the SMS (WAC 173-204). The SMS were developed to establish cleanup standards for marine and other environments for the purpose of reducing and/or eliminating adverse effects on biological resources and significant health threats to humans from surface sediment contamination. The SMS cleanup standards govern the cleanup of contaminated

sediment sites. Both MTCA and SMS regulations require that cleanup actions must protect human health and the environment, meet environmental standards in other applicable laws, and provide for monitoring to confirm compliance with cleanup levels.

MTCA places certain requirements on cleanup actions involving containment of hazardous substances that must be met for the cleanup action to be considered in compliance with soil cleanup standards. These requirements include implementing a compliance monitoring program that is designed to ensure the long-term integrity of the containment system and applying institutional controls where appropriate to the affected area (WAC 173-340-440). The key MTCA decision-making document for cleanup actions is the RI/FS. In the RI/FS, the nature and extent of contamination and the associated risks at a site are evaluated, and potential alternatives for conducting a site cleanup action are identified. The cleanup action alternatives are then evaluated against MTCA remedy selection criteria, and one or more preferred alternatives are selected. After reviewing the RI/FS, and after consideration of public comment, Ecology then selects a cleanup action for the site and documents the selection in a CAP. Following public review of the CAP, the site cleanup process typically moves forward into design, permitting, construction, and long-term monitoring.

This RI/FS report was prepared consistent with the requirements of MTCA and the SMS.

8.2.2 Solid and Hazardous Waste Management

The Washington Hazardous Waste Management Act (RCW 70.105) and the implementing regulations, the Dangerous Waste Regulations (Chapter 173-303 WAC), would apply if dangerous wastes are generated during the cleanup action. There is no indication of dangerous wastes being generated or disposed of at the Site. Related regulations include state and federal requirements for solid waste handling and disposal facilities (40 CFR 241, 257; Chapter 173-350 and -351 WAC) and land disposal restrictions (40 CFR 268; WAC 173-303-340).

8.2.3 Puget Sound Dredged Material Management Program

In Puget Sound, the open water disposal of sediments is managed under the DMMP. This program is administered jointly by the Corps, EPA, Washington Department of Natural

Resources (WDNR), and Ecology. The DMMP developed the PSDDA protocols, which include testing requirements to characterize whether dredged sediments are appropriate for open-water disposal. The results of this characterization are formalized in a written suitability determination from the Dredged Material Management Office (DMMO). The DMMP has also designated disposal sites throughout Puget Sound. While DMMP characterization has not been performed on Site sediments, similar wood waste materials have been determined to be suitable for open-water disposal at PSDDA facilities (e.g., DMMP 2009). However, if this option is selected, dredged material characterization would be required to complete the suitability determination. Use of PSDDA facilities would need to comply with other DMMP requirements including material approval, disposal requirements, and payment of disposal site fees.

8.2.4 State Environmental Policy Act

The State Environmental Policy Act (SEPA; RCW 43.21C; WAC 197-11) and the SEPA procedures (WAC 173-802) are intended to ensure that state and local government officials consider environmental values when making decisions. The SEPA process begins when an application for a permit is submitted to an agency, or an agency proposes to take some official action such as implementing a MTCA CAP. Prior to taking any action on a proposal, agencies must follow specific procedures to ensure that appropriate consideration has been given to the environment. The severity of potential environmental impacts associated with a project determines whether an Environmental Impact Statement (EIS) is required. A SEPA checklist would be required prior to initiating remedial construction activities. Because the Site cleanup action will be performed under a Consent Decree, SEPA and MTCA requirements will be coordinated, where possible.

8.2.5 Shoreline Management Act

The Shoreline Management Act (RCW 90.58) and its implementing regulations establish requirements for substantial developments occurring within water areas of the state or within 200 feet of the shoreline. Local shoreline management master programs are adopted under state regulations, creating an enforceable state law. Because the Site cleanup action will likely be performed under a Consent Decree, compliance with substantive requirements would be necessary, but a shoreline permit would not likely be required.

8.2.6 Washington Hydraulics Code

The Washington Hydraulics Code (WAC 220-110) establishes regulations for the construction of any hydraulic project or the performance of any work that will use, divert, obstruct, or change the natural flow or bed of any of the salt or fresh water of the state. The code also creates a program requiring Hydraulic Project Approval (HPA) permits for any activities that could adversely affect fisheries and water resources. Timing restrictions and technical requirements under the hydraulics code are applicable to dredging, construction of sediment caps, and placement of post-dredge residual covers if necessary. For the reasons stated above, the procedural requirements of an HPA permit would not likely be required, though the substantive requirements of an HPA must still be met by the cleanup action.

The FS has been prepared using costs and durations that recognize potential fish closure periods, during which time dredging and any in-water work will not be permitted. Exact in-water closure periods will be determined through agency consultation.

8.2.7 Water Management

8.2.7.1 Clean Water Act

The Clean Water Act (CWA) is the primary federal law for protecting water quality from pollution. The CWA regulations provide requirements for the discharge of dredged or fill material to waters of the United States and are applicable to any in-water work. The CWA regulations also prescribe permitting requirements for point source and non-point source discharges. Acute marine criteria are relevant and appropriate requirements for discharges to marine surface water during sediment dredging, as well as for return flows (if necessary) to surface waters from dewatering operations.

Section 404 of the CWA requires permits from the Corps for discharges of dredged or fill material into waters of the United States, including wetlands. Section 404 permits depend on suitability determinations (described previously) according to DMMP guidelines.

Section 404(b)(1) requires an alternatives analysis as part of the permitting process.

Requirements for all known, available, and reasonable technologies for treating waste water prior to discharge to state waters are applicable to any dewatering of marine sediment prior to upland disposal. Section 401 of the CWA requires the state to certify that federal permits

are consistent with water quality standards. The substantive requirements of a certification determination are applicable.

Ecology has promulgated state-wide water quality standards under the Washington Water Pollution Control Act (RCW 90.48). Under these standards, all surface waters of the state are divided into classes (Extraordinary, Excellent, Good, and Fair) based on the aquatic life uses of the waterbodies. Water quality criteria are defined for different types of pollutants and the characteristic uses for each class of surface water. The standards for marine waters will be applicable to discharges to surface water during sediment dredging and return flows (if necessary) to surface waters from dewatering operations.

The SMS acknowledges the Washington Water Pollution Control Act as the primary authorizing legislation for establishing sediment source control standards.

8.2.7.2 Construction Stormwater General Permit

Construction activities that disturb 1 acre or more of land need to comply with the provisions of construction stormwater regulations. Although the proposed dredge area is less than 1 acre in size, the on-site upland management of dredged material would likely trigger this permit requirement. Operators of regulated construction sites are required to:

- Develop stormwater pollution prevention plans
- Implement sediment, erosion, and pollution prevention control measures
- Obtain coverage under this Construction Stormwater General Permit

The permit also requires that Site inspections be conducted by a Certified Erosion and Sediment Control Lead (CESCL). This is typically an individual that works for the contractor performing the work.

8.2.8 Other Potentially Applicable Regulatory Requirements

The following is a list of other potentially applicable regulations for the cleanup action:

- **Archeological and Historical Preservation.** The Archeological and Historical Preservation Act (16 USCA 496a-1) would be applicable if any subject materials are discovered during Site grading and excavation activities.

- **Health and Safety.** Site cleanup-related construction activities would need to be performed in accordance with the requirements of the Washington Industrial Safety and Health Act (RCW 49.17) and the federal Occupational Safety and Health Act (29 CFR 1910, 1926). These applicable regulations include requirements that workers are to be protected from exposure to contaminants and that excavations are to be properly shored.

These requirements are not specifically addressed in the detailed analysis of cleanup action alternatives because they could be met by each of the alternatives.

8.3 Screening of General Response Actions and Remediation

This section presents a screening evaluation of potentially applicable general response actions and remediation technologies for the cleanup action. The screening evaluation is carried out for each of the environmental media (soil and sediment) requiring cleanup action evaluation. Based on the screening evaluation, selected response actions and technologies are carried forward for use in the development of cleanup action alternatives.

8.3.1 Soil Response Actions

8.3.1.1 Institutional Controls

Institutional controls (e.g., deed restrictions excluding future use of the Site for residential or day care uses) can be highly effective, implementable, and cost-effective provided that the cleanup action for which the institutional controls are implemented is consistent with future Site use. In cases where the proposed cleanup action is incompatible with land use, conflicts can result that jeopardize the effectiveness of institutional controls or that require mitigation.

8.3.1.2 Engineered Containment

Engineered containment for involves covering soils exceeding cleanup standards with a suitable cap to isolate these materials and seeding the area to provide erosion protection. Institutional controls, a deed restriction, and a soil management plan would be used to notify Site owners and future Site occupants of the presence of the impacted soil.

8.3.1.3 *Removal*

For the removal alternative, soil containing cPAHs above the cleanup standards would be removed and taken to an off-site location for disposal. Under this alternative, construction erosion control measures would be placed at the Site, soil with cPAHs above the cleanup standards would be removed, and the areas of excavation would be hydroseeded to provide protection against erosion. The affected soil would be the excavated, which would eliminate potential future exposure to this material.

8.3.2 *Sediments Response Actions*

8.3.2.1 *Institutional Controls*

For any aquatic construction project (e.g., dredging), environmental reviews are conducted by permitting agencies including the Corps, Ecology, and other resource agencies. These reviews include a review of area files relating to sediment conditions and requirements to address materials management and water quality.

Additional institutional controls may be implemented as appropriate, depending on the preferred cleanup action alternative. Such additional controls could include restrictive covenants for platted tidelands, use authorizations for state-owned aquatic lands, and/or documenting the Site cleanup action in Corps and regulatory agency permit records and records maintained by the State of Washington for state-owned aquatic lands.

Institutional controls can be highly effective, implementable, and cost-effective provided that the cleanup action for which the institutional controls are implemented is consistent with marine land and navigation uses. In cases where the proposed cleanup action is incompatible with land use and navigation uses, conflicts can result that jeopardize the effectiveness of institutional controls or that require mitigation.

8.3.2.2 *Monitored Natural Recovery*

Natural processes that are fundamental to the recovery of wood waste-impacted sediments following source control include sedimentation and biodegradation. The monitored natural recovery (MNR) remedy relies on these processes to reduce risks to acceptable levels

following source control, while monitoring recovery over time to verify remedy success (Magar et al. 2009).

MNR lines of evidence can be developed from rigorous analyses of Site data (e.g., laboratory and field studies, modeling, and other activities) that define the role of natural processes in reducing risk. Key factors for determining whether MNR is an appropriate remedy include the ability to achieve and sustain an acceptable level of risk reduction through natural processes within an acceptable period of time. Predicting future natural recovery rates requires site-specific inputs to numerical models, such as the net sedimentation rate to quantify natural recovery processes. Numerical models can be used to develop estimates of time to recovery using baseline data to determine likely effectiveness of MNR implementation.

Natural recovery processes operate regardless of the selected remedy. Effective sediment remedies may incorporate MNR in combination with approaches such as capping or dredging. Factors particularly favorable to MNR include evidence that natural recovery will effectively reduce risks within an acceptable time period, the ability to manage risks during the recovery period, and (where physical isolation is important) a low potential for exposure of buried contaminants.

8.3.2.3 *Enhanced Natural Recovery*

Enhanced natural recovery (ENR) is a commonly used technology to manage sediments that require action. ENR entails placement of a thin cover of clean sediment to accelerate the natural rate of recovery of the sediments. As discussed above, deposition of clean sediment plays a role in the natural recovery of wood waste-impacted sediments. Recovery can often be enhanced by actively providing a layer of clean sediment to the target area. This is often referred to as “enhanced” natural recovery or thin-layer cover and typically consists of placing a nominal 6-inch-thick layer of clean sediment over existing contaminated sediments.

8.3.2.4 *Engineered Containment*

Engineered containment for sediments involves placing a suitable cap to isolate material. In the aquatic environment, the containment typically must be designed to withstand erosive forces generated by wave action and propeller wash, and must be thick enough to provide the required isolation of the material contained by the cap. Monitoring results at other sites in the Puget Sound region have shown that containment can provide effective sediment remediation, without the risks involved in removing contaminants by dredging (Sumeri 1996).

Placing a thicker layer of cap material (typically 1 to 3 feet thick) can provide isolation of potentially contaminated sediments. However, thick sediment caps in shallow nearshore areas could eliminate significant areas of aquatic habitat, requiring compensatory mitigation or combination with dredging (dredge and cap remedies). Armored caps (e.g., with a gravel surface) may potentially be appropriate for consideration in sediment areas with high potential for disturbance (e.g., from propeller wash).

If selected as part of the Site remedy, a sediment cap would be designed to effectively contain and isolate contaminated sediments from the biologically active surface zone in accordance with EPA and Corps cap design criteria (see below). The cap would be designed to be thick enough and of sufficient grain size to maintain its integrity under reasonable worst case conditions. Engineered caps at the Site would also be designed to ensure that wood waste is effectively confined below the cap and that post-cap surface sediment porewater sulfide and ammonia concentrations continue to be maintained at protective concentrations. Cap designs to ensure that porewater sulfide and ammonia exposure is maintained below these performance standards would be developed considering groundwater upwelling and tidally induced transient porewater flow reversal processes. The upwelling velocity is a critical parameter in cap design, as it often controls contaminant flux into surface sediments. Tidal reversals can promote sulfide production in wood waste deposits by supplying sulfate-rich seawater to wood chips confined below the cap, and are most pronounced in the near-surface permeable soils in shallow aquifers.

A sediment cap would likely be constructed of clean sand and gravel and could be placed by a number of mechanical and hydraulic methods. Capping has been used frequently in

sediment remediation projects conducted in the northwest. Sediment capping is a proven technology to prevent exposure to contaminated sediments and could be easily implemented at the Site. Sediment caps can be relatively inexpensive remediation technologies. Therefore, engineered containment has been retained as a remedial alternative.

Table 8-1 provides a general summary of protective cap designs in Puget Sound that have been developed and approved under both EPA and Ecology cleanup programs. Cap designs must meet stringent criteria set forth in the EPA and the Corps design guidance, including:

- *Contaminated Sediment Remediation Guidance for Hazardous Waste Sites* (EPA 2005)
- *Guidance for Subaqueous Dredged Material Capping* (Palermo et al. 1998a)
- *Assessment and Remediation of Contaminated Sediments (ARCS) Program Guidance for In Situ Subaqueous Capping of Contaminated Sediments* (Palermo et al. 1998b)

These guidance documents provide detailed procedures for cap design, cap placement operations, and monitoring of engineered caps, and have been relied upon extensively for successful cap designs at other SMS cleanup sites. Caps designed according to the EPA and Corps guidance have been demonstrated to be protective of human health and the environment (EPA 2005). The thickness and other design specifications for in situ engineered caps at the Site would be determined during remedial design based on detailed analyses of the following components:

- Bioturbation/habitat quality
- Erosion (e.g., propeller wash, tidal currents, waves, wakes, and slope stability)
- Chemical isolation
- Consolidation
- Operational considerations (e.g., gas generation and placement inaccuracies)

Consistent with the EPA and Corps cap design guidance, the total cap thickness that satisfies all design components would be determined based on the sum of the individual component thicknesses listed above. However, for the purposes of this FS, a conceptual-level cap design was developed based on a review of engineered caps designed, approved, and successfully constructed and monitored in other areas of Puget Sound. Based on this initial review, the

conceptual cap design is 3 feet thick, assuming a 2-foot-thick base layer of sand covered by a 1-foot-thick surface layer of erosion protection aggregate (gravel) and habitat substrate.

Potential sources of sand include the commercial quarries, and/or beneficial use dredge projects in the region. Larger aggregates used for erosion protection or habitat substrate would likely be sourced from a commercial quarry. For costing purposes, the 3-foot thickness is considered to be the maximum placed thicknesses (i.e., including overplacement allowances).

8.3.2.5 *Removal*

Removal of sediments from the aquatic environment is a common approach to addressing materials that require remedial action. Removal could be performed from the water, using a barge-mounted excavation operation, from the land using long-reach excavators, or using a combination of approaches depending on the contractor's means and methods. Removal was retained as a response action for more detailed evaluation in this FS.

A number of site-specific operational conditions influence the effect of environmental dredging of contaminated sediment on aquatic systems. Experience with similar sites shows that resuspension of contaminated sediment and release of contaminants occur during dredging and that contaminated sediment residuals will remain following operations, which can affect the magnitude, distribution, and bioavailability of the contaminants and the exposure and risk to receptors of concern. Dredging residuals have been shown to be particularly problematic at sites with considerable debris (Patmont and Palermo 2007). Even after decades of sediment remediation project experience, there are still substantial uncertainties in our understanding of the cause-effect relationships relating dredging processes to risk reduction (EPA 2005; Bridges et al. 2008).

The extent of marine area removal at the Site is potentially limited by adjacent upland stability considerations. For full removal of target sediments, the depth of excavation could cause significant undermining of the uplands. Such undermining can be minimized through the use of shoring; however, complete removal of buried deep deposits may still not be possible even with shoring unless substantial upland excavation is performed. Because of

slope stability concerns, where deeply buried deposits remain in shoreline embankment areas, a combination of dredging on the angle of repose and a cap engineered to retain slope stability may be required.

8.3.2.5.1 Disposal and/or Reuse Options

There are several options for disposal of marine sediments. For those sediments that are determined by the DMMP to be suitable for open-water disposal, such sediments may be transported by bottom-dump barge for disposal at an unconfined open-water disposal site. While DMMP characterization of sediments from the Site has not been performed, wood waste from other similar sites has been determined suitable for open-water disposal at the non-dispersive DMMP site in Port Gardner near Everett. If a decision is made to consider open-water disposal, a DMMP suitability sampling program would be performed during design.

As shown in Table 5-5, elevated dioxin concentrations (TEQ of approximately 61 ppt) were detected in a composite sample of BW-7 subsurface sediments. If sediments that may be dredged from this area are to be considered for re-use on the upland site (e.g., as mulch or topsoil), additional soil sampling on stockpiles of dredge materials would be necessary to characterize the excavated material and inform decisions about the final disposition of the material. Where stockpile concentrations are below relevant MTCA soil cleanup standards (including possible institutional controls such as deed restrictions precluding future residential or day care uses of the property), at least some portion of the dredged sediment can likely be beneficially reused on the upland, provided that the thickness of the sediment fill and geotechnical properties are compatible with future land uses. For smaller dredge volumes, it is possible the entire excavated volume could be managed on site depending on the results of stockpile testing. This FS considers placement of up to 6 inches of dredge fill material on the upland site as a “manageable” thickness that would likely be compatible with anticipated future land use.

The upland area has approximately 8 acres of open space that could accommodate dredged material. A 6-inch thickness of fill over 8 acres would accommodate approximately 6,450 cy

of material. Any material in excess of 6,450 cy and all debris and other material that exceeds relevant MTCA soil cleanup standards would need to be managed off Site.

Sediments dredged from the marine environment are expected to have elevated salinity levels that initially would not support typical upland vegetation. However, exposure to rain is expected to rinse the saline porewater from the sediment over time. Considering typical unit weight (1 ton/cy) and specific gravity (1.65) of woody sediments, the expected void ratio of the 6-inch layer of the dredged material is approximately 70 percent. Thus, an estimated 4 to 5 inches of rain would be required to completely replace one pore volume of water in the topsoil layer. Historical weather data from Everett shown in Table 8-2 indicates that this could occur over a period of a few months (WRCC 2010). Considering the uncertainties in actual void ratio, rainfall, project timing, and flow pathways through the surface fill, it is conservatively expected that after approximately 6 months of exposure to the weather, the dredged material would effectively be rinsed of salt.

Successful sparging of salinity from wood debris was demonstrated as part of the 2007 interim action at the Port Gamble site, where wood debris sediments were dredged from Port Gamble Bay and placed within a nearshore upland stockpile containment structure (4-foot-thick sparging basin). Freshwater was applied through a simple sprinkler system, which successfully reduced porewater salinity within the sparging basin to below secondary drinking water standards (less than 0.5 parts per thousand) within a period of approximately four months (Anchor QEA and EPI 2010). Leachate from the sparging basin did not exceed discharge criteria, and was passively returned to Port Gamble Bay. Much of the sparged Port Gamble material was successfully reused as an upland soil amendment for a proposed future local soccer field.

For debris and sediments that are to be managed off site, upland disposal at a permitted municipal or private landfill (e.g., construction debris landfill or Subtitle D landfill, depending on the results of stockpile sampling) may be necessary. After dredging, sediments would be passively dewatered as necessary to render them suitable for transport from the Site using trucks.

8.3.2.6 *Ex Situ Treatment*

As discussed above, ex situ treatment of wood waste using natural or active sparging technologies has been demonstrated as a method to remove salt from the material to facilitate beneficial reuse of these materials. However, in order to be cost-effective, ex situ treatment by sparging requires a significant upland space available adjacent to the project site for up to 1 year while sparging is performed. While other remedial technologies such as thermal desorption, incineration, stabilization, and soil washing could potentially be applied to the Site, such technologies are substantially more expensive than off-site landfill disposal, and many of these technologies have limited effectiveness for sediments with a high organic content (e.g., wood waste). Thus, no other ex situ treatment technologies besides passive sparging to facilitate beneficial reuse of wood waste materials were retained for further evaluation.

8.3.2.7 *In Situ Treatment*

ElectroChemical Remediation Technology is an innovative technology for destroying organic contaminants in situ by applying an alternating current across electrodes placed in the subsurface. In theory, the applied voltage creates redox reactions that destroy contaminants and organic materials such as wood debris through oxidation-reduction mechanisms. The primary advantage of this technology is that it has the potential to treat sediment in situ. The disadvantages are that it has produced mixed results at the field level, and studies indicate that treatment is less effective in sediments with high wood organic content such as those common at the Site. Because field trials have not documented successful application of this technology to high organic content sediments, in situ treatment of marine sediments was screened from further evaluation in this FS.

9 MTCA EVALUATION CRITERIA

This section presents a description of the threshold requirements for cleanup actions under MTCA and the additional criteria used to evaluate the cleanup action alternatives.

9.1 MTCA Threshold Requirements

Cleanup actions performed under MTCA must comply with several basic requirements. Cleanup actions alternatives that do not comply with these criteria are not considered suitable cleanup actions under MTCA. The four threshold requirements for cleanup actions are:

- Protection of human health and the environment
- Compliance with cleanup standards
- Compliance with applicable state and federal laws
- Provision for compliance monitoring.

9.1.1 Protection of Human Health and the Environment

Cleanup actions performed under MTCA must ensure that both human health and the environment are protected as a result of the action.

9.1.2 Compliance with Cleanup Standards

Compliance with cleanup standards requires, in part, that cleanup levels are met at the applicable points of compliance. Where a cleanup action involves containment of soils and sediments with hazardous substance concentrations exceeding cleanup levels at the point of compliance, the cleanup action may be determined to comply with cleanup standards, provided the requirements specified in WAC 173-340-740(6)(f) are met, specifically:

- The remedy is permanent to the maximum extent practicable
- The remedy is protective of human health
- The remedy is protective of terrestrial ecological receptors
- Institutional controls are implemented
- Compliance monitoring is provided (this is also a threshold requirement) with periodic reviews
- The type and amount of hazardous substance remaining on site, and measures to prevent

migration of and contact with these substances are specified.

9.1.3 Compliance with Applicable State and Federal Laws

Cleanup actions conducted under MTCA must comply with applicable state and federal laws. The term "applicable state and federal laws" includes legally applicable requirements and those requirements that Ecology determines to be relevant and appropriate as described in WAC 173-340-710.

9.1.4 Provision of Compliance Monitoring

The cleanup action must allow for compliance monitoring in accordance with WAC 173-340-410. Compliance monitoring consists of protection monitoring, performance monitoring, and confirmational monitoring. Protection monitoring is conducted to confirm that human health and the environment are adequately protected during construction and the operation and maintenance period of a cleanup action. Performance monitoring is conducted to confirm that the cleanup action has attained cleanup standards and, if appropriate, remediation levels or other performance standards. Confirmational monitoring is conducted to confirm the long-term effectiveness of the cleanup action once cleanup standards and, if appropriate, remediation levels or other performance standards have been attained.

9.2 Additional MTCA Requirements

9.2.1 Provide for Permanent Solutions to the Maximum Extent Practicable

MTCA requires that when selecting from cleanup action alternatives that fulfill the threshold requirements, the selected action shall use permanent solutions to the maximum extent practicable (WAC 173-340-360[2][b][i]).

MTCA specifies that the permanence of these qualifying alternatives shall be evaluated by balancing the costs and benefits of each of the alternatives using a disproportionate cost analysis (DCA) in accordance with WAC 173-340-360(3)(e). The criteria for conducting this analysis are described in Section 9.4 below.

9.2.2 Provide a Reasonable Restoration Timeframe

In accordance with WAC 173-340-360(2)(b)(ii), MTCA places a preference on those cleanup action alternatives that, while equivalent in other respects, can be implemented in a shorter period of time. MTCA includes a summary of factors to be considered in evaluating whether a cleanup action provides for a reasonable restoration timeframe [WAC 173-340-360(4)(b)].

9.2.3 Provide for Consideration of Public Concerns

Ecology will consider public comments submitted during the RI/FS process in making its preliminary selection of an appropriate cleanup action alternative. This preliminary selection is subject to further public review and comment when the proposed remedy is published by Ecology in a draft CAP. While public concerns are addressed by Ecology through the review process, they are also expressly considered as an element of the DCA evaluation for each alternative.

9.3 Additional SMS Evaluation Criteria

Remedy selection criteria under SMS regulations are generally the same as those required under MTCA. The SMS evaluation criteria are specified in WAC 173-204-560(4)(f) through (k). While most of the requirements have a direct correlation to MTCA criteria, two additional SMS criteria are not specifically addressed by MTCA:

- The degree to which recycling, reuse, and waste minimization are employed
- Analysis of environmental impacts consistent with SEPA requirements.

These criteria will be addressed during development of the CAP.

9.4 MTCA Disproportionate Cost Analysis

The MTCA DCA described in WAC 173-340-360(3)(e) is used to evaluate which of the alternatives that meet the threshold requirements are protective to the maximum extent practicable. This analysis involves comparing the costs and benefits of alternatives and selecting the alternative whose incremental costs are not disproportionate to the incremental benefits. The evaluation criteria for the DCA are specified in WAC 173-340-360(3)(f), and

include protectiveness, permanence, cost, long-term effectiveness, management of short-term risks, implementability, and consideration of public concerns.

In order to favor the benefits of criteria associated with the primary goals of the remedial action, a weighting system was used in this FS. The criteria associated with environmentally based benefits are more highly weighted than other criteria that are associated with non-environmental factors, consistent with Ecology direction. Each of the MTCA criteria used in the DCA and the weighting factors ascribed to the criteria are described below.

9.4.1 Protectiveness

The overall protectiveness of a cleanup action alternative is evaluated based on several factors. Primary considerations include the extent to which human health and the environment are protected and the degree to which overall risk at a site is reduced. Both on-site and off-site reductions in risk are considered. Protectiveness also gauges the degree to which the cleanup action may perform above the level of the specific standards presented in MTCA. Finally, it is a measure of the improvement of the overall environmental quality at the site. For this FS, a weighting factor of 30 percent was applied toward the overall benefit analysis. This means that, despite being only one of six factors (17 percent) for which a numeric value was assigned, the numeric factor assigned to protectiveness for each alternative was up-weighted to represent 30 percent of the numeric benefit analysis. This high weighting is warranted due to the overall importance of protection of human health and the environment as a primary goal of cleanup at the Site.

9.4.2 Permanence

MTCA specifies that when selecting a cleanup action alternative, preference shall be given to actions that are “permanent solutions to the maximum extent practicable.” Evaluation criteria include the degree to which the alternative permanently reduces the toxicity, mobility, or mass of hazardous substances, including the effectiveness of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment processes, and the characteristics and quantity of treatment residuals generated. A weighing factor of 20 percent was assigned to the numeric values associated with this evaluation criterion. This

criterion has the second highest weighting factor, due to the importance of the need or lack of need for further action in the future.

9.4.3 Cost

The analysis of cleanup action alternative costs under MTCA includes all costs associated with implementing an alternative, including design, construction, long-term monitoring, and institutional controls. Costs are intended to be comparable among different alternatives to assist in the overall analysis of relative costs and benefits of the alternatives. The costs to implement an alternative include the cost of construction, the net present value of any long-term costs, and agency oversight costs. Long-term costs include operation and maintenance costs, monitoring costs, equipment replacement costs, and the cost of maintaining institutional controls. Cost estimates for removal and disposal technologies include processing, analytical, labor, and waste management costs. The design life of the cleanup action is estimated, and the costs of replacement or repair of major elements are included in the cost estimate. Costs were compared against benefits to assess cost-effectiveness and practicability of the cleanup action alternatives. No weighting factor was applied to this quantitative category.

9.4.4 Long-Term Effectiveness

Long-term effectiveness is a parameter that expresses the degree of certainty that the alternative will be successful in maintaining compliance with cleanup standards over the long-term performance of the cleanup action. The MTCA regulations contain a specific preference ranking for different types of technologies that is to be considered as part of the comparative analysis. The ranking places the highest preference on technologies such as reuse/recycling, treatment, immobilization/solidification, and disposal in an engineered, lined, and monitored facility.

Lower preference rankings are applied for technologies such as on-site isolation/containment with attendant engineered controls, and institutional controls and monitoring. The regulations recognize that, in most cases, the cleanup alternatives will combine multiple technologies to accomplish the cleanup action objectives. The MTCA preference ranking must be considered along with other site-specific factors in the evaluation of long-term

effectiveness. A weighting factor of 20 percent was assigned to the long-term effectiveness based on the importance of achieving final environmental cleanup without the need for future actions to ensure protection of human health and the environment.

9.4.5 Management of Short-Term Risks

Evaluation of this criterion considers the relative magnitude and complexity of actions required to maintain protection of human health and the environment during implementation of the cleanup action. Cleanup actions carry short-term risks, such as potential mobilization of contaminants during construction, or safety risks typical of large construction projects. In-water dredging activities carry a risk of temporary water quality degradation and potential sediment recontamination. Some short-term risks can be managed to some degree through the use of best practices during project design and construction, while other risks are inherent to project alternatives and can offset the long-term benefits of an alternative. The weighting factor of short-term risk management for this FS evaluation was 10 percent. The lower rating was based on the limited timeframe associated with the risks and the general ability to correct short-term issues during construction without significant effects on human health and the environment.

9.4.6 Implementability

Implementability is an overall metric expressing the relative difficulty and uncertainty of implementing the cleanup action. Evaluation of implementability includes consideration of technical factors such as the availability of mature technologies and experienced contractors to accomplish the cleanup work. It also includes administrative factors associated with permitting and completing the cleanup. The weighting factor for implementability was 10 percent. Implementability is less associated with the primary goal of the cleanup action—protection of human health and the environment—and therefore has a lower weighting factor. In addition, the issues associated with the implementability are reflected in the remedy costs.

9.4.7 Consideration of Public Concerns

The public involvement process under MTCA is used to identify potential public concerns regarding cleanup action alternatives. The extent to which an alternative addresses those

concerns is considered as part of the evaluation process. This includes concerns raised by individuals, community groups, local governments, tribes, federal and state agencies, and other organizations with an interest in the site. The weighting factor used for this criterion was 10 percent. Similar to the applied factor for implementability, the low weighting of public concerns prevents duplication of issues that are addressed with other criteria. Historically, public concerns for most sites are typically related to environmental concerns and performance of the cleanup action, which are addressed under other criteria such as protectiveness and permanence.

10 DEVELOPMENT AND EVALUATION OF UPLANDS CLEANUP ACTION ALTERNATIVES

In this section, the technologies and process options for cleanup technologies retained through the screening evaluation described in Section 8 are used to develop alternatives to address the cleanup action objectives for impacted soil areas at the Site. This section also provides a comparative analysis of the cleanup action alternatives. Each alternative addresses impacted media with a combination of technologies appropriate for Site conditions.

Based on the RI results, the media of concern at the Site is the on-site soil stockpiles. As discussed in Section 4.4, cPAHs were identified in the on-site soil stockpiles at concentrations above PCLs. No other COPCs were identified in soil or groundwater at the Site at concentrations above the applicable cleanup values.

Based on the environmental conditions described in the previous sections of this report, several remediation technologies were further screened to identify applicable methods for remediating the cPAHs in the soil stockpiles. The remediation technologies were initially identified by using the Federal Remediation Technologies Roundtable's (FRTR's) *Remediation Technologies Screening Matrix and Reference Guide* (2002), as well as local experience with commonly used remediation methods. The potential effectiveness and implementability of the technologies to remediate the cPAHs were evaluated, which resulted in a list of technologies that were retained for further consideration (see Table 10-1). The retained technologies were combined to create the four remedial alternatives that are described below.

10.1 Description of Cleanup Alternatives

The cleanup alternatives are evaluated on the basis of the requirements and the criteria specified in WAC 173-340-360. This section summarizes the three remedial alternatives that were developed and evaluated for the Site. For each alternative, the key components are described. Components and unit pricing were developed based on prior experience and current vendor information. These data were used to develop conceptual scenarios and to estimate costs associated with each of the listed alternative.

The following three alternatives were evaluated:

- Alternative 1: Limit Site Access
- Alternative 2: Grade and Cap Material On-Site
- Alternative 3: Excavation and Off-site Disposal

10.1.1 Alternative 1: Limit Site Access

The alternative assumes that the soil piles will remain, the area around soil samples SP-E1-C and SP-M2-C would be hydroseeded to provide improve vegetative cover, and fencing would be placed around these two areas to limit access to this soil. The approximate areas around SP-E1-C and SP-M2-C are shown on Figure 4-2. This alternative addresses the direct exposure pathway using engineering controls (fencing) and institutional controls (soil management plan and deed restriction).

It is estimated that this alternative will include the installation of 650 linear feet of fencing and one-half acre of hydroseeding. The estimated cost for this alternative is presented in Appendix K.

10.1.2 Alternative 2: Grade and Cap Material On-Site

This alternative would consist of grading/spreading around soil samples SP-E1-C and SP-M2-C into a soil layer approximately 1 foot deep, surveying the location of this soil placement, and then grading the remaining soil in the soil piles over the initial soil layer to provide a protective soil cap. The cover soil layer would be 2 feet deep when placed. It is estimated that the final grading would be approximately 3.1 acres for the existing soil piles to be placed at these proposed depths (layer thicknesses). The entire final area of graded soil would be hydroseeded to provide erosion protection. Institutional controls—a deed restriction and a soil management plan—would be used to notify Site owners and future Site occupants of the presence of the impacted soil. The soil management plan would require soil sampling and soil handling procedures be followed in the event Site activities disrupt the soil cover as identified by the survey performed following the soil grading. If this is the selected alternative, the proposed language for the deed restriction and the proposed soil management plan will be provided to Ecology with the CAP under separate cover.

It is estimated that this alternative will include the installation of erosion control measures, the grading of approximately 4,250 square yards (SY) of soil from the SP-E1-C and SP-M2-C sample areas, covering this material with 15,000 SY of soil from the remaining stockpiles to provide a 2-foot cover, and hydroseeding of 3.1 acres. The estimated cost for this alternative is presented in Appendix K.

10.1.3 Alternative 3: Excavation and Off-site Disposal

For Alternative 3, soil containing cPAHs above the PCLs would be removed and taken to an off-site location for disposal. Under this alternative, construction erosion control measures would be placed at the Site, soil with cPAHs above the PCLs would be removed, and the areas of excavation would be hydroseeded to provide protection against erosion. The soil around soil samples SP-E1-C and SP-M2-C as shown on Figure 4-2 representing the excavated and the conceptual configuration of this alternative. This alternative would eliminate potential future exposure to this material. Confirmation sampling would be completed from the excavation face of the remaining soil stockpile and the ground surface to confirm that soil removal is completed. Once confirmation sampling shows that the remaining cPAH concentrations are below the PCLs, the area impacted by excavation would be hydroseeded.

It is estimated that this alternative will include the installation of erosion control measures, excavation, loading of soil from the SP-E1-C and SP-M2-C samples areas, covering this material with 15,000 SY of soil from the remaining stockpiles to provide a 2-foot cover, and hydroseeding of 3.1 acres. The estimated cost for this alternative is presented in Appendix K.

10.2 Evaluation of Cleanup Alternatives

Consistent with MTCA regulations and Ecology guidance, the three remedial alternatives were evaluated for the seven evaluation criteria listed in WAC 173-340-360(3)(f). These criteria, along with the threshold requirements (WAC 173-340-360(1)(a)— protection of human health and the environment, compliance with cleanup standards, compliance with applicable laws, and providing for compliance monitoring), and other requirements (permanence of the alternative, reasonable restoration timeframe, and consideration of public concerns)—were considered. These seven evaluation criteria are summarized below

and presented with numeric scoring in Table 10-2 where a relative rating of 5 is the best and a rating of 1 is the worst.

10.2.1 Protectiveness

The protectiveness criteria is defined in WAC 173-340-360(3)(f)(i) as the overall protectiveness of human health and the environment, including the degree to which existing risks are reduced, time required to reduce risk at the facility and attain cleanup standards, on-site and off-site risks resulting from implementing the alternative, and improvement of the overall environmental quality. Alternatives 1 and 2 had the lower (worst) rating for the protectiveness criteria because, while the risk reduction timeframe is relatively fast, the improvement in overall environmental quality is less compared to Alternative 3. Alternative 3 has a protectiveness rating of 4 (5 being the best) because of the on-site and off-site risks associated with implementation of this alternative, specifically the risk associated with excavation, load, and transporting the impacted soil from the stockpiles.

10.2.2 Permanence

WAC 173-340-360(3)(f)(ii) defines the permanence criteria as the degree to which the alternative permanently reduces the toxicity, mobility, or volume of hazardous substances, including the adequacy of the alternative in destroying the hazardous substances, the reduction or elimination of hazardous substance releases and sources of releases, the degree of irreversibility of waste treatment process, and the characteristics and quantity of treatment of residuals generated. None of the three alternatives reduces the toxicity or volume of the hazardous substances. Alternative 3 removes the hazardous substances from the Site, providing remedy permanence for the Site by transferring the waste to an engineered landfill. Accordingly, Alternative 3 was given a score of 3 for the permanence criteria. Alternative 1 was given a score of 1 and Alternative 2 was given a score of 2 for the permanence criteria.

10.2.3 Effectiveness Over the Long Term

Long-term effectiveness includes the degree of certainty that the alternative will be successful, the reliability of the alternative during the period of time hazardous substances are expected to remain on-site at concentrations that exceed cleanup levels, the magnitude of

residual risk with the alternative in place, and the effectiveness of controls required to manage treatment residues or remaining wastes. Six types of cleanup action components are listed in WAC 173-340-360(1)(f)(iv) and are listed with the notes on Table 10-1. Alternative 1 was given a score of 1 (worst) for effectiveness over the long term based on the order for the six types of cleanup action components as listed in WAC 173-340-360. Alternative 2 was given a score of 2 for containment and Alternative 3 was given a score of 3 based on the removal of impacted soil.

10.2.4 Management of Short-Term Risks

Short-term risk is those risks to human health and the environment associated with the construction and implementation of an alternative with consideration of the measures that will be taken to manage such risks. Alternative 1 would require the least amount of soil disruption (excavation, loading, and hauling) to implement and was given a score of 4 for management of short-term risks. Alternative 2 requires grading of the impacted soil as part of the cap construction. Alternative 2 was given a score of 3 for management of short-term risks. Alternative 3 requires excavation and hauling activities, increasing short-term risks. Accordingly, Alternative 3 was given a score 2 for management of short-term risks.

10.2.5 Technical and Administrative Implementability

This criterion considered whether the alternative is technically possible; availability of necessary off-site facilities, services, and material; and the administrative and regulatory requirements. This criterion also considered scheduling, size, and complexity for construction operations and monitoring. None of the three alternatives would be technically difficult to implement. Alternatives 1 and 2 would be more difficult to implement administratively because both would restrict future Site activities. Accordingly, Alternatives 1 and 2 were given a score of 4. Alternative 3 would be the least complex to administratively implement because there would not be long-term Site restrictions. Accordingly, Alternative 3 was given a score of 5 for technical and administrative implementability.

10.2.6 Consideration of Public Concerns

This criterion considered the extent to which the community has concerns regarding an alternative based on those individual, community groups, local governments, tribes, federal

and state agencies, or any other organization that may have interest in or knowledge of the Site. Alternative 1 was given a score of 3 because access to impacted soil would be restricted using fencing and this alternative did not alter the existing soil stockpiles or provide improvement to the Site. Alternative 2 was given a score of 4 because it provided a surface cap and improved the general aesthetics of the Site. Alternative 3 would remove the impacted soil from the Site; however, because removal and off-site disposal of soil would increase construction noise and truck traffic, Alternative 3 was given a score of 3.

10.2.7 Cost

Alternative 1 is the least expensive alternative (\$70,839) and Alternative 3 is the most expensive alternative (\$147,992). The cost for Alternatives 2 is estimated at \$140,044. Alternative cost estimate summary sheets are provided in Appendix K.

10.3 Evaluation of Habitat Restoration Alternatives

The RI/FS activities are being overseen by Ecology and work is being conducted under the Governor's Puget Sound Initiative. The initiative focuses on cleaning up contamination, as well as restoring the Puget Sound. The Site lies on an area of fill that extends into Port Gardner Bay. The Site is relatively flat, with a maximum elevation of approximately 15 feet above mean sea level. The western and southern edges of the Site are covered by riprap and logs, which slope moderately down toward the shoreline. The riparian zone is composed principally of blackberry with a few willow trees. A wooden seawall extends along the northeastern shoreline of the Site.

While planning this cleanup and making cleanup decisions, Ecology and the Port will evaluate opportunities to perform remedial actions in a fashion that coincidentally enhances habitat. Elements of the remedial action will be evaluated for restoration opportunities in consultation with Ecology as plans for cleanup are developed. Potential restoration or enhancement alternatives may be achieved by removing environmental stressors at the Site. The work performed as part of the RI provides sufficient data to allow for an evaluation of restoration alternatives, which will be conducted as part of the FS. The Port will consider specific habitat restoration alternatives as appropriate based on the findings in the RI/FS.

SEPA (Chapter 43.21C RCW) requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An EIS must be prepared for all proposals with probable significant adverse impacts to the quality of the environment. The purpose of the checklist is to provide information to help the Site owner and the agency identify impacts from the proposal, and to help to agency decide whether and EIS is required. Appendix L contains a SEPA checklist that was prepared on behalf of the for the Bay Wood Products Site and JELD-WEN (adjacent property owner to the south) in 2006 as part of an application for waterfront redevelopment comprehensive plan map change, planned development overlay rezone, and shoreline designation change. While details of the planned development may have changed since the 2006 application, this SEPA checklist provides relevant information pertaining to potential receptors, habitat, and use.

10.4 Recommended Alternative

Based on the comparative evaluation of the three alternatives (Table 10-2), the total effectiveness and implementability scores for the three alternatives are 16, 18, and 20 respectively. The estimated cost for Alternative 3 is higher than the other alternatives, but is not disproportionately higher. Thus, Alternative 3 is the recommended alternative. Alternative 3 achieves long-term protection of human health and the environment, and has the best total effectiveness and implementability score of all of the alternatives.

10.5 Protection of Cultural Resources for the Recommended Site-Wide Alternative

None of the soils removed under Alternative 3 are native material and do not contact native material because the entire Site consists of non-native fill material. Since no native materials will be removed under Alternative 3, there is no anticipated impact to any cultural resources.

11 DEVELOPMENT AND EVALUATION OF SEDIMENT CLEANUP ACTION ALTERNATIVES

In this section, the technologies and process options for cleanup technologies retained through the screening evaluation described in Section 8 are used to develop alternatives to address the cleanup action objectives for impacted sediment areas at the Site. This section also provides a comparative analysis of the cleanup action alternatives. Each alternative addresses impacted media with a combination of technologies appropriate for Site conditions.

The sediment cleanup action alternatives developed in this section are based on conceptual-level designs for the implementation of individual technologies described in Section 8.3. The design parameters used to develop the alternatives are based on engineering judgment and current knowledge of Site conditions. The final design for the preferred alternatives may require additional characterization and analysis to refine the scope and costs associated with the selected cleanup action.

This section describes the sediment cleanup action alternatives, including a description of the delineated sediment management unit (SMU) within the area of sampling location BW-7, an initial screening of appropriate remedial technologies for the SMU, the evaluation and comparison of the marine area alternatives, and the MTCA DCA for each alternative.

11.1.1 Delineation and Description of Sediment Management Unit

Because there is no promulgated SMS criterion for wood waste, sediment cleanup requirements at the Site were determined based on interpretations of a suite of confirmatory biological tests performed on surface sediment samples collected in wood waste areas at the Site with the potential for deleterious effects. Bioassay test interpretations under SMS consist of endpoint comparisons of test sediments to the measurements observed in reference sediments, including statistical comparisons between the test and reference endpoints. As discussed in Section 5, the bioassay tests revealed that surface sediments collected from location BW-07 were potentially toxic in laboratory exposures to SMS test organisms.

While the bioassay data were used as the primary basis to delineate potential SMUs at the Site, the wood waste indicator parameter (TVS) will be used to provide further refinement to

the horizontal limits of SMU-1 during detailed design. Based on correlations between TVS and sediment toxicity at other similar sites, a TVS screening value of 15 percent will be used to refine the horizontal boundary of SMU-1.

The location of SMU-1 at the Site is depicted in Figure 11-1. The horizontal limits will be further refined during development of the CAP through a grid surface sampling effort to collect sediment samples and measure TVS at these locations.

11.1.2 Description of Sediment Cleanup Alternatives

Based on the screening described in Section 8.3.2, three alternatives were selected for detailed evaluation

- Alternative 1 – Dredge to Maximum Extent Practicable
- Alternative 2 – Dredge and Cap
- Alternative 3 – Capping

This section describes the major components of each alternative.

11.1.2.1 Alternative 1 – Dredge to Maximum Extent Practicable

This alternative entails the dredging to the maximum extent practicable of sediment containing woody debris in SMU-1. Based on core BW-07, dredging to a depth of approximately 10 feet below mudline is expected to be necessary to achieve the full depth of removal. A dredge cut of this thickness has the potential to undermine the shoreline; thus, appropriate side slopes and offsets will be used to protect the uplands during dredging. Once dredging has been completed, the dredge prism will be backfilled with clean import material from a beneficial reuse location or another suitable source.

Dredged material would be offloaded to the upland and either a) reused as topsoil on site, or b) disposed of at a local facility that can accept woody debris-laden sediment. For material reused on site, a 6-inch-thick layer of woody debris/sediment would be spread on the Site (up to 6,900 cy), with the balance of material disposed of off site.

Figure 11-2 presents a conceptual cross section for this alternative. It is estimated that approximately 10,300 cy will be dredged, and 15,600 tons of backfill and cap material would be placed under this alternative.

11.1.2.2 *Alternative 2 – Dredge and Cap*

This alternative balances the dredge cut thickness with an engineered cap. Over the area of SMU-1, a 2-foot required dredge cut with a 1-foot allowable overdepth has been assumed (a nominal 3-foot-thick dredge cut) would be made. Once dredging has been completed, the footprint would be capped with a 3-foot-thick sequence of sand base layer covered by an aggregate erosion protection and habitat surface layer. Figure 11-3 presents a conceptual cross section for this alternative.

Dredged material would be offloaded to the adjacent upland during construction and ultimately reused or disposed of as described in Alternative 1.

It is estimated that approximately 3,300 cy of material would be dredged under this alternative. The cap would require the import and placement of an estimated 6,100 tons of granular material.

11.1.2.3 *Alternative 3 – Capping*

This alternative entails placing an engineered cap over the sediment surface in SMU-1. The cap is nominally expected to be 3 feet thick, and would consist of a base isolation layer, and a blended erosion protection/habitat surface layer. To minimize habitat impacts, the cap profile would entail a small excavation along the shoreline and would be tapered in thickness along the shoreline to result in a profile that does not change the location of the mean higher high water (MHHW) line.

Figure 11-4 presents a conceptual cross section for this alternative. It is estimated that approximately 150 cy of material would be excavated, and 6,400 tons of granular cap material would be required to cover the estimated 0.5-acre footprint of SMU-1.

11.1.3 Detailed Evaluation and Comparison of Marine Alternatives

This section provides a narrative description of the evaluation and comparison of these alternatives. In each description, an absolute numeric ranking is provided ranging from 1 to 5, where 1 is the lowest (least favorable) ranking and 5 is the highest (most favorable) ranking. These absolute rankings are further modified by weighting factors for the DCA as described in Section 9.4.

11.1.3.1 Protectiveness

Alternative 1 would remove woody debris and sediment from the aquatic environment, and would provide the maximum practicable protectiveness to the marine environment.

However, because it is expected that buried wood will still be present on the uplands, an engineered cap would be used along the shoreline. The relatively large volume of dredged material would need to be managed both on site and off site. While this alternative is intended to maximize the removal, because the residual risk associated with buried woody deposits in the uplands, as well as the need for long-term cap monitoring, the dredging alternative has been assigned a score of 4 for protectiveness.

Alternative 2 would partially remove the woody debris deposit in SMU-1, with the remaining deposit contained by an engineered cap. Because this alternative leaves some wood waste on site, and because the engineered cap would require ongoing monitoring and maintenance, there is some residual risk associated with this alternative, as with the dredging alternative. For this reason, the dredge and cap alternative has been ranked the same as the dredge alternative, with a score of 4 for protectiveness.

While engineered caps (Alternative 3) can provide a high degree of protectiveness, there is more residual risk associated with the mass of sediments that would be left on site. Also, because of the need for ongoing monitoring and maintenance associated with caps, and due to the presence of potential sulfide impacts in the shallower water areas, the engineered containment alternative ranks lower than alternatives that include removal. The engineered containment alternative (Alternative 3) has been assigned a score of 3 for protectiveness.

11.1.3.2 *Permanence*

Removal of mixed wood waste and sediment from the marine environment would control sulfide generation in SMU-1, which, as described previously, is a byproduct of the breakdown of wood. While dredging is expected to generate residuals, they would be effectively managed in this case through placement of a clean backfill over the post-dredge surface. This alternative requires a small cap that would need to be monitored and maintained. Because of the potential need for monitoring and maintenance of the small cap area, Alternative 1 has been given a score of 4 for permanence.

Alternative 2 would result in the partial removal of the SMU-1 wood debris deposit. The cap would be engineered to provide permanent containment of remaining wood waste, and would be monitored and maintained as needed. However, because the cap would be larger compared to Alternative 1 and the remaining source volume would be greater, Alternative 2 ranks lower than Alternative 1 and has been given a score of 3 for permanence.

Alternative 3 would have the same thickness and footprint of cap as for Alternative 2. Therefore, monitoring and maintenance requirements are expected to be similar for both alternatives; thus, this alternative was assigned a score of 3 for permanence.

11.1.3.3 *Long-Term Effectiveness*

All alternatives are effective in the long term provided that appropriate monitoring and maintenance of the cap areas is performed. The significant difference between each alternative is the size of the required cap. Because Alternative 1 would require the smallest cap, and thus more limited long-term maintenance, it ranks relatively higher than Alternatives 2 and 3, which entail the placement of caps over a larger footprint. Because there is still a need for long-term maintenance, Alternative 1 has been given a score of 4. Alternatives 2 and 3 have been assigned a score of 3 for long-term effectiveness.

11.1.3.4 *Management of Short-Term Risks*

Alternative 1 entails the greatest volume of removal, which presents the greatest construction risk for accidents and injuries, as well as the greatest potential for water quality impacts and generated sediment residuals. Deep dredging at the toe of the slope could

induce slope instability that would jeopardize the upland shoreline. This risk would be managed by using conservative slope angles and offsets as necessary to maintain safe conditions during construction. Because of the short-term construction risks associated with Alternative 1, it has been assigned a score of 3 for this criterion.

Alternative 2 has somewhat fewer short-term risks compared to Alternative 1 because the duration of work is shorter, the volume of material dredged is lower, and the depth of cut at the toe of the slope is more manageable. Alternative 2 has been given a score of 4 for management of short-term risks.

The engineered cap in Alternative 3 does not require excavation. While the equipment requirements are similar for dredging and capping, there is no potential for generation of dredge residuals or resuspension of contaminants, and any short-term water quality impacts would be as a result of the placement of clean material (as opposed to suspended sediment generation from contaminated sediment dredging). Thus, the short-term risks for engineered containment are lower than for the alternatives involving dredging. A score of 5 has been assigned for the management of short-term risks under Alternative 3.

11.1.3.5 *Technical and Administrative Implementability*

The dredge alternative could present some implementability challenges. As previously discussed, deep dredging at the toe of the slope would require determining appropriate cut angles to avoid slope instability. This might require the use of a cap to manage any woody debris that was not able to be removed, resulting in a potential future source of sulfide that would remain on site. It is expected that the need for a cap would result in additional administrative requirements (e.g., ongoing operations, maintenance, and monitoring with periodic agency review). In addition, the relatively large volume of sediment removed would require a combination of both on-site and off-site management, and on-site reuse of material would cover the entire 8-acre upland facility. Because of these challenges, Alternative 1 has been given a score of 3 for implementability.

The Alternative 2 dredge and cap remedy has relatively fewer implementability concerns compared to Alternative 1 because the volume of dredged material is comparatively lower,

and the dredged material can be managed entirely on a portion of the upland site. However, similar issues surround the need to provide an engineered cap under this alternative. Because of the smaller volume of dredged material that would be managed, Alternative 2 ranks higher than Alternative 1 for implementability and has been assigned a score of 4.

Engineered containment used in Alternative 3 relies on proven technologies and has been demonstrated at sites throughout Puget Sound. Technical implementability of capping is generally straightforward, although layered caps are more difficult to construct compared to a cap composed of a single material. Administrative requirements for monitoring, maintenance, and periodic review of the cap are similar under all alternatives. Capping without dredging, however, would result in a change in bed elevation and habitat conditions in the area of SMU-1, which would be expected to trigger significant concern, review, and ultimately additional requirements (e.g., mitigation) from project stakeholders. Thus, engineered containment (Alternative 3) has been given a score of 3 for implementability.

11.1.3.6 *Consideration of Public Concerns*

The public typically prefers complete removal for environmental cleanups. At the same time, the environmental impacts of a larger construction project, associated truck traffic for off-site shipment of dredged material, and the inherent risks associated with dredging (residuals) would be a concern. Thus, the dredge alternative (Alternative 1) has been assigned a score of 4 for consideration of public concerns.

Both the dredge and cap and the engineered containment alternatives entail leaving woody debris in the aquatic environment. It is expected, therefore, that public concerns would be similar for both options, and that there would be a greater concern for leaving material in the aquatic environment compared to the removal that would be performed in Alternative 1. Thus, the dredge and cap (Alternative 2) and engineered containment (Alternative 3) alternatives have been given a score of 3 for consideration of public concerns.

11.1.4 *MTCA DCA for Sediment Cleanup*

Detailed cost estimates were prepared to support the FS evaluations. These estimates included the following major factors, and are presented in detail in Appendix M:

- Construction costs including materials, equipment, and labor
- Environmental controls and surveys during construction
- Engineering design and project management
- Environmental monitoring and construction management
- Long-term monitoring and mitigation

Table 11-1 provides details of the DCA for the sediment cleanup alternatives. The conclusions that result from the DCA are described below.

11.1.4.1 *Sediment Cleanup DCA*

The dredging remedy has an estimated cost of approximately \$1.8 million, and the dredge and cap remedy has an estimated cost of \$1.04 million. Engineered containment is estimated to cost approximately \$0.9 million. The total benefit score for dredging is highest, with the dredge and cap alternative slightly lower, and engineered containment the lowest, as depicted in Figure 11-5. The dredge and cap alternative (Alternative 2) provides the best balance of cost versus benefit. Thus, Alternative 2 is the preferred alternative for the marine area. The restoration timeframe for the preferred alternative is approximately 2 to 3 years.

11.2 Cleanup Decisions under SMS

Requirements under SMS for cleanup decisions are specified in WAC 173-204-580(2) through (4). This portion of the regulation specifies factors that are to be considered by Ecology in making its cleanup decision. Most of these requirements overlap with the cleanup decision requirements under MTCA. SMS cleanup decision requirements include the following:

- Achieve protection of human health and the environment
- Comply with applicable state, federal, and local laws
- Comply with Site cleanup standards
- Achieve compliance with sediment source control requirements
- Provide for landowner review of the cleanup study and consider public concerns raised during review of the draft cleanup report
- Provide adequate monitoring to ensure the effectiveness of the cleanup action
- Provide a reasonable restoration timeframe

- Consider the net environmental effects of the alternatives
- Consider the relative cost-effectiveness of the alternatives in achieving the approved Site cleanup standards
- Consider the technical effectiveness and reliability of the alternatives.

Like MTCA, the SMS regulations include a requirement for a reasonable restoration timeframe. However, SMS includes a preference for restoration timeframes that are less than 10 years [WAC 173-204-580(3)]. Longer restoration timeframes may be authorized, but only where it is not practicable to accomplish the cleanup action within a 10-year period. Of the SMS evaluation criteria listed above, all but two are addressed as part of the MTCA evaluation of alternatives presented in this FS. The two exceptions are: 1) the completion of a SEPA analysis of environmental impacts; and 2) consideration of the net environmental effects of the alternatives.

11.3 Recommended Sediment Cleanup Action Alternative

The recommended sediment cleanup action alternative includes the following elements:

- Excavate a 3-foot thickness of sediment in SMU-1 over an area of approximately 0.67 acre (to be refined through additional sampling during development of the CAP).
- Placement of an engineered cap that provides benthic protection from the remaining woody debris that remains on site under this action. The cap would require approximately 6,100 tons of imported sand and gravel.
- Manage the dredged material (approximately 3,300 cy) on site through upland placement of a nominal 6-inch-thick layer over approximately 4 acres.

The combined alternative outlined above satisfies the MTCA expectations for cleanup actions, including protection of human health and the environment, management of short- and long-term risks, and use of permanent solutions to the maximum extent practicable. The total cost of the recommended alternative is approximately \$1.04 million (Table 11-1), to be refined during remedial design. The final selection of the cleanup action alternative will be made following public review and comment on the RI/FS and will be formally documented in the CAP.

11.4 Habitat Restoration Elements for the Recommended Site-Wide Alternative

SMU-1 is situated entirely within mudflat adjacent to the Site uplands and has an elevation of approximately +5 feet MLLW. Because the recommended sediment cleanup action will remove wood waste from this area and replace the dredged sediment with a cap that is protective of benthic infauna, this cleanup action will restore this intertidal habitat. The cleanup action will include placement of final layer of “habitat mix” material that is suitable for fish spawning and benthos. This area is expected to be rapidly recolonized by recruitment of organisms. Additional habitat restoration elements may be considered during preparation of the cleanup action plan and final design and to the extent that habitat restoration can be performed economically as part of this cleanup action, these elements may be included.

11.5 Protection of Cultural Resources for the Recommended Site-Wide Alternative

Because the recommended alternative consists of removal of non-native sediments to a depth of 3 feet below the mudline in an area where non-native sediment (i.e., wood waste) exists at depths of greater than 6 feet below the mudline, there is no reason to believe that cultural resources found in the project area would be impacted.

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TABLES

**Table 2-1
Historic PCB Data**

Sample Location	Sample Depth (feet)	Sample Date	PCBs ^B (µg/kg)							
			Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Total
GeoEngineers 1993 Report^A										
NW-1	0.5	9/17/1992	ND (<58) ^C	ND (<58)	ND (<58)	ND (<58)	ND (<58)	770	290	1,060
NE-1	0.5	9/17/1992	ND (<62)	ND (<62)	ND (<62)	ND (<62)	ND (<62)	440	310	750
SW-1	0.5	9/17/1992	ND (<51)	ND (<51)	ND (<51)	ND (<51)	ND (<51)	760	410	1,170
SE-1	0.5	9/17/1992	ND (<52)	ND (<52)	ND (<52)	ND (<52)	ND (<52)	690	490	1,180
NW-2	1.0	10/21/1992	ND (<40)	ND (<40)	ND (<40)	ND (<40)	ND (<40)	90	ND (<40)	90
SW-2	1.0	10/21/1992	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND
SE-2	1.0	10/21/1992	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	170	69	239
N-2	0.5	10/21/1992	ND (<42)	ND (<42)	ND (<42)	ND (<42)	ND (<42)	1,500	360	1,860
N-3	1.0	10/21/1992	ND (<39)	ND (<39)	ND (<39)	ND (<39)	ND (<39)	89	ND (<39)	89
S-2	0.5	10/21/1992	ND (<48)	ND (<48)	ND (<48)	ND (<48)	ND (<48)	1,700	620	2,320
S-3	1.0	10/21/1992	ND (<36)	ND (<36)	ND (<36)	ND (<36)	ND (<36)	470	ND (<36)	470
E-2	0.5	10/21/1992	ND (<44)	ND (<44)	ND (<44)	ND (<44)	ND (<44)	680	180	860
E-3	1.0	10/21/1992	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND
W-2	0.5	10/21/1992	ND (<43)	ND (<43)	ND (<43)	ND (<43)	ND (<43)	960	310	1,270
W-3	1.0	10/21/1992	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	160	54	214
N-4	Surface	12/28/1992	ND (<39)	ND (<39)	ND (<39)	ND (<39)	ND (<39)	490	ND (<39)	490
S-4	Surface	12/28/1992	ND (<37)	ND (<37)	ND (<37)	ND (<37)	ND (<37)	68	ND (<37)	68
W-4	Surface	12/28/1992	ND (<38)	ND (<38)	ND (<38)	ND (<38)	ND (<38)	76	ND (<38)	76
Preliminary Cleanup Levels^D (PCLs)										
PCLs			0.5 ^E	0.5 ^E	0.5 ^E	0.5 ^E	0.5 ^E	0.5 ^E	0.5 ^E	0.5 ^E

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

A - Analytical data from GeoEngineers Environmental Site Assessment and Remedial Excavation Monitoring Report - February 3, 1993

B - PCBs per EPA Method 8080.

C - Not Detected (ND) at or above the laboratory detection limit of 58.0 µg/kg (micrograms per kilogram) - dry unit weight basis.

D - PCLs calculations presented in Attachment 2 of Work Plan

E - PCL for total PCBs

**Table 2-2
Surface Sediment Data Summary:
Ecology August 2008 Results**

Parameter	Sediment Quality Standard Chemical Criteria^A	Area Background Surface Sediment Concentration Range^B	Bay Wood Site Area Surface Sediment Concentration Range^C
Conventionals			
Fines (Silt/Clay; % WW)	--	1 to 30	45 to 74
Total Organic Carbon (% DW)	--	0.1 to 2.5	1.0 to 2.2
TVS (% DW)	12 ^D	1.0 to 6.4	4.6 to 8.3
Total Solids (% DW)	--	64 to 85	56 to 59
Ammonia (mg-N/kg DW)	--	0.03 UJ to 5.4 J	4.3 to 6.3
Total Sulfides (mg/kg DW)	--	0.01 U to 24.5 J	3.4 to 23.0
Metals in mg/kg DW			
Arsenic	57	0.6 U to 11	11 to 13
Cadmium	5.1	0.03 U	0.04 U
Chromium	260	22 J to 41	41 to 46
Copper	390	13 to 29	35 to 46
Lead	450	3 to 8	7 to 11
Mercury	0.41	0.007 U	0.008 U to 0.1
Silver	6.1	0.18 U	0.2 U
Zinc	410	36 to 67	63 to 79
LPAH in µg/kg DW			
Naphthalene	2,100	8.7 U	8.4 U to 31
Acenaphthylene	560	8.6 U	8.6 U
Acenaphthene	500	8.2 U	8.2 U
Fluorene	540	8.9 U	8.9 U
Phenanthrene	1,500	12 U	11 J to 34
Anthracene	960	7.7 U	7.7 U
1-Methylnaphthalene	--	7.2 U	7.2 U
2-Methylnaphthalene	670	8.2 U	8.2 U
Total LPAH	5,200	8.7 U to 12 J	11 J to 61
HPAH in µg/kg DW			
Fluoranthene	1,700	7.7 U to 30	38 to 53
Pyrene	2,600	7.5 U to 26	34 to 46
Benzo(a)anthracene	1,300	5.7 U to 11 J	5.7 U to 18 J
Chrysene	1,400	6.4 U to 16 J	28 to 37
Total Benzofluoranthenes	3,200	9.2 U to 10 J	9.5 U to 32 J
Benzo(a)pyrene	1,600	8.1 U	7.9 U to 14 J
Indeno(1,2,3-cd)pyrene	600	8.6 U	8.6 U
Dibenz(a,h)anthracene	230	8.5 U	8.5 U
Benzo(g,h,i)perylene	670	6.7 U	6.7 U
Total HPAH	12,000	9.2 U to 70 J	112 U to 164 J
Detected PAHs in mg/kg OC			
Naphthalene	99	5.9 U	0.9 U to 1.4
Phenanthrene	100	0.3 U to 1.7 J	1.1 J to 3.5

**Table 2-2
Surface Sediment Data Summary:
Ecology August 2008 Results**

Parameter	Sediment Quality Standard Chemical Criteria^A	Area Background Surface Sediment Concentration Range^B	Bay Wood Site Area Surface Sediment Concentration Range^C
Total LPAH	370	0.4 U to 1.7 J	1.1 J to 3.5
Fluoranthene	160	0.8 U to 3.2	1.8 to 5.4
Pyrene	1,000	0.8 U to 3.8	1.6 to 4.7
Benzo(a)anthracene	110	0.2 U to 1.1 J	0.3 U to 1.8 J
Chrysene	110	0.3 U to 1.7 J	1.7 to 2.9
Total Benzofluoranthenes	230	0.4 U to 1.0 J	0.4 U to 3.3 J
Benzo(a)pyrene	99	5.5 U	0.4 U to 1.4 J
Total HPAH	960	1.0 U to 8.7 J	5.0 to 17 J
Chlorinated Aromatics in µg/kg DW			
1,3-Dichlorobenzene	170	7.4 U	7.4 U
1,4-Dichlorobenzene	110	7.3 U	7.3 U
1,2-Dichlorobenzene	45	7.9 U	7.9 U
1,2,4-Trichlorobenzene	31	9.1 U	9.1 U
Hexachlorobenzene	22	8 U	8 U
Phthalate Esters in µg/kg DW			
Dimethylphthalate	71	7.7 U	7.7 U
Diethylphthalate	48	16 U	16 U
Di-n-Butylphthalate	1,400	12 U	12 U
Butylbenzylphthalate	63	11 U	11 U
bis(2-Ethylhexyl)phthalate	1,300	11 U to 62	11 U to 23
Di-n-Octylphthalate	420	8.3 U	8.3 U
Detected Phthalates in mg/kg OC			
bis(2-Ethylhexyl)phthalate	47	0.447 U to 6.645	0.495 U to 2.357
Phenols in µg/kg DW			
Phenol	420	13 U to 14 J	14 U
2-Methylphenol	63	14 U	14 U
4-Methylphenol	670	13 U	13 U
2,4-Dimethylphenol	29	15 U	15 U
Pentachlorophenol	360	47 U	47 U
Guaiacols and Resins in µg/kg DW			
Guaiacol	--	20 U	19 19 U
4,5-Dichloroguaiacol	--	20 U	19 19 U
4,5,6-Trichloroguaiacol	--	20 U	19 19 U
3,4,5-Trichloroguaiacol	--	20 U	19 19 U
Tetrachloroguaiacol	--	20 U	19 19 U
Pimaric Acid	--	98 U	200 200 U
Isopimaric Acid	--	98 U	200 200 U
Dehydroabietic Acid	--	98 U	230 230
Abietic Acid	--	98 U	200 200 UJ
Miscellaneous Extractables in µg/kg DW			

**Table 2-2
Surface Sediment Data Summary:
Ecology August 2008 Results**

Parameter	Sediment Quality Standard Chemical Criteria^A	Area Background Surface Sediment Concentration Range^B	Bay Wood Site Area Surface Sediment Concentration Range^C
Benzyl Alcohol	57	14 U	14 U
Benzoic Acid	650	110 U	110 U
Dibenzofuran	540	7.5 U	7.5 U
Hexachlorobutadiene	11	8.1 U	8.1 U
N-Nitrosodiphenylamine		8.7 U	8.7 U
PCBs in µg/kg DW			
Total PCBs	130	6.6 U	6.6 U
Dioxins/Furans ng/kg DW			
2,3,7,8-TCDD	--	0.06 U to 0.47 J	0.08 U
1,2,3,7,8-PECDD	--	0.15 U to 1.2 J	1.02 J
1,2,3,4,7,8-HXCDD	--	0.21 U to 1.7 J	0.30 U
1,2,3,6,7,8-HXCDD	--	0.37 J to 6.5 J	5.3 J
1,2,3,7,8,9-HXCDD	--	0.35 J to 4.4 J	4.6 J
1,2,3,4,6,7,8-HPCDD	--	5.0 J to 86	83
OCDD	--	37 to 572	675
2,3,7,8-TCDF	--	0.25 J to 3.3	2.3
1,2,3,7,8-PECDF	--	0.11 U to 0.80 J	0.63 J
2,3,4,7,8-PECDF	--	0.11 J to 1.0 J	0.90 J
1,2,3,4,7,8-HXCDF	--	0.14 J to 1.5 J	1.4 J
1,2,3,6,7,8-HXCDF	--	0.13 U to 0.84 J	0.19 U
1,2,3,7,8,9-HXCDF	--	0.12 U	0.15 U
2,3,4,6,7,8-HXCDF	--	0.13 U to 0.78 J	0.92 J
1,2,3,4,6,7,8-HPCDF	--	0.91 J to 18	16
1,2,3,4,7,8,9-HPCDF	--	0.10 U to 1.5 J	0.95 J
OCDF	--	2 J to 47	37
TEQ ^E (0 DL)	5.2	0.2 J to 5.2 J	4.0 J

Notes

- A - Sediment quality standard chemical criteria for low organic carbon (< 0.5%) sediments based on 1988 LAETs (DW basis).
- B - Area background stations include A2-08, A2-18B, A2-22, A2-26, A2-28, A2-29, and A2-30.
- C - Bay Wood Site area stations include A2-23, A2-25, and A2-25B.
- D - Preliminary TVS screening criteria from lowest site-specific standards developed at other regional wood debris sites (see text).
- E - Based on Interim DMMP Guidelines for the Port Gardner non-dispersive disposal site (updated November 14, 2008).

**Table 4-1
RI Data Analytical Summary Table**

Area	Sample Name	Matrix	TPH-HCID	TPH-Dx	TPH-Gx	Metals	PCBs	PAHs	SVOCs	Dioxins / Furans	VOCs
Former Covered Shop Attached to the Former Office Building	PB-1A-8	SS	X			X		X			X
	PB-1A-GW	GW	X			X		X			X
	PB-1B-13.5	SS	X	X		X		X			X
	PB-1B-GW	GW	X			X		X			X
Former PCB Transformer Area	PB-2A-7.5	SS	X				X				
	PB-2A-GW	GW	X								
Former Mill Operation Areas	PB-3A-9	SS	X			X	X	X		X	X
	PB-3A-GW	GW	X			X		X			X
	PB-3B-10.5	SS	X			X	X	X		X	X
	PB-3B-GW	GW	X			X		X			X
	PB-3C-7	SS	X	X		X	X	X			
	PB-3C-GW	GW	X			X		X			X
	PB-3D-5.5	SS	X	X		X	X	X			
	PB-3D-GW	GW	X			X		X			X
Former Surface Stain Area at Dry Storage	PB-4A-9.5	SS	X			X	X	X			X
	PB-4A-GW	GW	X	X		X		X			X
Former Dip Tank Area	PB-5A-9	SS	X	X		X			X	X	X
	PB-5A-GW	GW	X	X					X		X
	PB-5B	SS	X						X		X
	PB-5B-GW	GW	X						X		X
Former Oil Storage Shed	PB-6A-6	SS	X	X		X	X	X			X
	PB-6A-GW	GW	X			X	X	X			X

Notes:

TPH-HCID - Total Petroleum Hydrocarbons Identification (Ecology Method NWTPH-HCID)

TPH-Dx - Total Petroleum Hydrocarbons Diesel Range (Ecology Method NWTPH-Dx)

TPH-Gx - Total Petroleum Hydrocarbons Gasoline Range (Ecology Method NWTPH-Gx)

Metals: Arsenic, Cadmium, Total Chromium, Chromium VI, Copper, Lead, Nickel, Selenium, and Zinc (EPA Method 6010B); mercury (EPA Method 7471A)

PCBs - Polychlorinated Biphenyls (EPA Method 8082)

PAHs - Polynuclear Aromatic Hydrocarbons (EPA Method 8270SIM)

SVOCs - Semi-volatile Organic Compounds (EPA Method 8270C)

Dioxins and Furans - EPA Method 1613B

VOCs - Volatile Organic Compounds (EPA Method 8260)

**Table 4-2
Preliminary Cleanup Levels - Soil Detected Constituents**

Analyte	Preliminary Cleanup Levels (PCL)					Laboratory Practical Quantitation Limit (PQL) ^F	Selected PCLs ^G
	Soil Cleanup Based on Protection of Surface Water ^A	Soil Method A ^B	Soil Method B Direct Contact ^C	Soil Background ^D	Terrestrial Ecological Receptors ^E		
Semivolatile Organic Compounds (SVOCs)^H in milligrams per kilogram (mg/Kg)							
Bis(2-ethylhexyl) phthalate	2.64	NA	71 ¹	--	--	0.33	71
Dibenzofuran	NA	NA	160 ¹	--	--	0.33	160
Di-n-octylphthalate	531,201	NA	1,600 ¹	--	--	0.33	1,600
Methylnaphthalene;2-	NA	NA	320 ¹	--	--	0.33	320
Methylphenol;4-	NA	NA	400 ¹	--	--	0.33	400
Phenol	96.2	NA	48,000 ¹	--	--	0.33	48,000
	CCC	NA					
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^I (mg/Kg)							
Benzo[a]anthracene	0.020	NA	0.140	NA	NA	0.006	TEQ
Benzo[a]pyrene	0.054	0.100	0.14 ¹	NA	30	0.006	0.140
Benzo[b]fluoranthene	0.067	NA	0.140	NA	NA	0.006	TEQ
Benzo[k]fluoranthene	0.067	NA	0.140	NA	NA	0.006	TEQ
Chrysene		NA	0.140	NA	NA	0.006	TEQ
Dibenzo[a,h]anthracene	0.101	NA	0.140	NA	NA	0.006	TEQ
Indeno[1,2,3-cd]pyrene	0.196	NA	0.140	NA	NA	0.006	TEQ
cPAHs ^J	NA	NA	0.14 ¹	NA	NA	NA	0.140
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)^I (mg/Kg)							
Acenaphthene	65.3	NA	4,800 ¹	NA	NA	0.006	4,800
Anthracene	3,851	NA	24,000 ¹	NA	NA	0.006	24,000
Benzo[ghi]perylene ^K	1,132	NA	2,400 ¹	NA	NA	0.33	2,400
Fluoranthene	88.6	NA	3,200 ¹	NA	NA	0.006	3,200
Fluorene	173.8	NA	3,200 ¹	NA	NA	0.006	3,200
Naphthalene	137.4	5.0	1,600 ¹	NA	NA	0.33	1,600
Phenanthrene ^L	3,851	NA	24,000 ¹	NA	NA	0.33	24,000
Pyrene	1,132	NA	2,400 ¹	NA	NA	0.006	2,400
Volatile Organic Compounds (VOCs)^M (mg/Kg)							
Acetone	3.21	NA	8,000 ¹	NA	NA	0.05	8,000
Butanone;2- (MEK)	NA	NA	48,000 ¹	NA	NA	0.1	48,000
Carbon disulfide	5.6	NA	8,000 ¹	NA	NA	0.001	8,000
Chloroform	0.03	NA	160 ¹	NA	NA	0.005	160
Metals^N (mg/Kg)							
Arsenic	0.0105	20 ²	0.67	7	20	1	20
Beryllium	4,267	NA	160	0.6	25 ¹	0.1	25
Cadmium	5.7 ³	2	80	1	25	0.25	5.7
Chromium ^N	3.84	19	240	48 ⁴	42	0.5	48
Copper	1.07	NA	3,000	36 ⁴	100	1	36
Lead	108	250	NA	24	220 ¹	0.25	220
Nickel ^O	10.69	NA	1,600	48 ⁴	100	1	48

**Table 4-2
Preliminary Cleanup Levels - Soil Detected Constituents**

Analyte	Preliminary Cleanup Levels (PCL)					Laboratory Practical Quantitation Limit (PQL) ^F	Selected PCLs ^G
	Soil Cleanup Based on Protection of Surface Water ^A	Soil Method A ^B	Soil Method B Direct Contact ^C	Soil Background ^D	Terrestrial Ecological Receptors ^E		
Silver	0.054 ³	NA	400	NA	NA	0.5	0.054 ³
Thallium ^P	0.342	NA	5.6 ¹	NA	NA	1	5.6
Zinc	39.8	NA	24,000	85	270 ¹	1.5	270
Mercury	0.013	2	24 ¹	0.07	0.7	0.02	24
Total Petroleum Hydrocarbons^Q (mg/Kg)							
TPH-Dx	NA	2,000	NA	NA	460 ¹	4	460
Total Dioxin / Furan^R picograms per gram (pg/g)							
2,3,7,8 TCDD ^S TEQ	NA	NA	0.000011 ¹	NA	NA	0.000011	0.000011
Polychlorinated Biphenyls^T (mg/Kg)							
Total PCBs	NA	1	0.5 ¹	NA	NA	0.0005	0.50

Notes:

Shading denotes selected PCL value.

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

A - PCLs calculated from calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water.

B - Soil Method A values for unrestricted land use from CLARC summary tables.

C - Soil Method B Direct Contact values for unrestricted land use from CLARC summary tables.

D - Background concentrations from Table 1: Statewide & Regional 90th Percentile Values (Puget Sound) in Natural Background Soil Metals Concentrations in Washington State (Ecology 1994).

E - Terrestrial Ecological Evaluation Values from Ecology Toxics Cleanup Program Table 749-2: Priority contaminants of ecological concern for sites that qualify for the simplified terrestrial ecological evaluation.

F - PQL from Environmental Sciences Corp environmental laboratory.

G - Selected PCL = most restrictive PCL for Soil Cleanup, with the exception of analytes where PQL > calculated PCL or no calculated PCL is given. In these instances, the PQL will be selected as the PCL; if no PCL is available for Soil Cleanup Based on Protection of Surface Water, the Soil Method A or Soil Method B value (if no Method A value is given) is selected.

H - SVOCs per EPA Method 8270C.

I - cPAHs and PAHs per EPA Method 8270 SIM SS.

J - Total cPAH toxicity equivalent value relative to benzo[a]pyrene.

K - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate.

L - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

M - Priority Pollutant Metals per EPA Method 6010B.

N - Chromium VI.

O - Nickel, Soluble Salts.

P - Thallium, Soluble Salts.

Q - Hydrocarbon per NWTPH-Dx methodology.

R - Dioxins and Furans by EPA Method 1613.

S - Total dioxin/furan toxicity equivalent value relative to 2,3,7,8 TCDD.

T - PCBs per EPA Method 8082.

Key for Selection of PCLs

1 - Constituent not detected in groundwater in corresponding borings above PCL, therefore most restrictive value between MTCA Method B and TEE value was selected.

2 - The MTCA Method A soil cleanup level for unrestricted land use was used for arsenic because it was established based on adjustments for background.

3 - Constituent detected in groundwater above PCL, therefore protection of surface water value selected.

4 - PCL adjusted to background.

**Table 4-3
Preliminary Cleanup Levels - Groundwater Detected Constituents**

	Surface Water ARARs ^A										
	Aquatic Life - Fresh/Chronic - Ch. 173-201A WAC	Aquatic Life - Fresh/Chronic - Clean Water Act §304	Fresh/Chronic - National Toxics Rule, 40 CFR 131	Aquatic Life - Marine/Chronic - Ch. 173-201A WAC	Aquatic Life - Marine/Chronic - Clean Water Act §304	Marine/Chronic - National Toxics Rule, 40 CFR 131	Aquatic Life - Fresh/Acute - Ch. 173-201A WAC	Aquatic Life - Fresh/Acute - Clean Water Act §304	Fresh/Acute - National Toxics Rule, 40 CFR 131	Marine/Acute - Ch. 173-201A WAC	Aquatic Life - Marine/Acute - Clean Water Act §304
Semivolatile Organic Compounds (SVOCs) ^D in micrograms per liter (µg/L)											
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylnaphthalene; 2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carcinogenic Polycyclic Aromatic Compounds (cPAHs) ^E (µg/L)											
Benzo[a]anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[b]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total TEQ for all cPAHs ^F	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs) ^E (µg/L)											
Acenaphthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[ghi]perylene ^H		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene ^I	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds (VOCs) ^J (µg/L)											
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals ^K (µg/L)											
Antimony, Dissolved	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic, Dissolved	190	150	190	36	36	36	360	340	360	69	69
Beryllium, Dissolved	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium, Dissolved	0.37	0.25	1	9.3	8.8	9.3	0.82	2	3.9	42	40
Chromium ^M , Dissolved	10	11	10	50	50	50	15	16	15	1,100	1,100
Copper, Dissolved	3.47	9	11	3.1	3.1	2.4	4.61	13	17	4.8	4.8
Nickel, Dissolved	48.65	52	160	8.2	8.2	8.2	438	470	1,400	74	74
Selenium, Dissolved	5	5	5	71	71	71	20	NA	20	290	290
Silver, Dissolved	NA	NA	NA	NA	NA	NA	0.32	3.2	3.4	1.9	1.9
Zinc, Dissolved	32.29	120	100	81	81	81	35.36	120	110	90	90
Total Petroleum Hydrocarbons ^N (µg/L)											
TPH-Dx	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Table 4-3
Preliminary Cleanup Levels - Groundwater Detected Constituents**

	Surface Water ARARs ^A					Surface Water, Method B ^A	Ground Water, Method A, Table Value ^A	Ground Water, Method B ^A	Laboratory Practical Quantitation Limit (PQL) ^B	Selected PCLs ^C
	Aquatic Life - Marine/Acute - National Toxics Rule, 40 CFR 131	Human Health - Fresh Water - Clean Water Act §304	Human Health - Fresh Water - National Toxics Rule, 40 CFR 131	Human Health - Marine - Clean Water Act §304	Human Health - Marine - National Toxics Rule, 40 CFR 131					
Semivolatile Organic Compounds (SVOCs) ^D in micrograms per liter (µg/L)										
Acenaphthylene	NA	NA	NA	NA	NA	NA	NA	NA	10	10
Methylnaphthalene; 2	NA	NA	NA	NA	NA	NA	NA	32	1	31
Carcinogenic Polycyclic Aromatic Compounds (cPAHs) ^E (µg/L)										
Benzo[a]anthracene	NA	0.0038	0.0028	0.018	0.0311	NA	NA	NA	0.05	0.05
Benzo[a]pyrene	NA	0.0038	0.0028	0.018	0.0311	0.030	0.100	0.012	0.05	0.05
Benzo[b]fluoranthene	NA	0.0038	0.0028	0.018	0.0311	NA	NA	NA	0.05	0.05
Benzo[k]fluoranthene	NA	0.0038	0.0028	0.018	0.0311	NA	NA	NA	0.05	0.05
Chrysene	NA	0.0038	0.0028	0.018	0.0311	NA	NA	NA	0.05	0.05
Indeno[1,2,3-cd]pyrene	NA	0.0038	0.0028	0.018	0.0311	NA	NA	NA	0.05	0.05
Total TEQ for all cPAHs ^F	NA	NA	NA	NA	NA	NA	NA	NA	0.05	0.05 ^G
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs) ^E (µg/L)										
Acenaphthene	NA	670	NA	990	NA	640	NA	960	0.1	640
Anthracene	NA	8,300	9,600	40,000	110,000	26,000	NA	4,800	0.1	8,300
Benzo[ghi]perylene ^H	NA	830	960	4,000	11,000	2,600	NA	480	0.1	830
Fluoranthene	NA	130	300	140	370	90	NA	640	0.1	90
Fluorene	NA	1,100	1,300	5,300	14,000	3,500	NA	640	0.1	1,100
Naphthalene	NA	NA	NA	NA	NA	4,900	160	160	0.1	4,900
Phenanthrene ^I	NA	8,300	9,600	40,000	110,000	26,000	NA	4,800	0.1	640
Pyrene	NA	830	960	4,000	11,000	2,600	NA	480	0.1	830
Volatile Organic Compounds (VOCs) ^J (µg/L)										
Acetone	NA	NA	NA	NA	NA	NA	NA	800	25	800
Carbon disulfide	NA	NA	NA	NA	NA	NA	NA	800	0.5	800
Toluene	NA	1,300	6,800	15,000	200,000	18,900	1,000	640	0.5	1,300
Metals ^K (µg/L)										
Antimony, Dissolved	NA	5.6	14	640	4,300	1,037	NA	6.4	1	5.6
Arsenic, Dissolved	69	0.018	0.018	0.14	0.14	0.098	5	0.058	1	5 ^L
Beryllium, Dissolved	NA	NA	NA	NA	NA	273	NA	32	1	270
Cadmium, Dissolved	42	NA	NA	NA	NA	20	5	8	1	1
Chromium ^M , Dissolved	1,100	NA	NA	NA	NA	486	NA	48	1	10
Copper, Dissolved	2.4	NA	NA	NA	NA	2,700	NA	590	1	2.4
Nickel, Dissolved	74	610	610	4,600	4,600	1,100	NA	320	1	8.2
Selenium, Dissolved	290	170	NA	4,200	NA	2,700	NA	80	1	5
Silver, Dissolved	1.9	NA	NA	NA	NA	26,000	NA	80	0.5	0.5
Zinc, Dissolved	90	7,400	NA	26,000	NA	16,500	NA	4,800	10	32
Total Petroleum Hydrocarbons ^N (µg/L)										
TPH-Dx	NA	NA	NA	NA	NA	NA	500	NA	100	500

Table 4-3
Preliminary Cleanup Levels - Groundwater Detected Constituents

Notes:

Shading denotes selected PCL value.

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

Hierarchy for Selection of PCLs

The groundwater cleanup levels were selected using the following hierarchy:

- 1) Choose the most stringent value among all the Surface Water ARARs and Surface Water Method B values per WAC-173-340-730.
- 2) If there is no Surface Water cleanup value available in the Cleanup Levels and Risk Calculation (CLARC) table, then choose the (Table 720-1) Groundwater Method A value.
- 3) If there is no Groundwater Method A cleanup value, then choose the Groundwater Method B (ingestion) value from the CLARC table.
- 4) If there is no Groundwater Method B cleanup value, then choose the most stringent Groundwater ARAR value available in CLARC.

A - ARARs and MTCA cleanup levels were identified from Ecology's online CLARC database (<https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>).

B - PQL from Environmental Sciences Corp environmental laboratory.

C - Groundwater PCLs selected per Ecology recommended hierarchy as outlined below.

D - SVOCs per EPA Method 8270C.

E - cPAHs and PAHs will be analyzed per 8270 SIM (low level).

G - Value for cPAHs from Benzo(a)pyrene

H - Toxicity information is not available for benzo(ghi)perylene. Pyrene used as surrogate.

I - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

J - VOCs per EPA Method 8260

K - Dissolved metals per EPA Method 6020

L - Ecology's Method A cleanup level of 5 ug/L for arsenic is based on background (WAC 173-340-900); therefore, the Method A cleanup level has been selected for arsenic in groundwater.

M - Chromium VI

NA - Value not available

**Table 4-4
Soil Analytical Results - Detected Constituents**

Sample Name	PB-1A-8	PB-1B-13.5	PB-2A-7.5	PB-3A-9FT	PB-3B-10.5FT	PB-3C-7FT	PB-3D-5.5FT	PB-4A-9.5	PB-5A-9FT	PB-5B	PB-6A-6FT	Preliminary Cleanup Level (PCL) A								
Sample Date	5/21/2009	5/21/2009	6/1/2009	5/20/2009	5/20/2009	5/21/2009	5/21/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009									
Sample Depth (ft)	8	13.5	7.5	9	10.5	7	5.5	9.5	9	8.5	6									
Semivolatile Organic Compounds (SVOCs)^B in mg/Kg																				
Methylnaphthalene;2-	<0.0070	<0.0071	--	<0.0068	J3	<0.0073	J3	0.021	J	<0.0065	<0.0072	<0.38	<0.35	0.074	320.000					
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^C in mg/Kg																				
Benzo[a]anthracene	0.008	<0.0071	--	<0.0068	J3	<0.0073	J3	0.010	J, J6	<0.0065	<0.0072	<0.38	<0.35	0.049	J	TEQ				
Benzo[a]pyrene	0.008	<0.0071	--	<0.0068	J3	<0.0073	J3	0.008	J, J6	0.001	J	0.001	J	<0.38	<0.35	0.060	0.140			
Benzo[b]fluoranthene	0.007	J	<0.0071	--	<0.0068	<0.0073		0.013	J, J6	0.002	J	<0.0072	<0.38	<0.35	0.035	J	TEQ			
Benzo[k]fluoranthene	0.003	J	<0.0071	--	<0.0068	J3	<0.0073	J3	0.008	J, J6	<0.0065	<0.0072	<0.38	<0.35	0.019	J	TEQ			
Chrysene	0.008	0.001	J	--	<0.0068	<0.0073		0.006	J, J6	0.001	J	0.001	J	<0.38	<0.35	0.082	J	TEQ		
Dibenzo[a,h]anthracene	<0.0070	<0.0071	--	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.013	J	TEQ				
Indeno[1,2,3-cd]pyrene	0.004	J	<0.0071	--	<0.0068	J3	<0.0073	J3	<0.032	J6	0.001	J	<0.0072	<0.38	<0.35	0.010	J	TEQ		
cPAH TEQ	0.010	0.005	--	0.005		0.006		0.015		0.003		0.001	0.287	0.264	0.073		0.140			
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)^C in mg/Kg																				
Acenaphthene	<0.0070	<0.0071	--	<0.0068	J3	0.003	J, J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	<0.036		4800.000				
Anthracene		J	<0.0071	--	<0.0068	<0.0073		<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.009	J	24000.000				
Benzo[ghi]perylene	0.005	J	<0.0071	--	<0.0068	J3	<0.0073	J3	0.007	J, J6, J3	0.002	J	<0.0072	<0.38	<0.35	0.038		2400.000		
Fluoranthene	0.018	0.002	J	--	<0.0068	J3	<0.0073	J3	0.013	J, J6	0.003	J	0.002	J	<0.38	<0.35	0.018	J	3200.000	
Fluorene	<0.0070	<0.0071	--	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.020	J	3200.000				
Naphthalene	<0.0070	<0.0071	--	<0.0068	J3	0.005	J, J3	0.013	J, J6	0.004	J	<0.0072	<0.38	<0.35	0.029	J	1600.000			
Phenanthrene	0.010	0.002	J	--	<0.0068	J3	<0.0073	J3	0.012	J, J6	0.003	J	<0.0072	<0.38	<0.35	0.047		24000.000		
Pyrene	0.018	0.002	J	--	<0.0068	J3	<0.0073	J3	0.017	J, J6	0.002	J	0.002	J	<0.38	<0.35	0.079	J	2400.000	
Volatile Organic Compounds (VOCs)^D in mg/Kg																				
Acetone	<0.058	<0.059	--	<0.057		<0.060		--		--		0.050	J	<0.29	0.043	J	0.040	J	8000.000	
Butanone;2- (MEK)	<0.012	<0.012	--	0.003	J	<0.012		--		--		<0.012	<0.057	0.007	J	0.005	J	48000.000		
Carbon disulfide	<0.0012	0.004	--	<0.0011		<0.0012		--		--		0.004	<0.0057	<0.0011		0.001		8000.000		
Chloroform	<0.0058	<0.0059	--	<0.0057		0.001	J	--		--		<0.0060	<0.029	<0.0054		<0.0060		160.000		
Metals^E (mg/Kg)																				
Arsenic	4.1	4	--	<5.7	O	0.66	J, P1	<1.1		<1.1		<1.2	<2.3	O	--	1.4		20		
Beryllium	<1.2 ^F	O	<1.2	O	--	0.66		0.56		0.68		0.87		0.8		0.73		0.78	25	
Cadmium	0.36	0.35	--	<0.28		<0.30		<0.26		<0.27		<0.30	<0.29	--		<0.30		5.7		
Chromium	27	32	--	27		29		29		32		45	32	--		36		48		
Copper	14	16	--	9		17		18		26		8.3	7.2	--		25		36		
Lead	4.3	5.4	--	2.2		4.4		5.6		3.8		8.2	1.1	P1	--	13		220		
Nickel	28	40	--	38		25		38		42		82	78	--		25		48		
Silver	0.9	0.94	--	<0.57		<0.60		<0.53		<0.54		<0.60	<0.57	--		<0.60		0.5		
Thallium	9.5	8.7	--	<5.7	O	<6.0	O	<5.3	O	<11.	O	<6.0	O	<11.	O	--	<6.0	O	5.6	
Zinc	42	41	--	33		46		38		41		54	31	--		40		270		
Mercury	0.0079	J	0.02	J	--	0.0045	J	0.23		0.019	J	0.022		0.0042	J	0.0058	J	--	0.036	24

**Table 4-4
Soil Analytical Results - Detected Constituents**

Sample Name	PB-1A-8	PB-1B-13.5	PB-2A-7.5	PB-3A-9FT	PB-3B-10.5FT	PB-3C-7FT	PB-3D-5.5FT	PB-4A-9.5	PB-5A-9FT	PB-5B	PB-6A-6FT	Preliminary Cleanup Level (PCL) A	
Sample Date	5/21/2009	5/21/2009	6/1/2009	5/20/2009	5/20/2009	5/21/2009	5/21/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009		
Sample Depth (ft)	8	13.5	7.5	9	10.5	7	5.5	9.5	9	8.5	6		
Total Petroleum Hydrocarbons (TPH)^F mg/Kg													
Diesel Range Organics	--	<4.7	--	--	--	42	1.7	J	--	76	--	47	460
Heavy Oil Range Organics	--	12	--	--	--	550	16	--	--	620	--	490	460
Dioxins and Furans^G (pg/g)													
2,3,7,8 TCDD TEQ ^H	--	--	--	0.51	10	--	--	--	--	1.54	--	--	11

Notes:

Shading indicates PQL higher than Preliminary Cleanup Level (PCL)

Shading indicates detected concentration greater than PCL

-- Not analyzed

BOLD indicates detected above laboratory detection limit

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A - Soil PCLs calculated as shown on Table 4-2

B - SVOCs per EPA Method 8270C

C - cPAHs and PAHs analyzed per 8270 SIM (low level)

D - VOCs by EPA Method 8260

E - Priority Pollutant Metals per EPA Method 6010B.

F - TPH by NWTPH-Dx

G - Dioxins and Furans by EPA Method 1613

H - Total dioxin/furan toxicity equivalent value relative to 2,3,7,8 TCDD

Laboratory Qualifiers

Q - (ESC) Sample held beyond the accepted holding time.

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

J4 - The associated batch QC was outside the established quality control range for accuracy.

J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low

O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination.

The detection limit is elevated in order to reflect the necessary dilution.

**Table 4-5
Groundwater Analytical Results - Detected Constituents**

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-2A-GW 5/20/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/21/2009	PB-3C-GW 5/21/2009	PB-3D-GW 6/1/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW 5/21/2009	PB-5B-GW- 6/1/2009	PB-6A-GW 5/21/2009	PB-3D-MW 12/13/2010	Preliminary Cleanup Level						
Semivolatile Organic Compounds (SVOCs)^B in µg/L																				
Acenaphthylene	<0.050	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.032	J	<0.050	<1.0	<1.0	<1.0	<0.050	--	10			
Methylnaphthalene; 2	0.038	J	0.097	J	--	<0.25	<0.25	<0.25	0.064	J	0.015	J	<10	<10	<10	0.026	J	--	32	
Carcinogenic Polycyclic Aromatic Compounds(cPAHs)^C in µg/L																				
Benzo[a]anthracene	<0.050	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.076	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	TEQ		
Benzo[a]pyrene	<0.050	J3	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.045	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	0.050	
Benzo[b]fluoranthene	<0.050	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.083	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	TEQ		
Benzo[k]fluoranthene	<0.050	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.026	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	TEQ		
Chrysene	<0.050	J3	0.028	J	--	<0.050	<0.050	<0.050	0.068	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	TEQ		
Indeno[1,2,3-cd]pyrene	<0.050	J3	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.029	J	<0.050	J3	<1.0	<1.0	<1.0	<0.050	<0.05	TEQ	
cPAHs	0.038	0.038	--	0.038	0.038	0.038	0.0700	0.038	0.76	0.76	0.755	0.038	0.04	0.050						
Non-Carcinogenic PAHs (PAHs)^C in µg/L																				
Acenaphthene	<0.050	J3	0.021	J	--	<0.050	J3	<0.050	J3	0.043	J	0.15	<0.050	<1.0	<1.0	<1.0	<0.050	0.05	640	
Anthracene	0.019	J	0.02	J	--	<0.050	J3	<0.050	J3	<0.050	0.07	<0.050	<1.0	<1.0	<1.0	<0.050	<0.05	8,300		
Benzo[ghi]perylene		J3	<0.050	--	<0.050	J3	<0.050	J3	<0.050	0.044	J	<0.050	<1.0	<1.0	<1.0	<0.050	<0.05	830		
Fluoranthene	0.05		0.067	--	<0.050	<0.050	0.021	J	0.26	<0.050	<1.0	<1.0	<1.0	0.027	J	<0.05	90			
Fluorene	0.013	J	0.028	J	--	<0.050	J3	<0.050	J3	0.017	J	0.069	<0.050	<1.0	<1.0	<1.0	0.013	J	<0.05	1,100
Naphthalene	0.061	J	0.22	J	--	<0.25	<0.25	<0.25	0.11	J	<0.25	<5.0	<5.0	<5.0	0.074	J	0.07	4,900		
Phenanthrene	0.042	J	0.061	--	<0.050	<0.050	0.021	J	0.21	<0.050	<1.0	<1.0	<1.0	0.038	J	0.05	640			
Pyrene	0.033	J, J3	0.05	--	<0.050	<0.050	<0.050	0.18	<0.050	<1.0	<1.0	<1.0	<0.050	<0.05	830					
Volatile Organic Compounds (VOCs)^D in µg/L																				
Acetone	<25	12	J	--	<25	<25	12	J	<25	<50	<25	--	<50	<25	--	800				
Carbon disulfide	<0.50	0.64	J	--	0.52	<0.50	<0.50	<0.50	<1.0	<0.50	--	<1.0	J4	<0.50	--	800				
Toluene	<0.50	0.31	J	--	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	--	<5.0	0.86	--	1,300					
Metals^E in µg/L																				
Antimony, Dissolved	0.6	J	0.55	J	--	0.86	J	0.62	J	<1.0	0.41	J	<1.0	--	--	--	0.52	J	--	5.6
Arsenic, Dissolved	2.2		5.8	--	1.2	0.89	J	0.69	J	2.5	3.2	--	--	--	2.2	<1.0	5			
Beryllium, Dissolved	<2.0	<2.0	--	<2.0	<2.0	<2.0	<2.0	<2.0	0.94	J	--	--	--	0.9	J	--	270			
Cadmium, Dissolved	<5.0	<5.0	--	1.4	J	0.89	J	0.93	J	<5.0	<5.0	--	--	--	<5.0	--	1			
Chromium, Dissolved	<10	2.3	J	--	<10	<10	<10	6.8	J	<10	--	--	--	<10	--	10				
Copper, Dissolved	<20	<20	--	<20	<20	<20	<20	28	--	<20	--	--	--	<20	6.55	2.4				
Nickel, Dissolved	<20	<20	--	<20	12	J	13	J	30	<20	--	--	--	<20	7.8	8.2				
Selenium, Dissolved	7.8	J, B	7.8	J, B	--	<20	<20	<20	<20	<20	--	--	--	<20	<1.0	5				
Silver, Dissolved	8.2	J	4.7	J	--	<10	<10	<10	<10	<10	--	--	--	5.1	J	<0.2	0.5			
Zinc, Dissolved	<30	<30	--	<30	<30	19	J	<30	<30	<30	--	--	--	<30	--	32				
Total Petroleum Hydrocarbons (TPH)^F (µg/L)																				
Diesel Range Organics	--	--	--	--	--	--	--	63	J	400	--	--	--	--	--	500				
Heavy Oil Range Organics	--	--	--	--	--	--	--	<250	360	--	--	--	--	--	500					

Table 4-5
Groundwater Analytical Results - Detected Constituents

Notes:

Shading indicates PQL higher than Preliminary Cleanup Level (PCL)

Shading indicates detected concentration greater than PCL

BOLD indicates detected above the laboratory detection limit

<0.05 indicates detected below the detection limit of 0.05 micrograms/liter ($\mu\text{g/L}$)

-- Not analyzed

A - Groundwater PCLs calculated as shown on Table 4-3

B - SVOCs per EPA Method 8270C

C - cPAHs and PAHs analyzed per 8270 SIM (low level)

D - VOCs by EPA Method 8260

E - Priority Pollutant Metals per EPA Method 6010B.

F - TPH by NWTPH-Dx

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

J4 - The associated batch QC was outside the established quality control range for accuracy.

B - (EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.

**Table 4-6
Soil Stockpile Analytical Results - Detected Constituents**

Sample Name Sample Date	SP-E1-C 6/2/2009	SP-E2-C 6/2/2009	SP-E3-C 6/2/2009	SP-E4-C 6/2/2009	SP-E4-C 6/2/2009	SP-E5-C 6/2/2009	SP-E6-C 6/2/2009	SP-E7-C 6/2/2009	SP-M1-C 6/2/2009	SP-M2-C 6/2/2009	SP-M3-C 6/2/2009	SP-M3-C 6/2/2009	SP-M4-C 6/2/2009	SP-M5-C 6/2/2009	SP-W1-C 6/2/2009	SP-W1-C 6/2/2009	SP-W2-C 6/2/2009	^A 1/4/2005	Cleanup Level (PCL) ^B								
Semivolatile Organic Compounds (SVOCs)^C (mg/kg)																											
phthalate	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O	--	0.15	71							
Dibenzofuran	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--	--	0.03	160							
Di-n-octylphthalate	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O	--	0.03	1,600							
Methylphenol;4-	--	--	--	--	<0.38	J4	--	--	--	--	--	<0.34	J4	--	--	<0.40	J4	--	0.02	400							
Phenol	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--	--	0.08	48,000							
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^D in milligrams per kilogram (mg/Kg)																											
Benzo[a]anthracene	0.75	0.072	0.051	0.15	<3.8	0.1	0.023	0.14	0.15	0.18	0.087	<0.34	0.05	0.011	0.058	<7.9	O	0.047	0.43	TEQ							
Benzo[a]pyrene	0.15	0.04	0.026	0.08	0.081	J	0.04	0.022	0.08	0.07	0.1	0.076	<0.34	0.032	0.006	J	0.024	0.05	J	0.031	0.23	0.140					
Benzo[b]fluoranthene	0.6	0.088	0.079	0.21	0.19	J	0.1	0.03	0.14	0.23	0.25	0.067	<0.34	0.072	0.018	0.065	0.14	J	0.09	0.76 ^H	TEQ						
Benzo[k]fluoranthene	0.11	0.046	0.026	0.095	0.11	J	0.04	0.013	0.072	0.07	0.11	0.04	<0.34	0.022	0.007	0.034	0.07	J	0.038	--	TEQ						
Chrysene	0.82	0.15	0.089	0.24	0.44	J	0.13	0.022	0.097	0.2	0.31	0.084	<0.34	0.06	0.022	0.11	<7.9	O	0.075	1.0	TEQ						
Dibenzo[a,h]anthracene	0.03	0.012	0.0095	0.019	<0.38	0.01	0.005	J	0.014	0.02	0.01	0.01	<0.34	0.006	J	0.001	J	0.003	J	<0.40	0.005	J	0.05	TEQ			
Indeno[1,2,3-cd]pyrene	0.07	0.026	0.022	0.037	<0.38	0.02	0.014	0.028	0.04	0.04	0.017	<0.34	0.011	0.003	J	0.009	<0.40	0.01	0.12	TEQ							
cPAH TEQ	0.31	0.066	0.046	0.134	0.685	0.07	0.031	0.120	0.12	0.16	0.099	0.26	0.049	0.01	0.042	0.54	0.051	0.38	0.140								
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)^D mg/Kg																											
Acenaphthene	0.01	0.0067	J	0.0068	J	0.0029	J	<0.38	0.02	0.0025	J	0.01	0.02	0.03	0.003	J	<0.34	0.011	0.006	J	0.005	J	<0.40	0.004	J	0.14	4,800
Anthracene	0.07	0.046	0.029	0.044	0.033	J	0.05	0.01	0.035	0.08	0.1	0.015	<0.34	0.029	0.01	0.034	<0.40	0.024	0.11	24,000							
Benzo[ghi]perylene	0.06	0.026	0.022	0.032	<0.38	0.02	0.015	0.026	0.03	0.04	0.018	<0.34	0.011	0.003	J	0.008	<0.40	0.008	0.12	2,400							
Fluoranthene	2.2	0.068	0.11	0.25	0.4	0.24	0.053	0.14	0.3	0.71	0.089	0.02	J	0.14	0.025	0.13	0.32	J	0.076	0.85	3,200						
Fluorene	0.02	0.017	0.0093	0.011	<0.38	0.02	0.0044	J	0.012	0.03	0.05	0.005	J	<0.34	0.016	0.01	0.012	<0.40	0.007	J	0.11	3,200					
Naphthalene	0.05	0.028	0.038	0.0081	<0.38	0.03	0.0066	0.017	0.13	0.1	0.008	<0.34	0.04	0.088	0.023	0.04	J	0.01	0.06	1,600							
Phenanthrene	0.08	0.06	0.041	0.06	0.095	J	0.09	0.034	0.044	0.1	0.24	0.02	<0.34	0.069	0.017	0.048	0.11	J	0.02	0.36	24,000						
Pyrene	1.1	0.075	0.089	0.16	0.53	J	0.1	0.039	0.086	0.2	0.25	0.096	<0.34	0.092	0.016	0.065	<7.9	O	0.054	0.97	2,400						
Metals^E (mg/Kg)																											
Arsenic	3.1	2.4	2.2	2.9	--	1.7	5.6	10	3.5	3.8	2.6	--	2.3	1.1	J	3.1	--	2.6	11	20							
Beryllium	0.69	0.67	0.71	0.63	--	0.67	0.55	0.55	0.68	0.77	0.57	--	0.8	0.51	0.68	--	0.62	--	25								
Cadmium	<0.31	<0.32	<0.30	<0.29	--	<0.27	<0.26	<0.26	<0.32	<0.35	<0.26	--	<0.29	<0.28	<0.30	--	<0.30	0.3	5.7								
Chromium	40	37	42	34	--	36	26	27	40	45	26	--	37	31	38	--	39	40.5	48								
Copper	44	64	41	33	--	33	32	38	52	53	22	--	39	19	36	--	28	52.4	36								
Lead	11	15	9.5	10	--	10	14	36	15	20	7	--	10	3.7	10	--	6.2	16	250								
Nickel	34	34	37	34	--	33	28	32	35	36	34	--	36	32	37	--	36	44	48								
Zinc	51	60	54	57	--	51	65	180	130	76	47	--	64	38	55	--	47	75.8	270								
Mercury	0.08	0.093	0.071	0.069	--	0.08	0.072	0.044	0.11	0.11	0.035	--	0.088	0.038	0.072	--	0.066	0.11	24								
Volatile Organic Compounds (VOCs)^F mg/Kg																											
Benzoic acid	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.22	320,000 ^I							
Polychlorinated Biphenyls (PCBs)^G mg/Kg																											
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.04	--							
Total PCBs	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.04	0.50							

Table 4-6
Soil Stockpile Analytical Results - Detected Constituents

Notes:

Shading indicates PQL higher than Preliminary Cleanup Level (PCL)

Shading indicates detected concentration greater than PCL

<0.058 indicates detected below the detection limit of 0.058 mg/kg

BOLD indicates detected above laboratory detection limit

-- Not analyzed

A - Laboratory data for sample EC-1A-S1 from February 2005 Everett Marina PSDDA Sediment Characterization Report, Table 3-2

B - Soil PCLs calculated as shown on Table 4-2

C - SVOCs per EPA Method 8270

D - cPAHs and PAHs analyzed per 8270 SIM (low level)

E - Priority Pollutant Metals per EPA Method 6010B

F - VOCs per EPA Method 8260

G - PCBs per EPA Method 8082

H - Results listed as Total Benzofluoranthenes

I - No Work Plan PCL calculated. PCL based on MTCA Method B

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

**Table 5-1
Sediment Sample Locations and Mudline Elevations**

Station ID	Northing	Easting	Latitude (°N)	Longitude (°W)	Mudline Elevation (feet MLLW)
CR-Ref-22% Fines	126893	1183785	47 19.9734	122 40.4940	NR
CR-Ref-95% Fines	130653	1179934	47 20.5764	122 41.4474	NR
BW-01-BIO	373457	1303525	48 00.9333	122 12.5941	1.8
BW-04-BIO	373940	1303171	48 01.0117	122 12.6830	3.9
BW-05-BIO	374305	1302820	48 01.0707	122 12.7706	3
BW-07-BIO	374058	1304026	48 01.0336	122 12.4739	5.3
BW-11-BIO	374207	1303088	48 01.0554	122 12.7045	1.7
BW-01-SC	373457	1303526	48 00.9333	122 12.5939	2.5
BW-04-SC	373941	1303170	48 01.0119	122 12.6833	4.3
BW-05-SC	374308	1302822	48 01.0712	122 12.7702	3
BW-07-SC	374059	1304030	48 01.0338	122 12.4730	5.2
BW-11-SC	374207	1303089	48 01.0554	122 12.7043	2
BW-01-SS	373465	1303516	48 00.9346	122 12.5963	2.1
BW-02-SS	373583	1303383	48 00.9536	122 12.6295	1.5
BW-03-SS	373754	1303268	48 00.9814	122 12.6584	1.8
BW-04-SS	373933	1303169	48 01.0106	122 12.6835	3.5
BW-05-SS	374289	1302798	48 01.0680	122 12.7760	2.1
BW-06-SS	374417	1303543	48 01.0913	122 12.5939	3
BW-07-SS	374076	1304030	48 01.0366	122 12.4730	4.7
BW-08-SS	374576	1304199	48 01.1193	122 12.4338	4.7
BW-09-SS	374226	1304342	48 01.0622	122 12.3972	6.2
BW-10-SS	374545	1304595	48 01.1154	122 12.3366	5.4
BW-11-SS	374189	1303114	48 01.0525	122 12.6981	2
BW-12-SS	374274	1303165	48 01.0666	122 12.6859	2.5

Notes:

Washington North Zone, NAD 83 geographic and state plane coordina

**Table 5-2
Surface Sediment Conventionals and Wood Waste/Petroleum Hydrocarbons**

Location ID			BW-01 BW-01-SS- 090602	BW-01 BW-01-SS- 091218	BW-01 BW-51-SS- 091218	BW-02 BW-02-SS- 090602	BW-03 BW-03-SS- 090602	BW-03 BW-53-SS- 090602	BW-04 BW-04-SS- 090602	BW-04 BW-54-SS- 090602	BW-04 BW-04-SS- 091218	BW-05 BW-05-SS- 090602	BW-05 BW-05-SS- 091218
Sample ID													
Sample Date			6/2/09	12/18/2009	12/18/2009	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	12/18/2009	6/2/09	12/18/2009
Depth			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SMS SQS	SMS CSL	Normal	Normal	Field Duplicate	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal
Porewater (mg/L)													
Porewater Ammonia (mg-N/L)	--	--	1.45	--	--	2.55	1.93	1.61	1.84	1.7	--	2.38	--
Porewater Sulfide (mg/L)	--	--	0.05 U	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	--
Conventional Parameters													
Ammonia (mg-N/kg)	--	--	7.94	4.96	--	4.7	5.88	6.2	7.22	5.5	3.04	7.58	4.07
Sulfide (mg/kg)	--	--	62.8	116 J	--	8.9	60.6	174	27.6	112	39.6 J	502	23.2 J
Total organic carbon (%)	--	--	2.73†	2.55	2.18	1.91†	1.19†	1.61†	1.5†	2.73†	2.08	2.45†	1.64
Total volatile solids (%)	--	--	7.54	7.99	7.8	2.99	7.1	7.16	7.69	8.1	14.19	6.53	5.54
Field Observations of Woody Debris (pct by volume)													
Sediment Surface (0 cm)	--	--	None	None	None	None	None	--	None	None	None	None	10%
Subsurface (1-10cm)	--	--	None	None	None	None	None	--	Few	None	One Piece	None	10%
Grain Size (pct)													
Total Gravel	--	--	0.1 U	0.1 U	0.1 U	0.8	0.1 U	0.2	0.1	0.1 U	0.9	0.1	0.4
Total Sand	--	--	4.7	2.3	4.9	69.7	5.4	4.7	7.7	6.1	7.1	13.4	60
Total Silt	--	--	75.2	75.3	74.2	23.4	74.4	76.1	75.8	77.4	75.7	72.7	33.4
Total Clay	--	--	19.9	22.6	20.9	6.2	20.3	19.1	16.5	16.5	16.2	13.7	6.2
Total Fines (silt + clay)	--	--	95.1	97.8	95.1	29.6	94.7	95.2	92.3	93.9	91.9	86.4	39.6
Ionizable Organic Compounds (µg/kg)													
Phenol	420	1,200	20 U	--	--	--	20 U	19 U	--	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	6.1 U	--	--	--	6.1 U	6.1 U	--	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	20 U	--	--	--	20 U	19 U	--	--	--	--	--
2,4-Dimethylphenol	29	29	6.1 U	--	--	--	6.1 U	6.1 U	--	--	--	--	--
Benzyl alcohol	57	73	30 U	--	--	--	31 U	30 U	--	--	--	--	--
Benzoic acid	650	650	200 U	--	--	--	200 U	190 U	--	--	--	--	--
Aromatic Hydrocarbons (mg/kg-OC)													
Total LPAH (U = 0)	370	780	1.65	--	--	--	2.7	1.61	--	--	--	--	--
Total HPAH (U = 0)	960	5,300	17.32	--	--	--	25.6	15.9	--	--	--	--	--
Total PAH (U = 0)	--	--	18.97	--	--	--	28.3	17.51	--	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)													
Diesel Range Hydrocarbons	--	--	22	--	--	6.8 U	10	12	20	13	--	12	--
Motor Oil Range	--	--	120	--	--	25	54	70	110	75	--	57	--
Extractable Petroleum Hydrocarbons (µg/kg)													
C8-C10 Aliphatic	--	--	--	4,500 UJ	4,300 UJ	--	--	--	--	--	4,100 UJ	--	2,900 UJ
C8-C10 Aromatic	--	--	--	4,500 U	4,300 U	--	--	--	--	--	4,100 U	--	2,900 U
C10-C12 Aliphatic	--	--	--	4,500 UJ	4,300 UJ	--	--	--	--	--	4,100 UJ	--	2,900 UJ
C10-C12 Aromatic	--	--	--	4,500 U	4,300 U	--	--	--	--	--	4,100 U	--	2,900 U
C12-C16 Aliphatic	--	--	--	4,500 UJ	4,300 UJ	--	--	--	--	--	4,100 UJ	--	2,900 UJ
C12-C16 Aromatic	--	--	--	4,500 U	4,300 U	--	--	--	--	--	4,100 U	--	2,900 U

**Table 5-2
Surface Sediment Conventionals and Wood Waste/Petroleum Hydrocarbons**

Location ID			BW-01 BW-01-SS- 090602	BW-01 BW-01-SS- 091218	BW-01 BW-51-SS- 091218	BW-02 BW-02-SS- 090602	BW-03 BW-03-SS- 090602	BW-03 BW-53-SS- 090602	BW-04 BW-04-SS- 090602	BW-04 BW-54-SS- 090602	BW-04 BW-04-SS- 091218	BW-05 BW-05-SS- 090602	BW-05 BW-05-SS- 091218
Sample ID													
Sample Date			6/2/09	12/18/2009	12/18/2009	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	12/18/2009	6/2/09	12/18/2009
Depth			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SMS SQS	SMS CSL	Normal	Normal	Field Duplicate	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal
C16-C21 Aliphatic	--	--	--	4,500 UJ	4,300 UJ	--	--	--	--	--	4,100 UJ	--	2,900 UJ
C16-C21 Aromatic	--	--	--	4,500 U	4,300 U	--	--	--	--	--	4,100 U	--	2,900 U
C21-C34 Aliphatic	--	--	--	18,000 J	16,000 J	--	--	--	--	--	11,000 J	--	5,600 J
C21-C34 Aromatic	--	--	--	5,600	6,300	--	--	--	--	--	5,700	--	2,900 U
Volatiles Petroleum Hydrocarbons (µg/kg)													
Benzene	--	--	--	2,100 UJ	21,00 UJ	--	--	--	--	--	1,900 UJ	--	1,100 U
C5-C6 Aliphatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 UJ
C6-C8 Aliphatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 UJ
C8-C10 Aliphatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 UJ
C8-C10 Aromatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 U
C10-C12 Aliphatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 UJ
C10-C12 Aromatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 U
C12-C13 Aromatic	--	--	--	21,000 UJ	21,000 UJ	--	--	--	--	--	19,000 UJ	--	11,000 U
Ethylbenzene	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 U
m,p-Xylene	--	--	--	4,200 UJ	4,200 UJ	--	--	--	--	--	3,700 UJ	--	2,200 U
o-Xylene	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 U
Methyl tert-butyl ether (MTBE)	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 U
n-Decane (C10)	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 UJ
n-Dodecane (C12)	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 UJ
n-Hexane	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 UJ
n-Octane (C8)	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 UJ
n-Pentane (C5)	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 UJ
Toluene	--	--	--	2,100 UJ	2,100 UJ	--	--	--	--	--	1,900 UJ	--	1,100 U

**Table 5-2
Surface Sediment Conventionals and Wood Waste/Petroleum Hydrocarbons**

Location ID			BW-06 BW-06-SS- 090602	BW-07 BW-07-SS- 090602	BW-07 BW-07-SS- 091218	BW-08 BW-08-SS- 090602	BW-09 BW-09-SS- 090602	BW-10 BW-10-SS- 090602	BW-11 BW-11-SS- 090602	BW-11 BW-11-SS- 091218	BW-12 BW-12-SS- 090602	CR-22 CR-REF 22%FINES	CR-95 CR-REF 95%FINES
Sample ID			090602	090602	091218	090602	090602	090602	090602	091218	090602	1/5/10	1/5/10
Sample Date			6/2/09	6/2/09	12/18/2009	6/2/09	6/2/09	6/2/09	6/2/09	12/18/2009	6/2/09	0 - 10 cm	0 - 10 cm
Depth			0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SMS SQS	SMS CSL	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Bioassay Reference Sediment	Bioassay Reference Sediment
Porewater (mg/L)													
Porewater Ammonia (mg-N/L)	--	--	0.945	2.83	--	1.03	1.47	0.829	3.41	--	2.46	--	--
Porewater Sulfide (mg/L)	--	--	0.05 U	0.05 U	--	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U	--	--
Conventional Parameters													
Ammonia (mg-N/kg)	--	--	6.36	8.98	6.54	5.09	8.94	6.36	13.6	6.35	8.19	--	--
Sulfide (mg/kg)	--	--	6.56	46.8	49 J	1.68 U	5.1	3.5	136	56.8 J	133	--	--
Total organic carbon (%)	--	--	1.61†	2.08†	2.44	1.11†	2.14†	1.43†	1.52†	2.02	2.73†	--	--
Total volatile solids (%)	--	--	5.69	6.29	18.39	5.72	7.6	4.23	8.73	16.17	7.64	--	--
Field Observations of Woody Debris (pct by volume)													
Sediment Surface (0 cm)	--	--	One 6" piece	Few	None	None	None	None	<10%	None	<5%	--	--
Subsurface (1-10cm)	--	--	<10% below 5cm	15% / Few	Trace	None	5%	None	10%	None	<10%	--	--
Grain Size (pct)													
Total Gravel	--	--	1.7	4.4	0.9	0.6	0.1	0.7	0.5	0.1 U	0.4	0.1 U	0.1 U
Total Sand	--	--	20.3	78.5	40.1	54.3	18.7	69	8.3	8.7	10.1	63.7	3.9
Total Silt	--	--	67.1	14.7	50.3	36.6	71	24.2	77.6	74.2	75.8	31.3	65.6
Total Clay	--	--	10.9	2.5	8.6	8.5	10.2	6	13.8	17.1	13.7	4.9	30.5
Total Fines (silt + clay)	--	--	78	17.2	59	45.1	81.2	30.2	91.4	91.2	89.5	36.2	96.1
Ionizable Organic Compounds (µg/kg)													
Phenol	420	1,200	--	20 U	--	--	19 J	--	20 U	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	--	6 U	--	--	6 U	--	6 U	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	--	20 U	--	--	20 U	--	18 J	--	--	--	--
2,4-Dimethylphenol	29	29	--	6 U	--	--	6 U	--	6 U	--	--	--	--
Benzyl alcohol	57	73	--	30 U	--	--	30 U	--	30 U	--	--	--	--
Benzoic acid	650	650	--	200 U	--	--	200 U	--	200 U	--	--	--	--
Aromatic Hydrocarbons (mg/kg-OC)													
Total LPAH (U = 0)	370	780	--	12.27	--	--	5.26	--	2.79	--	--	--	--
Total HPAH (U = 0)	960	5,300	--	61.03	--	--	26.89	--	34.34	--	--	--	--
Total PAH (U = 0)	--	--	--	73.3	--	--	32.15	--	37.13	--	--	--	--
Total Petroleum Hydrocarbons (mg/kg)													
Diesel Range Hydrocarbons	--	--	8.2 U	28	--	14	17	11	15	--	12	--	--
Motor Oil Range	--	--	27	190	--	53	78	39	79	--	64	--	--
Extractable Petroleum Hydrocarbons (µg/kg)													
C8-C10 Aliphatic	--	--	--	--	3,400 UJ	--	--	--	--	4,000 UJ	--	--	--
C8-C10 Aromatic	--	--	--	--	3,400 U	--	--	--	--	4,000 U	--	--	--
C10-C12 Aliphatic	--	--	--	--	3,400 UJ	--	--	--	--	4,000 UJ	--	--	--
C10-C12 Aromatic	--	--	--	--	3,400 U	--	--	--	--	4,000 U	--	--	--
C12-C16 Aliphatic	--	--	--	--	3,400 UJ	--	--	--	--	4,000 UJ	--	--	--
C12-C16 Aromatic	--	--	--	--	3,400 U	--	--	--	--	4,000 U	--	--	--

**Table 5-2
Surface Sediment Conventional and Wood Waste/Petroleum Hydrocarbons**

Location ID			BW-06	BW-07	BW-07	BW-08	BW-09	BW-10	BW-11	BW-11	BW-12	CR-22	CR-95
Sample ID			BW-06-SS-	BW-07-SS-	BW-07-SS-	BW-08-SS-	BW-09-SS-	BW-10-SS-	BW-11-SS-	BW-11-SS-	BW-12-SS-	CR-REF	CR-REF
Sample Date			090602	090602	091218	090602	090602	090602	090602	091218	090602	22%FINES	95%FINES
Depth			6/2/09	6/2/09	12/18/2009	6/2/09	6/2/09	6/2/09	6/2/09	12/18/2009	6/2/09	1/5/10	1/5/10
Sample Type	SMS SQS	SMS CSL	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Normal	0 - 10 cm Bioassay Reference Sediment	0 - 10 cm Bioassay Reference Sediment
C16-C21 Aliphatic	--	--	--	--	3,400 UJ	--	--	--	--	4,000 UJ	--	--	--
C16-C21 Aromatic	--	--	--	--	3,400 U	--	--	--	--	4,000 U	--	--	--
C21-C34 Aliphatic	--	--	--	--	14,000 J	--	--	--	--	11,000 J	--	--	--
C21-C34 Aromatic	--	--	--	--	3,400 U	--	--	--	--	4,700	--	--	--
Volatile Petroleum Hydrocarbons (µg/kg)													
Benzene	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
C5-C6 Aliphatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C6-C8 Aliphatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C8-C10 Aliphatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C8-C10 Aromatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C10-C12 Aliphatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C10-C12 Aromatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
C12-C13 Aromatic	--	--	--	--	14,000 U	--	--	--	--	19,000 UJ	--	--	--
Ethylbenzene	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
m,p-Xylene	--	--	--	--	2,900 U	--	--	--	--	3,700 UJ	--	--	--
o-Xylene	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
n-Decane (C10)	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
n-Dodecane (C12)	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
n-Hexane	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
n-Octane (C8)	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
n-Pentane (C5)	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--
Toluene	--	--	--	--	1,400 U	--	--	--	--	1,900 UJ	--	--	--

Table 5-2
Surface Sediment Conventional and Wood Waste/Petroleum Hydrocarbons

Notes:

Detected concentration is greater than CSL Criteria

Detected concentration is greater than SQS Criteria

Non-detected concentration is above one or more identified screening levels

Bold = Detected result

† = Sample analyzed via EPA 160.4 for total volatile solids using small volume sample size (June 2009 results); December 2009 samples analyzed via ASTM 2974 large volume sample size

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

-- Results not reported or not applicable

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

**Table 5-3
Surface Sediment Chemical Data**

Location ID			BW-01	BW-02	BW-03	BW-03	BW-04	BW-04	BW-05	BW-06	BW-07	BW-08	BW-09	BW-10	BW-11	BW-12
Sample ID			BW-01-SS-	BW-02-SS-	BW-03-SS-	BW-03-SS-	BW-04-SS-	BW-04-SS-	BW-05-SS-	BW-06-SS-	BW-07-SS-	BW-08-SS-	BW-09-SS-	BW-10-SS-	BW-11-SS-	BW-12-SS-
Sample Date			090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602
Depth	SMS	SMS	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SQS	CSL	Normal	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Metals (mg/kg)																
Antimony	--	--	10 U	--	10 U	10 U	--	--	--	--	7 U	--	9 U	--	10 U	--
Arsenic	57	93	30	--	20	20	--	--	--	--	13	--	16	--	20	--
Cadmium	5.1	6.7	0.4 U	--	0.4 U	0.4 U	--	--	--	--	0.3 U	--	0.4 U	--	0.4 U	--
Chromium	260	270	67	--	63	69	--	--	--	--	28.9	--	46.9	--	61	--
Copper	390	390	71.1	--	67.9	72.6	--	--	--	--	29.1	--	48.7	--	65.7	--
Lead	450	530	13	--	12	13	--	--	--	--	7	--	17	--	11	--
Mercury	0.41	0.59	0.11	--	0.1	0.1	--	--	--	--	0.03	--	0.09	--	0.11	--
Nickel	--	--	55	--	51	56	--	--	--	--	25	--	37	--	51	--
Silver	6.1	6.1	0.6 U	--	0.6 U	0.6 U	--	--	--	--	0.4 U	--	0.5 U	--	0.7 U	--
Zinc	410	960	98	--	94	104	--	--	--	--	60	--	72	--	88	--
PCB Aroclors (mg/kg-OC)																
Aroclor 1016	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1221	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1232	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1242	--	--	0.51	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1248	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1254	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	4.67	--	0.64 U	--
Aroclor 1260	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1262	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Aroclor 1268	--	--	0.36 U	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	0.93 U	--	0.64 U	--
Total PCB (U = 0)	12	65	0.51	--	0.82 U	0.61 U	--	--	--	--	0.47 U	--	4.67	--	0.64 U	--
Aromatic Hydrocarbons (mg/kg-OC)																
Total LPAH (U = 0)	370	780	1.65	--	2.7	1.61	--	--	--	--	12.27	--	5.26	--	2.79	--
Naphthalene	99	170	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.53 J	--	0.65 J	--	1.3 U	--
Acenaphthylene	66	66	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.47 J	--	1.3 U	--
Acenaphthene	16	57	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Fluorene	23	79	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.67 J	--	0.56 J	--	1.3 U	--
Phenanthrene	100	480	0.95	--	1.7	0.93 J	--	--	--	--	2.9	--	2.6	--	1.8	--
Anthracene	220	1200	0.7 J	--	1 J	0.68 J	--	--	--	--	8.17	--	0.98	--	0.99 J	--
2-Methylnaphthalene	38	64	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Total HPAH (U = 0)	960	5300	17.32	--	25.6	15.9	--	--	--	--	61.03	--	26.89	--	34.34	--
Fluoranthene	160	1200	4.4	--	7.4	4.1	--	--	--	--	17.3	--	7.01	--	11.8	--
Pyrene	1000	1400	2.3	--	4	2.2	--	--	--	--	8.65	--	3.4	--	4.3	--
Benzo(a)anthracene	110	270	1.6	--	2.2	1.5	--	--	--	--	4.1	--	2.4	--	3.2	--
Chrysene	110	460	3.66	--	4.7	3.6	--	--	--	--	13.9	--	4.1	--	7.24	--
Benzo(b)fluoranthene	--	--	1.6	--	2.7	1.7	--	--	--	--	5.29	--	2.7	--	3	--
Benzo(k)fluoranthene	--	--	1.6	--	2.7	1.7	--	--	--	--	5.29	--	2.7	--	3	--
Total Benzofluoranthenes (U = 0)	230	450	3.2	--	5.4	3.4	--	--	--	--	10.58	--	5.4	--	6	--
Benzo(a)pyrene	99	210	1.2	--	1.9	1.1 J	--	--	--	--	3.9	--	2.6	--	1.8	--
Indeno(1,2,3-c,d)pyrene	34	88	0.48 J	--	1.7 U	1.2 U	--	--	--	--	1.2	--	0.89 J	--	1.3 U	--
Dibenzo(a,h)anthracene	12	33	0.22 U	--	0.51 U	0.38 U	--	--	--	--	0.29 U	--	0.34	--	0.39 U	--
Benzo(g,h,i)perylene	31	78	0.48 J	--	1.7 U	1.2 U	--	--	--	--	1.4	--	0.75 J	--	1.3 U	--
Total PAH (U = 0)	--	--	18.97	--	28.3	17.51	--	--	--	--	73.3	--	32.15	--	37.13	--
Chlorinated Benzenes (mg/kg-OC)																
1,2-Dichlorobenzene	2.3	2.3	0.22 U	--	0.51 U	0.38 U	--	--	--	--	0.29 U	--	0.28 U	--	0.39 U	--
1,4-Dichlorobenzene	3.1	9	0.22 U	--	0.51 U	0.38 U	--	--	--	--	0.29 U	--	0.28 U	--	0.39 U	--

**Table 5-3
Surface Sediment Chemical Data**

Location ID			BW-01	BW-02	BW-03	BW-03	BW-04	BW-04	BW-05	BW-06	BW-07	BW-08	BW-09	BW-10	BW-11	BW-12
Sample ID			BW-01-SS-	BW-02-SS-	BW-03-SS-	BW-03-SS-	BW-04-SS-	BW-04-SS-	BW-05-SS-	BW-06-SS-	BW-07-SS-	BW-08-SS-	BW-09-SS-	BW-10-SS-	BW-11-SS-	BW-12-SS-
Sample Date			090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602
Depth	SMS	SMS	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SQS	CSL	Normal	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
1,2,4-Trichlorobenzene	0.81	1.8	0.22 U	--	0.51 U	0.38 U	--	--	--	--	0.29 U	--	0.28 U	--	0.39 U	--
Hexachlorobenzene	0.38	2.3	0.036 U	--	0.083 U	0.06 U	--	--	--	--	0.047 U	--	0.046 U	--	0.066	--
Phthalates (mg/kg-OC)																
Dimethyl phthalate	53	53	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Diethyl phthalate	61	110	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Di-n-butyl phthalate	220	1700	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Butylbenzyl phthalate	4.9	64	0.55 U	--	1.3 U	0.93 U	--	--	--	--	0.72 U	--	0.7 U	--	0.99 U	--
Bis(2-ethylhexyl) phthalate	47	78	1.4	--	2.7	1.4	--	--	--	--	12.5	--	1.6	--	2.2	--
Di-n-octyl phthalate	58	4500	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.77 J	--	0.93 U	--	1.3 U	--
Miscellaneous (mg/kg-OC)																
Dibenzofuran	15	58	0.73 U	--	1.7 U	1.2 U	--	--	--	--	0.96 U	--	0.93 U	--	1.3 U	--
Hexachlorobutadiene	3.9	6.2	0.036 U	--	0.083 U	0.06 U	--	--	--	--	0.047 U	--	0.046 U	--	0.064 U	--
N-Nitrosodiphenylamine	11	11	0.22 U	--	0.51 U	0.38 U	--	--	--	--	0.29 U	--	0.28 U	--	0.39 U	--
Ionizable Organic Compounds (µg/kg)																
Phenol	420	1200	20 U	--	20 U	19 U	--	--	--	--	20 U	--	19 J	--	20 U	--
2-Methylphenol (o-Cresol)	63	63	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
4-Methylphenol (p-Cresol)	670	670	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	18 J	--
2,4-Dimethylphenol	29	29	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
Pentachlorophenol	360	690	30 U	--	31 U	30 U	--	--	--	--	30 U	--	30 U	--	30 U	--
Benzyl alcohol	57	73	30 U	--	31 U	30 U	--	--	--	--	30 U	--	30 U	--	30 U	--
Benzoic acid	650	650	200 U	--	200 U	190 U	--	--	--	--	200 U	--	200 U	--	200 U	--
PCB Aroclors (µg/kg)																
Aroclor 1016	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1221	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1232	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1242	--	--	14	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1248	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1254	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	100	--	9.8 U	--
Aroclor 1260	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1262	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Aroclor 1268	--	--	9.9 U	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	20 U	--	9.8 U	--
Total PCB (U = 0)	--	--	14	--	9.8 U	9.8 U	--	--	--	--	9.8 U	--	100	--	9.8 U	--
Aromatic Hydrocarbons (µg/kg)																
Total LPAH (U = 0)	--	--	45	--	32	26	--	--	--	--	256	--	113	--	43	--
Naphthalene	--	--	20 U	--	20 U	19 U	--	--	--	--	11 J	--	14 J	--	20 U	--
Acenaphthylene	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	10 J	--	20 U	--
Acenaphthene	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Fluorene	--	--	20 U	--	20 U	19 U	--	--	--	--	14 J	--	12 J	--	20 U	--
Phenanthrene	--	--	26	--	20	15 J	--	--	--	--	61	--	56	--	28	--
Anthracene	--	--	19 J	--	12 J	11 J	--	--	--	--	170	--	21	--	15 J	--
1-Methylnaphthalene	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
2-Methylnaphthalene	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Total HPAH (U = 0)	--	--	474	--	305	256	--	--	--	--	1271	--	573.2	--	521	--
Fluoranthene	--	--	120	--	88	66	--	--	--	--	360	--	150	--	180	--
Pyrene	--	--	63	--	48	36	--	--	--	--	180	--	73	--	65	--
Benzo(a)anthracene	--	--	44	--	26	24	--	--	--	--	85	--	51	--	48	--
Chrysene	--	--	100	--	56	58	--	--	--	--	290	--	88	--	110	--

**Table 5-3
Surface Sediment Chemical Data**

Location ID			BW-01	BW-02	BW-03	BW-03	BW-04	BW-04	BW-05	BW-06	BW-07	BW-08	BW-09	BW-10	BW-11	BW-12
Sample ID			BW-01-SS-	BW-02-SS-	BW-03-SS-	BW-53-SS-	BW-04-SS-	BW-54-SS-	BW-05-SS-	BW-06-SS-	BW-07-SS-	BW-08-SS-	BW-09-SS-	BW-10-SS-	BW-11-SS-	BW-12-SS-
Sample Date			090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602	090602
Depth	SMS	SMS	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SQS	CSL	Normal	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Benzo(b)fluoranthene	--	--	44	--	32	27	--	--	--	--	110	--	57	--	45	--
Benzo(k)fluoranthene	--	--	44	--	32	27	--	--	--	--	110	--	57	--	45	--
Total Benzo(a)fluoranthenes (U = 0)	--	--	88	--	64	54	--	--	--	--	220	--	114	--	90	--
Benzo(a)pyrene	--	--	33	--	23	18 J	--	--	--	--	82	--	55	--	28	--
Indeno(1,2,3-c,d)pyrene	--	--	13 J	--	20 U	19 U	--	--	--	--	25	--	19 J	--	20 U	--
Dibenzo(a,h)anthracene	--	--	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	7.2	--	6 U	--
Benzo(g,h,i)perylene	--	--	13 J	--	20 U	19 U	--	--	--	--	29	--	16 J	--	20 U	--
Total PAH (U = 0)	--	--	519	--	337	282	--	--	--	--	1527	--	686.2	--	564	--
Chlorinated Benzenes (µg/kg)																
1,2-Dichlorobenzene	--	--	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
1,3-Dichlorobenzene	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
1,4-Dichlorobenzene	--	--	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
1,2,4-Trichlorobenzene	--	--	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
Hexachlorobenzene	--	--	0.98 U	--	0.99 U	0.97 U	--	--	--	--	0.98 U	--	0.98 U	--	1	--
Miscellaneous (µg/kg)																
Dibenzofuran	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Hexachlorobutadiene	--	--	0.98 U	--	0.99 U	0.97 U	--	--	--	--	0.98 U	--	0.98 U	--	0.98 U	--
N-Nitrosodiphenylamine	--	--	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
Phthalates (µg/kg)																
Dimethyl phthalate	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Diethyl phthalate	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Di-n-butyl phthalate	--	--	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	20 U	--
Butylbenzyl phthalate	--	--	15 U	--	15 U	15 U	--	--	--	--	15 U	--	15 U	--	15 U	--
Bis(2-ethylhexyl) phthalate	--	--	39	--	32	22	--	--	--	--	260	--	34	--	34	--
Di-n-octyl phthalate	--	--	20 U	--	20 U	19 U	--	--	--	--	16 J	--	20 U	--	20 U	--
Dioxin Furans (ng/kg)																
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	0.293 J	--	0.312 J	0.183 J	--	--	--	--	0.264 J	--	0.57 J	--	0.223 J	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	1.27 J	--	1.07 J	0.684 J	--	--	--	--	1.48 J	--	1.49 J	--	0.801 J	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	2.24 J	--	1.49 J	1.56 J	--	--	--	--	6.48	--	2.46	--	1.38 J	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	15	--	8.2	6.76	--	--	--	--	9.59	--	7.36	--	5.08	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	5.94	--	3.78	2.86	--	--	--	--	6	--	3.88	--	2.82	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	264	--	130	93.5	--	--	--	--	301	--	98	--	89.8	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	2380	--	1160	734	--	--	--	--	2810	--	686	--	731	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	1.48	--	1.22	1.03	--	--	--	--	0.825	--	3.45	--	1.16	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	0.8 J	--	0.474 J	0.408 J	--	--	--	--	0.423 J	--	1.16 J	--	0.402 J	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	1.61 J	--	1.05 J	0.824 J	--	--	--	--	1.03 J	--	2.8	--	0.928 J	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	1.97 J	--	1.26 J	0.86 J	--	--	--	--	1.75 J	--	3.11	--	0.821 J	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	1.81 J	--	1.09 J	0.778 J	--	--	--	--	1.53 J	--	2.18 J	--	0.693 J	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	0.569 J	--	0.336 J	0.357 J	--	--	--	--	0.635 J	--	0.785 J	--	0.275 J	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	2.65	--	1.76 J	1.31 J	--	--	--	--	2.35 J	--	2.86	--	1.12 J	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	44.6	--	27.9	17.3	--	--	--	--	41.3	--	19.9	--	12.2	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	2.72	--	1.43 J	0.952 J	--	--	--	--	2.4 J	--	1.51 J	--	0.763 J	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	118	--	64.8	35.6	--	--	--	--	121	--	33.6	--	33.3	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	16.2 J	--	12.6 J	11.8 J	--	--	--	--	14.3 J	--	50 J	--	22.8 J	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	18.6 J	--	13.7 J	10.9 J	--	--	--	--	13.6	--	46 J	--	21.6 J	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	112	--	67.9 J	54.2 J	--	--	--	--	77.3 J	--	83.8	--	57.2	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	559	--	300	218	--	--	--	--	552	--	225	--	272	--

**Table 5-3
Surface Sediment Chemical Data**

Location ID			BW-01	BW-02	BW-03	BW-03	BW-04	BW-04	BW-05	BW-06	BW-07	BW-08	BW-09	BW-10	BW-11	BW-12
Sample ID			BW-01-SS-090602	BW-02-SS-090602	BW-03-SS-090602	BW-53-SS-090602	BW-04-SS-090602	BW-54-SS-090602	BW-05-SS-090602	BW-06-SS-090602	BW-07-SS-090602	BW-08-SS-090602	BW-09-SS-090602	BW-10-SS-090602	BW-11-SS-090602	BW-12-SS-090602
Sample Date			6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09	6/2/09
Depth	SMS	SMS	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm	0 - 10 cm
Sample Type	SQS	CSL	Normal	Normal	Normal	Field Duplicate	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Total Tetrachlorodibenzofuran (TCDF)	--	--	17.2 J	--	14.7 J	11.3 J	--	--	--	--	10.9 J	--	43.2 J	--	13.3 J	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	20.7 J	--	14.5 J	8.99 J	--	--	--	--	13.1 J	--	28.5 J	--	9.3 J	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	66.2 J	--	37.3 J	26.2 J	--	--	--	--	52.8	--	39.6 J	--	19.5 J	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	148	--	90.3 J	52 J	--	--	--	--	125 J	--	52.5	--	37.9	--
Total Dioxin/Furan TEQ (Mammal) ND=0	--	--	9	--	6	4	--	--	--	--	9	--	7	--	4	--
Total Dioxin/Furan TEQ (Mammal) ND=1/2	--	--	9	--	6	4	--	--	--	--	9	--	7	--	4	--
Total Petroleum Hydrocarbons (mg/kg)																
Diesel Range Hydrocarbons	--	--	22	6.8 U	10	12	20	13	12	8.2 U	28	14	17	11	15	12
Motor Oil Range	--	--	120	25	54	70	110	75	57	27	190	53	78	39	79	64

Notes:

Detected concentration is greater than CSL Criteria

Detected concentration is greater than SQS Criteria

Non-detected concentration is above one or more identified screening levels

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnaphthalene is not included in the sum of LPAHs.

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Total PAH are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene. 2-Methylnaphthalene is not included.

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Total xylene is the sum of o-, m-, p- isomers

Totals are calculated as the sum of all detected results (U=0). If all results are not detected, the highest reporting limit value is reported as the sum.

U=1/2; Half of the detection limit is included in the sum of results (applies to dioxin/furan TEQ calculation only)

-- Results not reported or not applicable

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

Toxicity Equivalency (TEQ) values as of 2005, World Health Organization

**Table 5-4
Subsurface Sediment Chemical Data**

Station ID	BW-01	BW-01	BW-04	BW-04	BW-05	BW-05	BW-05	BW-07	BW-07	BW-11	BW-11
Sample ID	BW-01-SC-A-091218	BW-01-SC-B-091218	BW-04-SC-B-091218	BW-04-SC-C-091218	BW-05-SC-A-091218	BW-55-SC-A-091218	BW-05-SC-B-091218	BW-07-SC-B-091218	BW-07-SC-C-091218	BW-11-SC-A-091218	BW-11-SC-B-091218
Sample Date	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009	12/18/2009
Depth (ft)	0 - 2.4	2.4 - 4.2	0.7 - 2.8	2.8 - 4.4	0 - 2.9	0 - 2.9	2.9 - 4.8	0.4 - 4.8	4.8 - 6.2	0 - 1.4	1.4 - 3.8
Sample Type	Normal	Normal	Normal	Normal	Normal	Field Duplicate	Normal	Normal	Normal	Normal	Normal
Porewater (mg/L)											
Ammonia (mg-N/L)	5.03	5.46	4.9	*	11.6	11.8	31.4	31	14.5	5.53	11.8
Sulfide (mg/L)	0.05 U	0.05 U	0.295	*	0.05 U	0.05 U	0.25 U	0.05 U	0.48	0.05 U	0.05 U
Conventional Parameters											
Ammonia (mg-N/kg)	16.2	22.1	9.44	17.9	18.3	--	54.7	81.5	55.8	13	31.2
Sulfide (mg/kg)	900 J	311 J	216 J	953 J	122 J	--	686 J	8.74 J	2.04 UJ	313 J	952 J
Total organic carbon (%)	3.31	9.22	9.62	9.13	4.47	4.82	2.77	3.21	7.17	2.25	8.2
Total volatile solids (%)	10.26	39.2	27.03	25.97	13.93	14.29	11.36	8.1	18.42	10.03	29.86
Total solids (%)	47	43.1	47.9	58.5	59.6	57.7	64.7	61	55.2	50.2	54.9
Field Observations of Woody Debris (visual %)	None	30%	95%	80%	30%	30%	Trace	5 - 10%	80%	5%	85%
Grain Size (%)											
Gravel	0.1 U	4.1	21.4	7.8	2.7	2.4	1.6	3.6	1.1	0.3	12.1
Total Sand	5.8	22.5	57.8	64.1	51.1	53	23.5	24.9	50.8	12.8	50.7
Total Silt	67.8	44.6	13.3	19.7	35.8	34.4	58.2	56.8	38.5	69.3	28.8
Total Clay	26.3	28.8	7.5	8.6	10.5	10.2	16.5	14.7	9.6	17.8	8.3
Fines (silt + clay)	94.1	73.3	20.8	28.2	46.3	44.6	74.8	71.4	48.1	87	37.2

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

-- Results not reported or not applicable

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

mg-N/kg = milligrams of nitrate per kilogram

mg-N/l = milligrams of nitrate per liter

* Insufficient porewater generated to perform tests

**Table 5-5
BW-07 Composite Sample Results**

Location ID			BW-07-SC
Sample ID			BW-07-SC-COMP-100726
Sample Date			7/26/10
Depth			10 - 190 cm
Sample Type	SMS SQS	SMS CSL	Normal
Grain Size (pct)			
Total Gravel	--	--	6.6
Total Sand	--	--	28.5
Total Silt	--	--	51.1
Total Clay	--	--	13.9
Total Fines (Silt + Clay)	--	--	65
Conventional Parameters (pct)			
Total Organic Carbon	--	--	4.09
Total Solids	--	--	61.3
Metals (mg/kg)			
Antimony	--	--	8 U
Arsenic	57	93	9
Cadmium	5.1	6.7	0.9
Chromium	260	270	45.9
Copper	390	390	56
Lead	450	530	25
Mercury	0.41	0.59	0.13
Nickel	--	--	47
Silver	6.1	6.1	0.5 U
Zinc	410	960	102
Aromatic Hydrocarbons (µg/kg-dry weight)			
Total LPAH (U = 0)	--	--	119
Naphthalene	--	--	37 J
Acenaphthylene	--	--	30 J
Acenaphthene	--	--	60 U
Fluorene	--	--	60 U
Phenanthrene	--	--	52 J
Anthracene	--	--	60 U
2-Methylnaphthalene	--	--	60 U
Total HPAH (U = 0)	--	--	540
Fluoranthene	--	--	110
Pyrene	--	--	110
Benzo(a)anthracene	--	--	54 J
Chrysene	--	--	97
Total Benzofluoranthenes (U = 0)	--	--	104 J
Benzo(a)pyrene	--	--	65
Indeno(1,2,3-c,d)pyrene	--	--	60 U
Dibenzo(a,h)anthracene	--	--	6 U
Benzo(g,h,i)perylene	--	--	60 U
Chlorinated Benzenes (µg/kg-dry weight)			
1,2-Dichlorobenzene	--	--	6 U
1,3-Dichlorobenzene	--	--	60 U

**Table 5-5
BW-07 Composite Sample Results**

Location ID Sample ID Sample Date Depth Sample Type	SMS SQS	SMS CSL	BW-07-SC BW-07-SC-COMP-100726 7/26/10 10 - 190 cm Normal
1,4-Dichlorobenzene	--	--	6 U
1,2,4-Trichlorobenzene	--	--	6 U
Hexachlorobenzene	--	--	6 U
Phthalates (µg/kg-dry weight)			
Dimethyl phthalate	--	--	15 U
Diethyl phthalate	--	--	60 U
Di-n-butyl phthalate	--	--	60 U
Butylbenzyl phthalate	--	--	18
Bis(2-ethylhexyl) phthalate	--	--	60 U
Di-n-octyl phthalate	--	--	60 U
Miscellaneous (µg/kg-dry weight)			
Dibenzofuran	--	--	60 U
Hexachlorobutadiene	--	--	6 U
Hexachloroethane	--	--	60 U
N-Nitrosodiphenylamine	--	--	8.4 U
PCB Aroclors (µg/kg-dry weight)			
Aroclor 1016	--	--	20 U
Aroclor 1221	--	--	20 U
Aroclor 1232	--	--	20 U
Aroclor 1242	--	--	20 U
Aroclor 1248	--	--	20 U
Aroclor 1254	--	--	20 U
Aroclor 1260	--	--	20 U
Aroclor 1262	--	--	20 U
Aroclor 1268	--	--	20 U
Ionizable Organic Compounds (µg/kg-dry weight)			
Phenol	420	1,200	60 U
2-Methylphenol (o-Cresol)	63	63	6 U
4-Methylphenol (p-Cresol)	670	670	33 J
2,4-Dimethylphenol	29	29	6 U
Pentachlorophenol	360	690	30 U
Benzyl alcohol	57	73	30 U
Benzoic acid	650	650	600 U
Aromatic Hydrocarbons (mg/kg-OC)			
Total LPAH (U = 0)	370	780	2.9095
Naphthalene	99	170	0.9046 J
Acenaphthylene	66	66	0.7335 J
Acenaphthene	16	57	1.467 U
Fluorene	23	79	1.467 U
Phenanthrene	100	480	1.2714 J
Anthracene	220	1200	1.467 U
2-Methylnaphthalene	38	64	1.467 U

**Table 5-5
BW-07 Composite Sample Results**

Location ID Sample ID Sample Date Depth Sample Type	SMS SQS	SMS CSL	BW-07-SC BW-07-SC-COMP-100726 7/26/10 10 - 190 cm Normal
Total HPAH (U = 0)	960	5300	13.2029
Fluoranthene	160	1200	2.6895
Pyrene	1000	1400	2.6895
Benzo(a)anthracene	110	270	1.3203 J
Chrysene	110	460	2.3716
Total Benzofluoranthenes (U = 0)	230	450	2.5428 J
Benzo(a)pyrene	99	210	1.5892
Indeno(1,2,3-c,d)pyrene	34	88	1.467 U
Dibenzo(a,h)anthracene	12	33	0.1467 U
Benzo(g,h,i)perylene	31	78	1.467 U
Chlorinated Benzenes (mg/kg-OC)			
1,2-Dichlorobenzene	2.3	2.3	0.1467 U
1,3-Dichlorobenzene	--	--	--
1,4-Dichlorobenzene	3.1	9	0.1467 U
1,2,4-Trichlorobenzene	0.81	1.8	0.1467 U
Hexachlorobenzene	0.38	2.3	0.1467 U
Phthalates (mg/kg-OC)			
Dimethyl phthalate	53	53	0.3667 U
Diethyl phthalate	61	110	1.467 U
Di-n-butyl phthalate	220	1700	1.467 U
Butylbenzyl phthalate	4.9	64	0.4401
Bis(2-ethylhexyl) phthalate	47	78	1.467 U
Di-n-octyl phthalate	58	4500	1.467 U
Miscellaneous (mg/kg-OC)			
Dibenzofuran	15	58	1.467 U
Hexachlorobutadiene	3.9	6.2	0.1467 U
Hexachloroethane	--	--	--
N-Nitrosodiphenylamine	11	11	0.2054 U
Total PCBs	12	65	0.489 U
Dioxin Furans (ng/kg)			
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	1.96
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	5.67
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	12.3
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	66.7
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	37.8
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	2570
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	19500
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	8.52
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	4.93
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	4.43 J
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	14.9
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	16.7

**Table 5-5
BW-07 Composite Sample Results**

Location ID Sample ID Sample Date Depth Sample Type	SMS SQS	SMS CSL	BW-07-SC BW-07-SC-COMP-100726 7/26/10 10 - 190 cm Normal
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	4.57 J
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	17.4
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	291
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	17.1
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	408
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	156
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	163
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	547
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	4250
Total Tetrachlorodibenzofuran (TCDF)	--	--	141
Total Pentachlorodibenzofuran (PeCDF)	--	--	193
Total Hexachlorodibenzofuran (HxCDF)	--	--	385
Total Heptachlorodibenzofuran (HpCDF)	--	--	682
Total Dioxin/Furan TEQ (Mammal) ND=0	--	--	61.7493
Total Petroleum Hydrocarbons (mg/kg)			
Diesel Range Hydrocarbons	--	--	19
Motor Oil Range	--	--	63

Notes:

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

U=1/2 = Half of the detection limit is included in the sum of results (applies to dioxin/furan TEQ calculation only)

-- Results not reported or not applicable

mg/kg = milligrams per kilogram

µg/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

Toxicity Equivalency (TEQ) values as of 2005, World Health Organization

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnaphthalene is not included in the sum of LPAHs.

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene.

2-Methylnaphthalene is not included in the sum of LPAHs.

Total HPAH (High PAH) are the total of fluoranthene, pyrene, benz(a)anthracene, chrysene, total benzofluoranthenes, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, debenzo(a,h)anthracene, and benzo(g,h,i)perylene.

Total fluoranthene includes the total of benzo(b&k)fluoranthenes.

**Table 5-6
Bioassay Testing Results Summary**

Treatment	Amphipod Survival Bioassay		Polychaete Growth Bioassay		Larval Development Bioassay	
	Pass/Fail SQS	Pass/Fail CSL	Pass/Fail SQS	Pass/Fail CSL	Pass/Fail SQS	Pass/Fail CSL
A2-25	Pass	Pass	Pass	Pass	Indeterminate ^A	Pass
BW-01	Pass	Pass	Pass	Pass	Pass	Pass
BW-04	Pass	Pass	Pass	Pass	Pass	Pass
BW-05	Pass	Pass	Pass	Pass	Pass	Pass
BW-07	Pass	Pass	Fail	Fail	Fail	Fail
BW-11	Pass	Pass	Pass	Pass	Pass	Pass

Notes:

A Both reference sediments and test sediments failed for this test. This makes determination of adverse biological effects problematic.

Table 5-7
10-Day Amphipod Bioassay Results

Treatment	Mean Survival (%)	$M_R - M_T$	Statistically Less than Reference	Fails SQS?	Fails CSL
Control - Ampelisca	95				
Control - Eohaustorius	98				
CR-Ref 22% Fines	88				
CR-Ref 95% Fines	92				
BW-01 ^B	97	-5	No	Pass	Pass
BW-04 ^B	91	1	No	Pass	Pass
BW-05 ^B	98	-6	No	Pass	Pass
BW-07 ^A	82	6	No	Pass	Pass
BW-11 ^B	97	-5	No	Pass	Pass

Notes:

- A Treatment tested with *Eohaustorius* and CR-Ref 22% fines
- B Treatment tested with *Ampelisca* and CR-Ref 95% fines

Table 5-8
20-Day Chronic Juvenile Polychaete Growth Test Results Using Ash Free Dry Weight

Treatment	Mean Individual Growth Rate (mg/ind/day)	MIG_T/MIG_R	Statistically Less than Reference	Fails SQS?	Fails CSL?
Control	0.542	N/A	N/A	N/A	N/A
CR-Ref 22% Fines	0.439	N/A	N/A	N/A	N/A
CR-Ref 95% Fines	0.488	N/A	N/A	N/A	N/A
BW-01 ^B	0.379	0.78	Yes	Pass	Pass
BW-04 ^B	0.407	0.83	No	Pass	Pass
BW-05 ^B	0.484	0.99	No	Pass	Pass
BW-07 ^A	0.217	0.49	Yes	Fail	Fail
BW-11 ^B	0.423	0.87	No	Pass	Pass

Notes:

- A Treatment compared to CR-Ref 22% fines
- B Treatment compared to CR-Ref 95% fines

**Table 5-9
2-Day Larval Development Bioassay Results**

Treatment	Mean Percentage Normal Survival (Control Adjusted)	$(N_T/N_C)/$ (N_R/N_C)	Statistically Less Than Reference	Fails SQS?	Fails CSL?
Control	99.2				
CR-Ref 22% Fines	81.4				
CR-Ref 95% Fines	64.3 ^C				
BW-01 ^B	69.9	1.09	No	Pass	Pass
BW-04 ^B	70.9	1.10	No	Pass	Pass
BW-05 ^B	63.6	0.99	No	Pass	Pass
BW-07 ^A	49.3	0.61	Yes	Fail	Fail
BW-11 ^B	55.1	0.86	No	Pass	Pass

Notes:

- A Treatment compared to CR-Ref 22% Fines
- B Treatment compared to CR-Ref 95% Fines
- C CR-Ref 95% Fines fails SMS Performance Criteria (65%), however because this failure was marginal, Ecology approved use of this reference.

**Table 8-1
Regional Sediment Capping Projects**

Water Body	Project	Regulatory Program	Year	Chemical of Concern	Cap Design(s)
Bellingham Bay	G-P Log Pond	MTCA	2001	Mercury, wood debris, phenols	3' thick sand cap
Eagle Harbor	Eagle Harbor (East Harbor)	CERCLA	1994	PAHs, metals	3' thick cap of dredged material
Elliott Bay	King County - Denny Way CSO	Corps of Engineers	1990	PCBs, PAHs, metals	2.5' thick cap of dredged material
Elliott Bay	Pier 51 - Coleman Dock	Corps of Engineers	1989	PCBs, PAHs, metals	1.5' thick cap of dredged material
Elliott Bay	Pier 53 - Washington St. CSO	Corps of Engineers	1992	PCBs, PAHs, metals	1' thick and 3' thick cap of dredged material
Elliott Bay	Pier 64 - Port of Seattle	MTCA	1994	PCBs, PAHs, metals	1' thick ENR layer of dredged material
Elliott Bay	Pacific Sound Resources (PSR)	CERCLA	2004	PAHs	6' thick sand & gravel cap; armored in places. 54" sand & gravel cap. 42" sand cap.
Duwamish Waterway	Duwamish/Diagonal CSO	NRDA	2005	PCBs, mercury, phthalates	3' thick sand cap or armored cap. Restore grade
Duwamish Waterway	Norfolk CSO	NRDA	1998	PCBs, mercury, BEHP, 1,4-dichlorobenzene	3' thick sand cap. Restore grade
Duwamish Waterway	West Waterway CAD	Corps of Engineers	1984	PCBs, metals	2' thick sand cap
Commencement Bay	Thea Foss	CERCLA	2003	Metals, PAHs, PCBs, phenols, phthalates	
Commencement Bay	Middle Waterway	CERCLA	2003	Metals, PCB, phthalates	3' thick sand cap or armored cap.
Commencement Bay	Head of Thea Foss	CERCLA	2003	PAHs, NAPLs	HDPE plus 3' thick sand cap.
Commencement Bay	Simpson Tacoma Kraft	Corps of Engineers	1988	PAHs	4' thick sand cap
Budd Inlet	One Tree Island Marina		1987	Metals, PAHs	4' thick sand cap

Table 8-2
Historic Weather Data - Everett, Washington

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	45.2	49.1	52.8	58	63.8	68.5	73	73.4	68.5	59.8	51	45.8	59.1
Average Min. Temperature (F)	33.2	34.5	36.7	40.5	45.8	50.8	53.5	53.4	48.5	42.7	37.4	34.4	42.6
Average Total Precipitation (in.)	4.62	3.41	3.55	2.71	2.36	2.18	1.19	1.34	1.97	3.45	4.87	5.07	36.72
Average Total SnowFall (in.)	2.3	0.6	0.5	0.1	0	0	0	0	0	0	0.4	1	4.9
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes

Data for Everett Jr. College (Station 452675)

Source: Western Regional Climate Center, wrcc@dri.edu

Period of Record : 6/ 1/1948 to 12/31/2005

**Table 10-1
Upland Technology Screening Summary**

Technology Category	Identified Technology	Technology Retained for Use in Alternatives
Soil Stockpiles		
Containment	Surface Capping	Yes
In-Situ Treatment	Monitored Natural Attenuation	No
	Soil Vapor Extraction	No
	In-situ stabilization	No
	In-situ bioremediation	No
	Bioventing	No
Source Removal	Excavation and Off-Site Disposal at Permitted Landfill/Recycling Facility	Yes
	Bioremediation	No
	Thermal desorption	No
	Incineration	No
	Stabilization/immobilization	No

**Table 10-2
Upland Evaluation Criteria Scoring**

Remedial Alternatives	Protectiveness	Permanence	Effectiveness Over the Long Term^a	Management of Short-Term Risks	Technical and Administrative Implementability	Consideration of Public Concerns	Total Effectiveness and Implementability Score	Cost
Alternative 1 - Limited Site Access	3	1	1	4	4	3	16	4
Alternative 2 - Cap Material On-Site	3	2	2	3	4	4	18	2
Alternative 3 - Excavation and Off-Site Disposal	4	3	3	2	5	3	20	2

Notes:

Scale definition: 5 = best, 1 = worst

^a Per WAC 173-340-360(3)(f)(iv) as a guide, the long term effectiveness of cleanup action components, in descending order are:

- reuse or recycling
- destruction or detoxification
- immobilization or solidification
- on-site or off-site disposal at an engineered facility
- on-site isolation or containment with controls
- institutional controls and monitoring

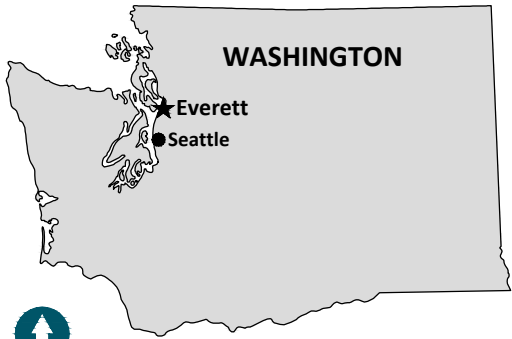
**Table 11-1
Sediment MTCA DCA Scoring**

Criteria	Alternative		
	Dredge to Maximum Extent Practicable	Dredge and Cap	Engineered Containment
MTCA Threshold Criteria			
1. Protection of Human Health and the Environment	Yes	Yes	Yes
2. Compliance with Cleanup Standards	Yes	Yes	Yes
3. Compliance with ARARs	Yes	Yes	Yes
4. Provision for Compliance Monitoring	Yes	Yes	Yes
Restoration Time Frame	2 to 3 years	2 to 3 years	2 to 3 years
Relative Benefits Ranking (1= lowest; 5 = highest)			
Protectiveness	4	4	3
Permanence	4	3	3
Long-term Effectiveness	4	3	3
Management of Short Term Risks	3	4	5
Technical and Administrative Implementability	3	4	3
Consideration of Public Concerns	4	3	3
Weighted Benefits - Disproportionate Cost Analysis			
Protectiveness (30%)	1.2	1.2	0.9
Permanence (20%)	0.8	0.6	0.6
Long-term Effectiveness (20%)	0.8	0.6	0.6
Management of Short Term Risks	0.3	0.4	0.5
Technical and Administrative Implementability (10%)	0.3	0.4	0.3
Consideration of Public Concerns	0.4	0.3	0.3
Total of Scores	3.8	3.5	3.2
Estimated Cost (+50%/-30%)	\$1,800,000	\$1,040,000	\$920,000
Cost/Benefit	4.74E+05	2.97E+05	2.88E+05
Cost disproportionate to Incremental Benefits?	Yes	No	N/A (baseline)
Overall Alternative Ranking	2	1	3
% Benefit Increase over Baseline	119%	109%	
% Cost Increase over Baseline	196%	113%	

FIGURES

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-010.dwg FIG 1-1

Nov 03, 2010 10:33am cdavidson



Not to Scale

SOURCE: Google Earth Pro, 2010.

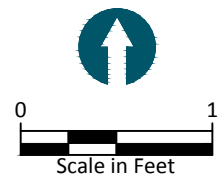



Figure 1-1
Vicinity Map
Bay Wood Products RI/FS

\\Orcas\GIS\Jobs\080546-01_Bay_Wood_Products_POE\Maps\2010_10\Parcel_Map.mxd nkoehle 11/03/2010 11:00 AM



 Tax Parcel - Port of Everett

Aerial Imagery © 2007 ESRI, i-cubed.

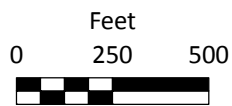
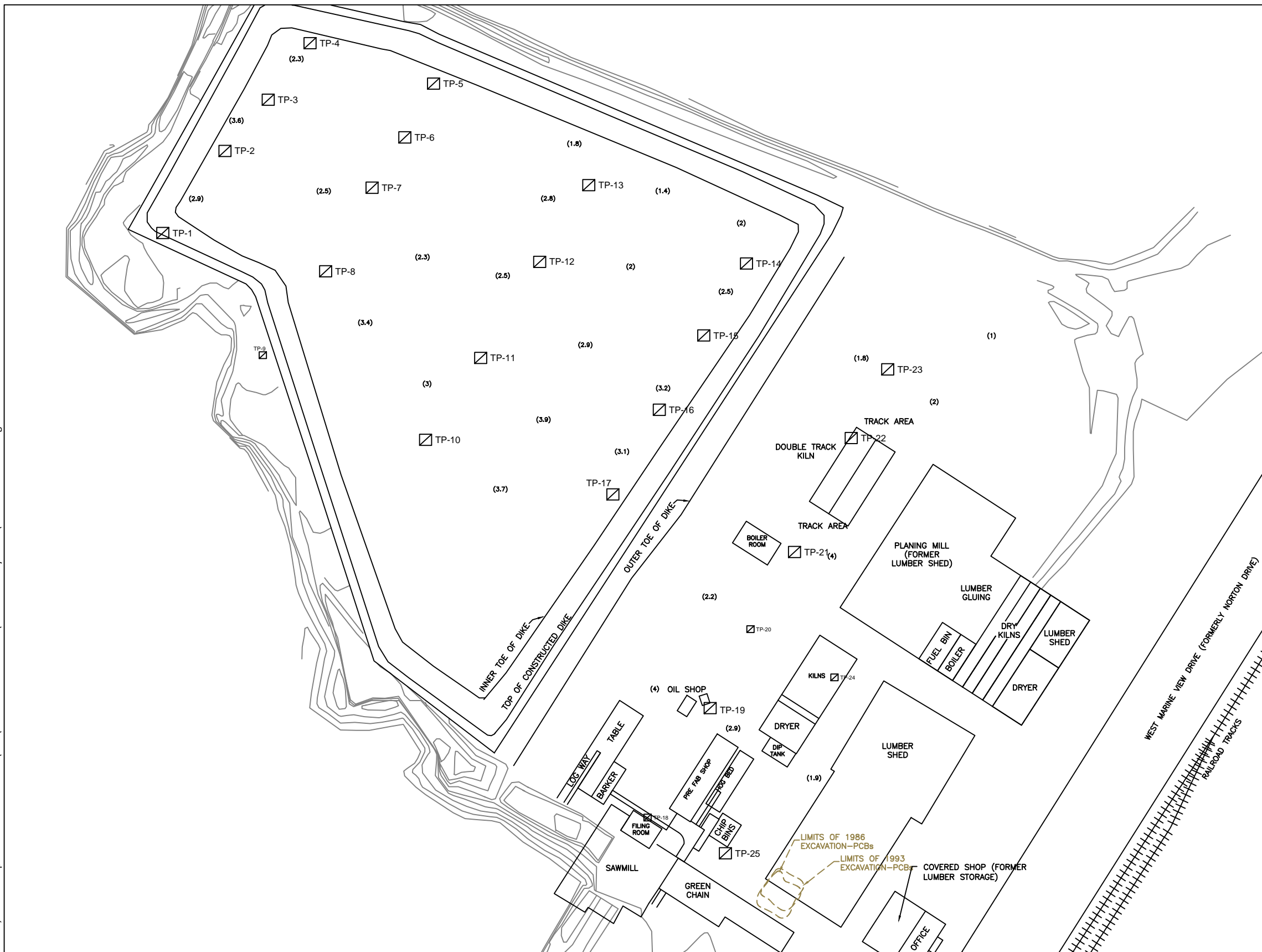


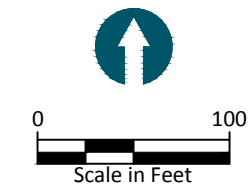
Figure 1-2
Parcel Map
Bay Wood Products RI/FS

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-011.dwg RI-FS FIG 2-1
 Oct 27, 2010 12:56pm cavidson



LEGEND:

- FORMER SITE STRUCTURES
- (2.5) DIFFERENCE IN ELEVATION IN FEET FROM 1995 POST EXCAVATION SURVEY AND 2005 FIELD SURVEY
- TP-12 TEST PITS LOCATIONS (LANDAU 1994)

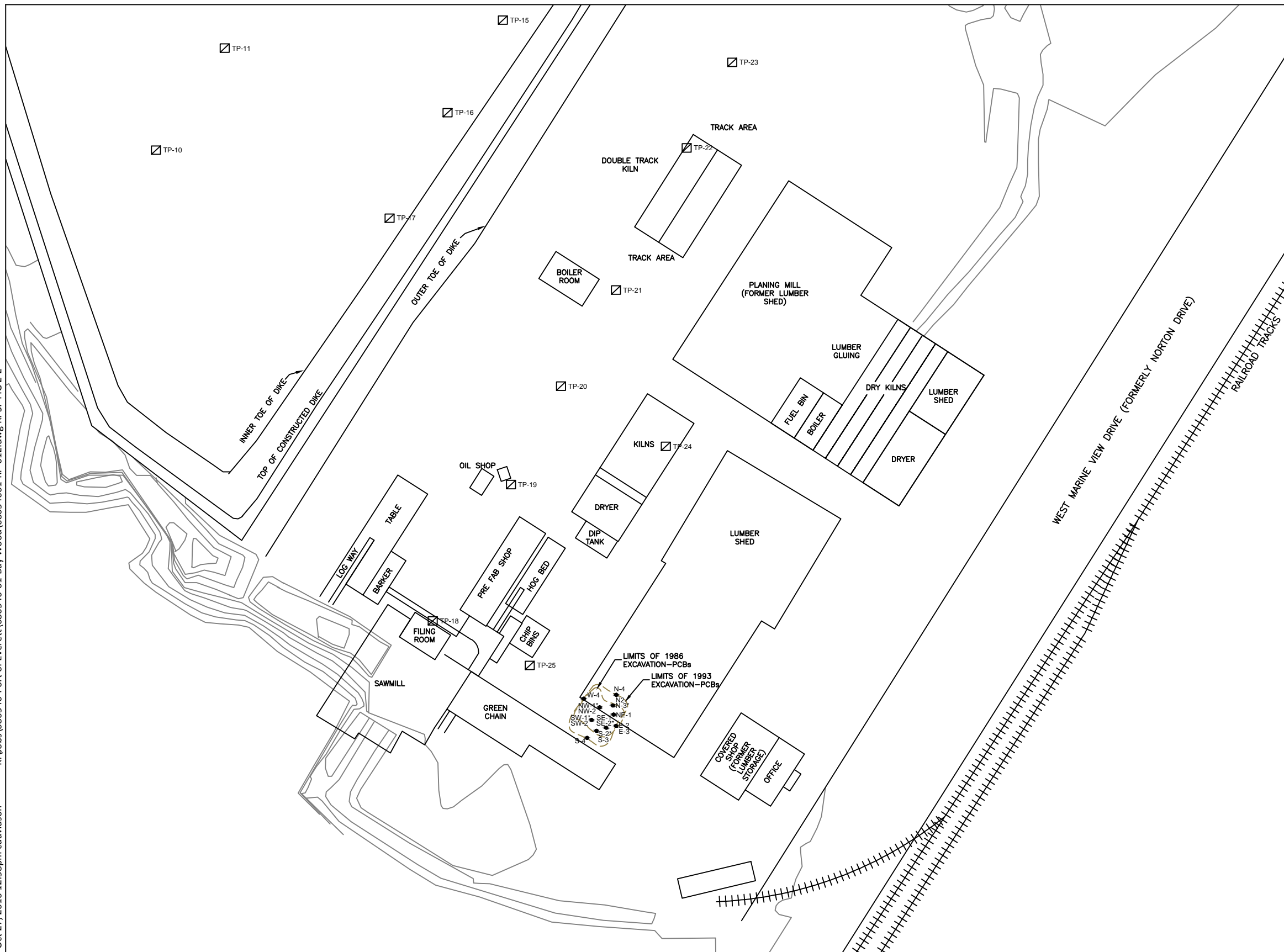


NOTES:

1. OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.
2. JANUARY 1, 1971 PUBLISHER FOREST PRODUCTS PLANT LAYOUT
3. VARIOUS SANBORN MAPS AND AERIAL PHOTOGRAPHS
4. THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DATA ARE NOT GEOREFERENCED AND ACTUAL LOCATIONS MAY VARY. NOT ALL STRUCTURES ARE SHOWN.

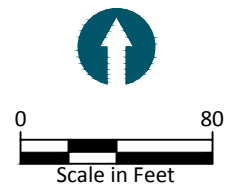
SOURCE: SLR DRAWING "SITE PLAN WITH HISTORICAL SITE FEATURES", DATED OCTOBER 25, 2010.

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-012.dwg RI-SF FIG 2-2
 Oct 27, 2010 12:58pm c davidson



LEGEND:

- N2 SOIL SAMPLE
- * SOIL WAS EXCAVATED FROM THESE AREA AFTER SAMPLING
- ☒ TP-10 TEST PITS (LANDAU 1994)
- ▭ FORMER SITE STRUCTURES



NOTES:

1. OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.
2. JANUARY 1, 1971 PUBLISHER FOREST PRODUCTS PLANT LAYOUT
3. VARIOUS SANBORN MAPS AND AERIAL PHOTOGRAPHS
4. THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DATA ARE NOT GEOREFERENCED AND ACTUAL LOCATIONS MAY VARY. NOT ALL STRUCTURES ARE SHOWN.

SOURCE: SLR DRAWING "SITE PLAND - EASTERN PORTION OF THE STIE", DATED OCTOBER 25, 2010.

\\lorcas\GIS\Jobs\080546-01_Bay_Wood_Products_POE\Maps\2010_03\Actual_Sample_Locations.mxd nkechie 11/03/2010 11:04 AM



- June 2009 Sampling Station
- December 2009 Sampling Station
- Previous Sampling Station
- Tax Parcel - Port of Everett

Aerial Imagery © 2007 ESRI, i-cubed.

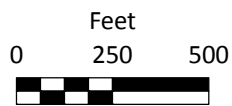
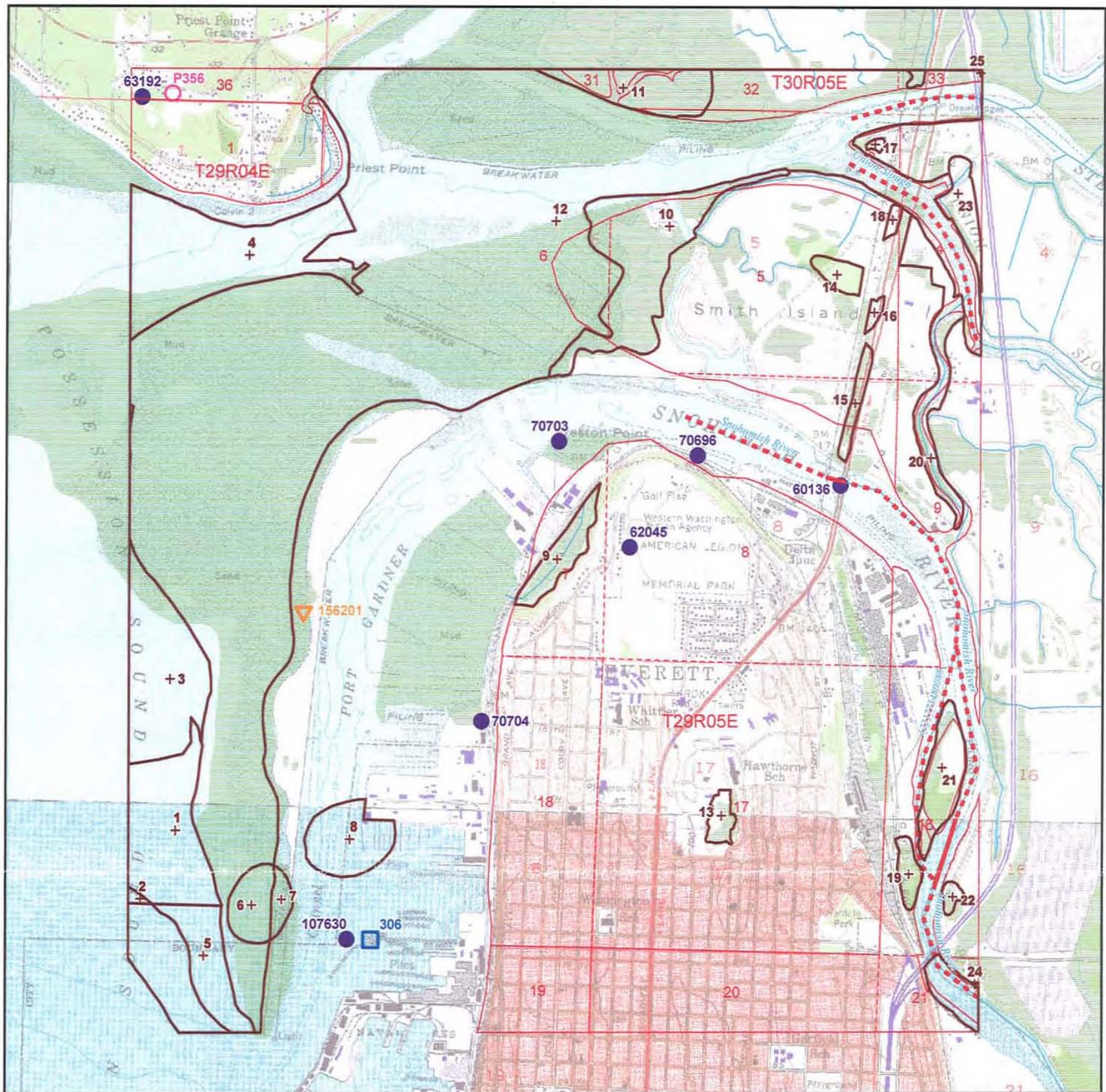


Figure 2-3
Sediment Sampling Stations
Bay Wood Products RI/FS



Washington Department of Fish and Wildlife
HABITATS AND SPECIES MAP
 IN THE VICINITY OF T29R05E SECTION

Map Scale 1:24,000 - Production Date: Sep 10, 2010
 Coordinate System - State Plane South Zone 5626 (NAD83 HPGN)
 Map Designed by WDFW Information Technology Services GIS

PLEASE NOTE

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Locations of mapped wildlife and habitat features are generally within a quarter mile of the locations displayed on this map. Locations of fish and wildlife resources are subject to variation caused by disturbance, changes in season and weather, and other factors. WDFW does not recommend using maps more than six months old and information should not be used for future projects.

For questions about how the information may apply to a specific project or site, contact the WDFW Regional Office for your region at:
<http://wdfw.wa.gov/about/regions/index.html>

MAIN DATA SOURCES

Priority Habitats and Species polygon, Habitat point, Klickitat County Oak, Wildlife Survey Data Management polygon/point, Spotted Owls, Seal/Sea Lion Haulouts, 1:24K streams and fish presence data: Wa. Dept. of Fish and Wildlife. Seabird Colony data: US National Oceanic and Atmospheric Administration. Kelp Bed, Oak Stand, Eelgrass, Turf Algae and Township/Section data: Wa. Dept. of Natural Resources. Wetland data: US Fish and Wildlife Service, National Wetlands Inventory. 1:24K Quadrangle Image: US Geological Survey.

Map Legend

7

Priority Habitats/Species:

- Priority Habitats and Species (PHS) Polygon Borders
- Priority Wildlife Areas (WSDM)
- Priority Wildlife Sites (WSDM)
- Priority Habitat Sites
- Marbled Murrelet Occupancy Sites
- Spotted Owl Sites - Status 1-3
- Spotted Owl Sites - Status 4
- Priority Seabird Colonies
- Priority Seal/Sea Lion Haulouts
- Priority Fish Presence
- National Wetlands Inventory
- Oak Stands
- Kelp Beds
- Eelgrass
- Turf Algae

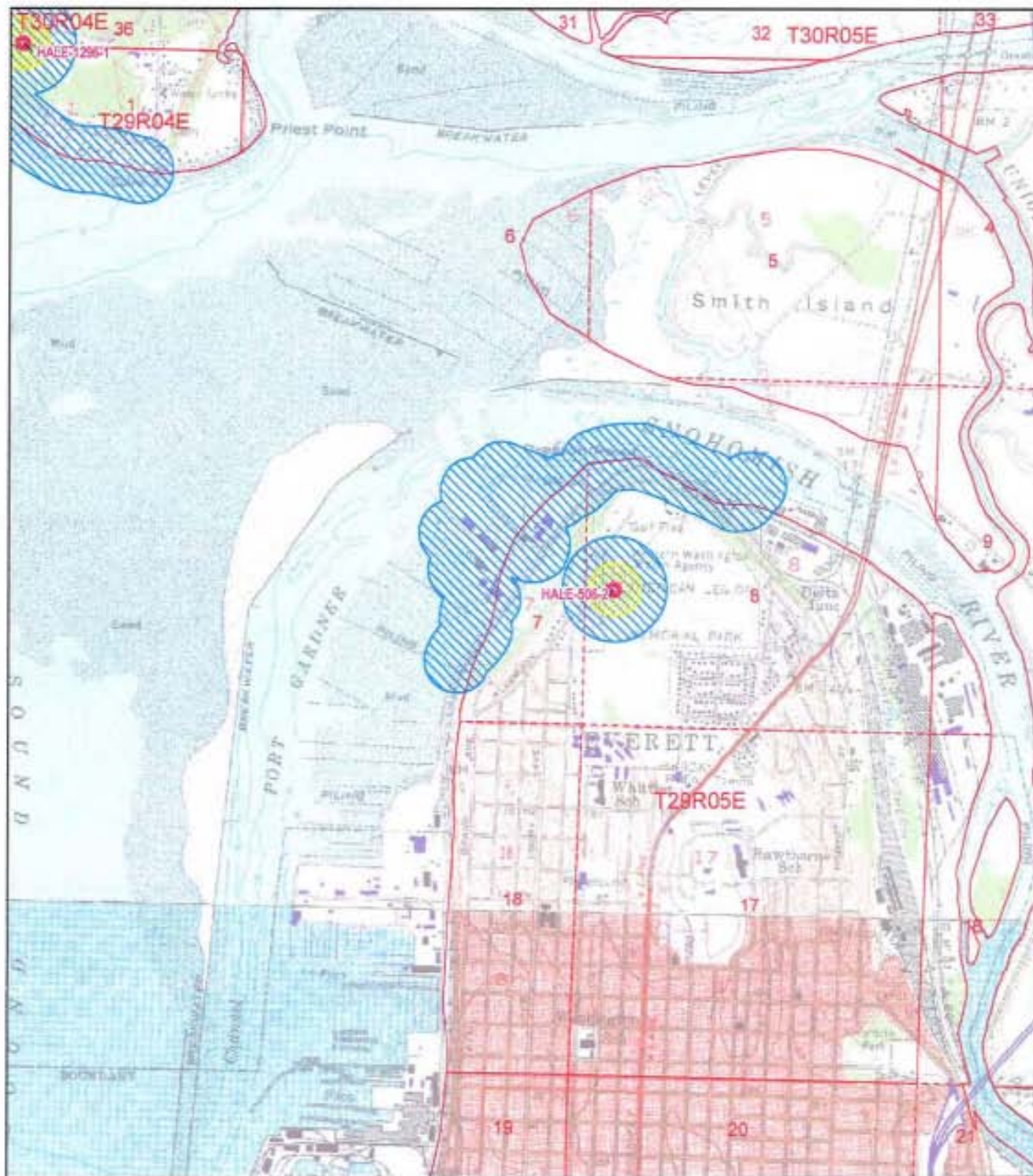
Other Habitats/Species:

- Other Seabird Colonies
- Other Seal/Sea Lion Haulouts
- Spotted Owl Management Circles Established Territory
- Spotted Owl Management Circles Insufficient Evidence to Establish Territory
- Marbled Murrelet Detection Sections (WDFWSTAT 1 through 4)
- Marbled Murrelet 1.5 Mile Buffers (Status 1 through 3)

Other Symbols:

- Rivers and Streams
- Section Lines
- Township Lines





Washington Department of Fish and Wildlife
BALD EAGLE
BUFFER MANAGEMENT ZONE MAP
 IN THE VICINITY OF T29R05E SECTION 7

Map Scale 1:24,000 - Production Date: Sep 10, 2010
 Coordinate System - State Plane South Zone 5626 (NAD83 HPGN)
 Map Designed by WDFW Information Technology Services GIS

MAP INFORMATION
 This map is intended to help you determine if a Bald Eagle Management Plan (BEMP) is needed for your project. A BEMP is a habitat protection agreement between Washington Department of Fish and Wildlife (WDFW) and a landowner ensuring minimal impact on bald eagles and reasonable land use for the owner. For a list of bald eagle management contacts and a fact sheet that addresses frequently asked questions, visit the following WDFW web site at:
http://wdfw.wa.gov/wfm/diversity/eoc/baldeagle/eagle_management.htm

PLEASE NOTE
 All fish and wildlife species are vulnerable to harm from human activities. By receiving information on this map, from the Washington Department of Fish and Wildlife (WDFW), you incur an obligation to use it in a way that does not cause undue harm to our public fish and wildlife resources.

DISCLAIMER
 This map only includes information that WDFW maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the locations of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources.

This information is highly variable regarding source, some of it is based on field surveys while others are based on "best professional judgement" of the biologist involved. This information has been generalized for the release to the general public. For questions about how the information may apply to a specific project or site, contact the WDFW Regional Office for your region. Contact information available online at:
<http://wdfw.wa.gov/about/regions/index.html>

MAIN DATA SOURCES
 Priority Habitat and Species polygon, Wildlife Survey Data Management polygon/point, and Bald Eagle Buffer Data: Washington Department of Fish and Wildlife.

Township/Section Data: Washington Department of Natural Resources.
 1:24K Quadrangle Image: US Geological Survey.

Map Legend

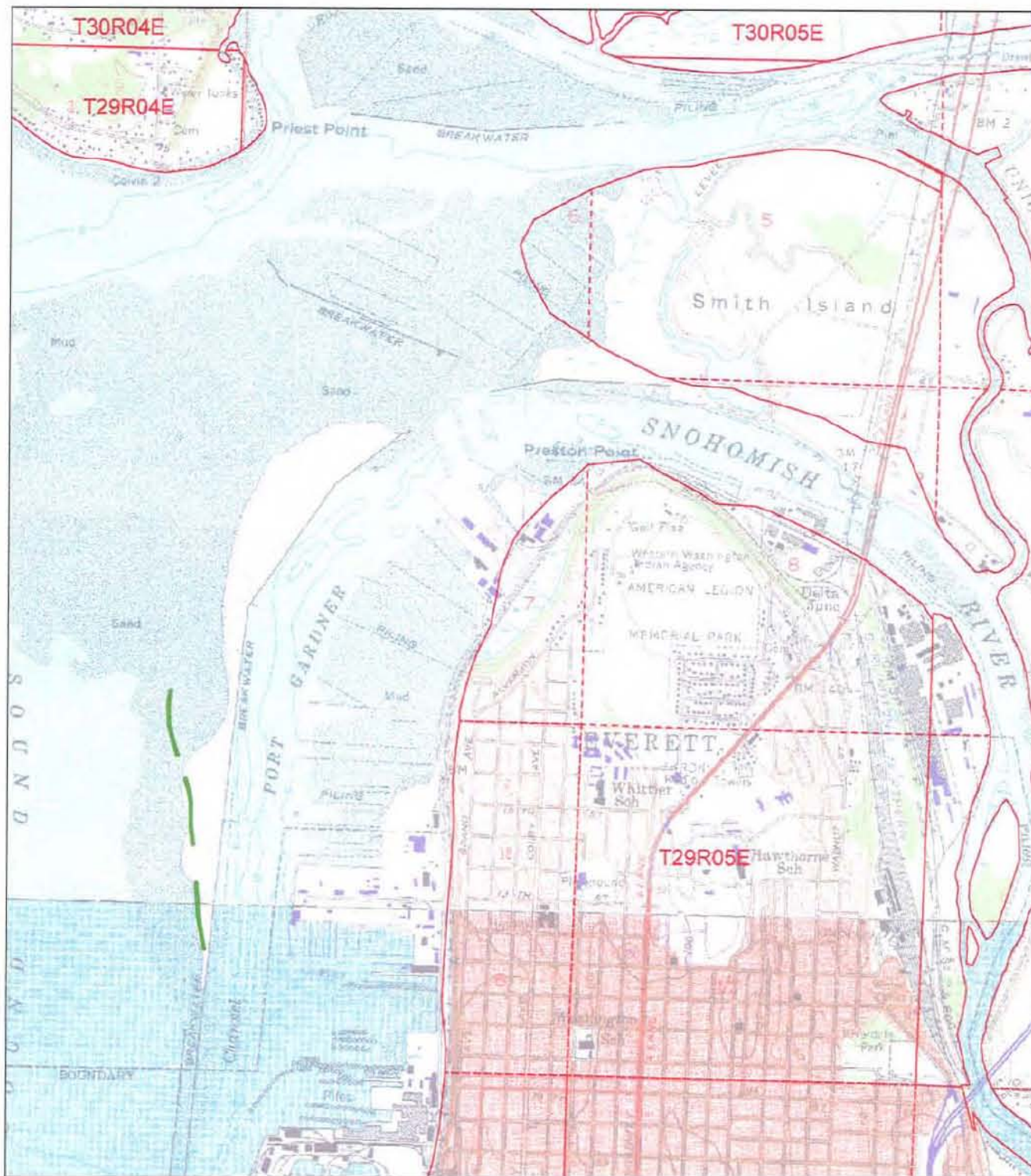
Bald Eagle Information:

- Nest Site (Species Code-Occurrence-Sequence)
- Communal Roost Site (Species Code-Occurrence-Sequence)
- Communal Roost Area
- 400 Foot Nest Buffer
- 800 Foot and Shoreline Nest Buffer
- 1,320 Foot Communal Roost Buffer

Other Symbols:

- Section Lines
- Township Lines





Washington Department of Fish and Wildlife
**SURF SMELT, SAND LANCE, ROCK SOLE
 AND HERRING MAP**
 IN THE VICINITY OF T29R05E SECTION 7

Map Scale 1:24,000 - Production Date: Sep 10, 2010
 Coordinate System - State Plane South Zone 5626 (NAD83 HPGN)
 Map Designed by WDFW Information Technology Services GIS

PLEASE NOTE

All Fish and wildlife species are vulnerable to harm from human activities. By receiving information on this map, from the Washington Department of Fish and Wildlife (WDFW), you incur an obligation to use it in a way that does not cause undue harm to our public fish and wildlife resources.

DISCLAIMER

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MAIN DATA SOURCES

Marine Resources and Forage Fish Survey Data: Washington Department of Fish and Wildlife.
 Township/Section Data: Washington Department of Natural Resources.
 1:24K Quadrangle Image: US Geological Survey.

Map Legend

Forage Fish/Marine Resources Data:

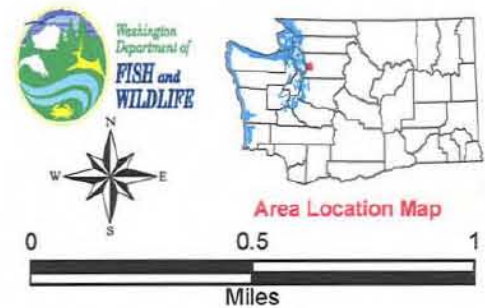
- Documented Surf Smelt Spawning Areas
- Documented Sand Lance Spawning Areas
- Documented Rock Sole Spawning Areas
- Documented Herring Spawning Areas
- Documented Herring Holding Areas
- Potential Surf Smelt/Sand Lance Spawning Areas

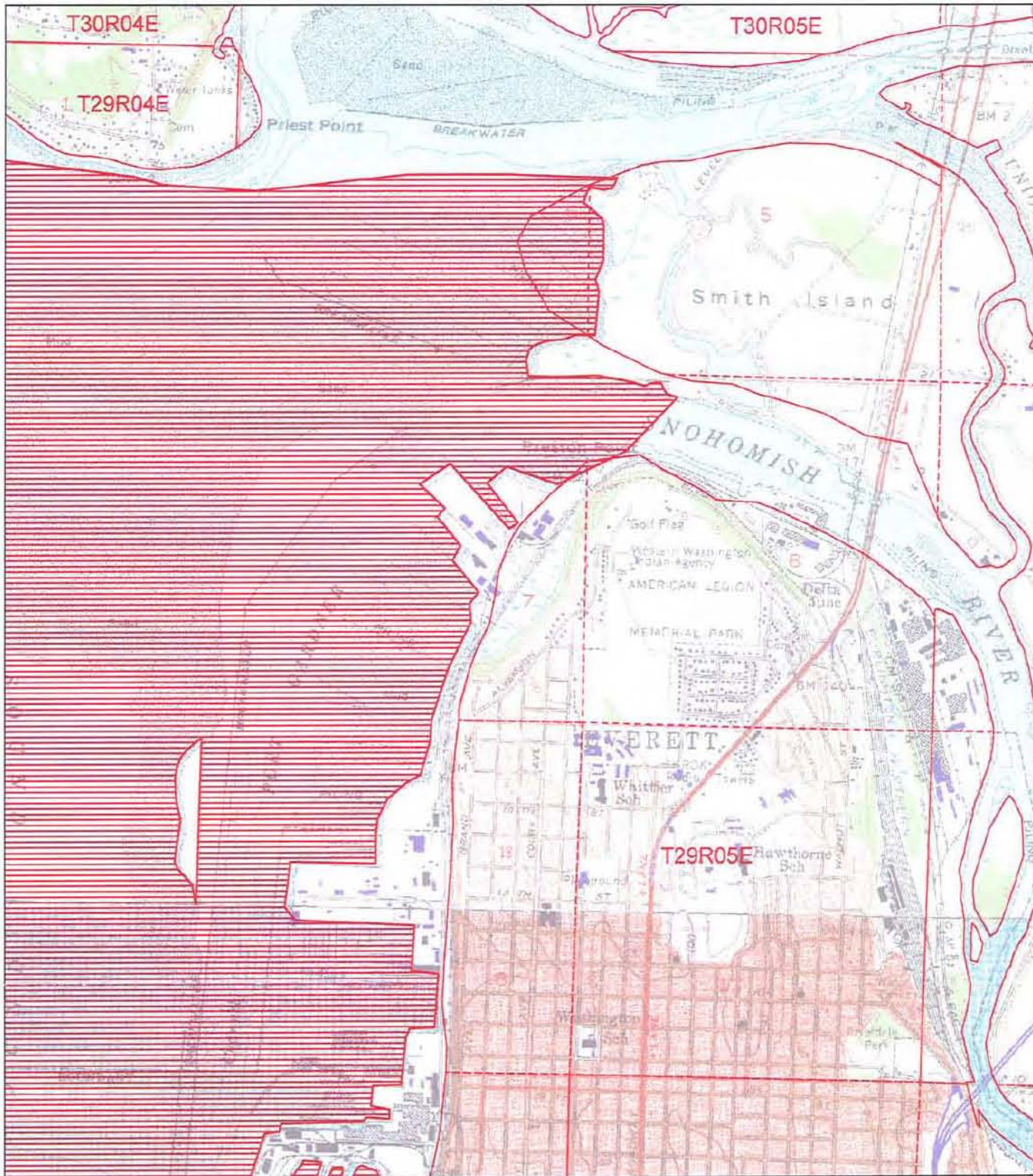
Other Symbols:

- Section Lines
- Township Lines

NOTE:

The spawning information for surf smelt, sand lance and rock sole are offset from the shoreline for display purposes only. The typical depths for herring spawning are +3 feet to -20 feet (MLLW).





Washington Department of Fish and Wildlife
**DUNGENESS CRAB, PANDALID SHRIMP
 AND SEA URCHIN MAP**
 IN THE VICINITY OF T29R05E SECTION 7

Map Scale 1:24,000 - Production Date: Sep 10, 2010
 Coordinate System - State Plane South Zone 5626 (NAD83 HPGN)
 Map Designed by WDFW Information Technology Services GIS

Map Legend

Marine Resources Data:

- Sea Urchin
- Dungeness Crab
- Pandalid Shrimp

Other Symbols:

- Section Lines
- Township Lines

PLEASE NOTE
 All Fish and wildlife species are vulnerable to harm from human activities. By receiving information on this map, from the Washington Department of Fish and Wildlife (WDFW), you incur an obligation to use it in a way that does not cause undue harm to our public fish and wildlife resources.

DISCLAIMER
 This map only includes information that WDFW maintains in a central computer database. It is not an attempt to provide you with an official agency response as to the impacts of your project on fish and wildlife. This information only documents the locations of fish and wildlife resources to the best of our knowledge. It is not a complete inventory and it is important to note that fish and wildlife resources may occur in areas not currently known to WDFW biologists, or in areas for which comprehensive surveys have not been conducted. Site specific surveys are frequently necessary to rule out the presence of priority resources.

This information is highly variable regarding source, some of it is based on field surveys while others are based on "best professional judgement" of the biologist involved. This information has been generalized for the release to the general public. For questions about how the information may apply to a specific project or site, contact the WDFW Regional Office for your region. Contact information available online at:
<http://wdfw.wa.gov/about/regions/index.html>

MAIN DATA SOURCES
 Marine Resources Data: Washington Department of Fish and Wildlife.
 Township/Section Data: Washington Department of Natural Resources.
 1:24K Quadrangle Image: US Geological Survey.

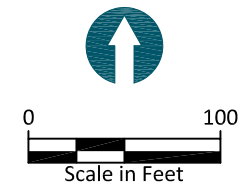


Jan 10, 2011 2:39pm S:\GETVAR,?? N:\Portland\Figures\BAY WOOD_Updated January 2010\FIGS 2-1 AND 4-1\08054601-RP-011.dwg RL-SF FIG 4-1



LEGEND:

- FORMER SITE FEATURES
- GEOPROBE BORING LOCATION (SLR 2009)
- SOIL STOCKPILE COMPOSITE SAMPLE LOCATION (SLR 2009)
- MONITORING WELL LOCATION (SLR 2010)
- INCOMPLETE MONITORING WELL (MET REFUSAL)



NOTES:



1. OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.
2. JANUARY 1, 1971 PUBLISHER FOREST PRODUCTS PLANT LAYOUT
3. VARIOUS SANBORN MAPS AND AERIAL PHOTOGRAPHS
4. THIS DRAWING IS FOR CONCEPTUAL PURPOSES ONLY. DATA ARE NOT GEOREFERENCED AND ACTUAL LOCATIONS MAY VARY. NOT ALL STRUCTURES ARE SHOWN.

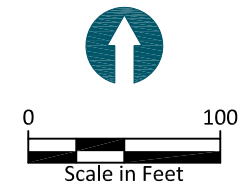
SOURCE: SLR DRAWING "SITE PLAN WITH 2009 UPLAND SAMPLING LOCATIONS", DATED OCTOBER 25, 2010.

Jan 10, 2011 2:31pm \$(GETVAR,?) N:\Portland\Figures\BAY WOOD_Updated January 2010\FIG 4-2_08054601-RP-013.dwg RI-FS FIG 4-2



LEGEND:

-  SOIL STOCKPILE COMPOSITE SAMPLE LOCATION (JUNE 2009, SLR)
-  STOCKPILE LOCATION OUTLINES AS MEASURED BY ANCHOR QEA ON 12/18/2009 AND ESTIMATED EXTENT OF SOIL IN STOCKPILES WITH cPHAS ABOVE PCLs






SOURCE: AERIAL PHOTOGRAPH FROM GOOGLE EAGLE PRO, LICENSED TO SLR INTERNATIONAL CORP. PHOTOGRAPH DATED NOVEMBER 9, 2007.

SLR DRAWING "ESTIMATED EXTENT OF SOIL IN STOCKPILES WITH CPAHS ABOVE PCLs", DATED NOVEMBER 20, 2010.

Oct 27, 2010 1:04pm cdavidson K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-001.dwg RI-FS FIG 5-1

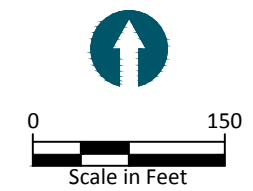


LEGEND:

-  GEOPROBE BORING (SLR 2009)
-  CROSS SECTION LOCATION
-  SHORELINE SURFACE SOIL/SEDIMENT ASSESSMENT LOCATION

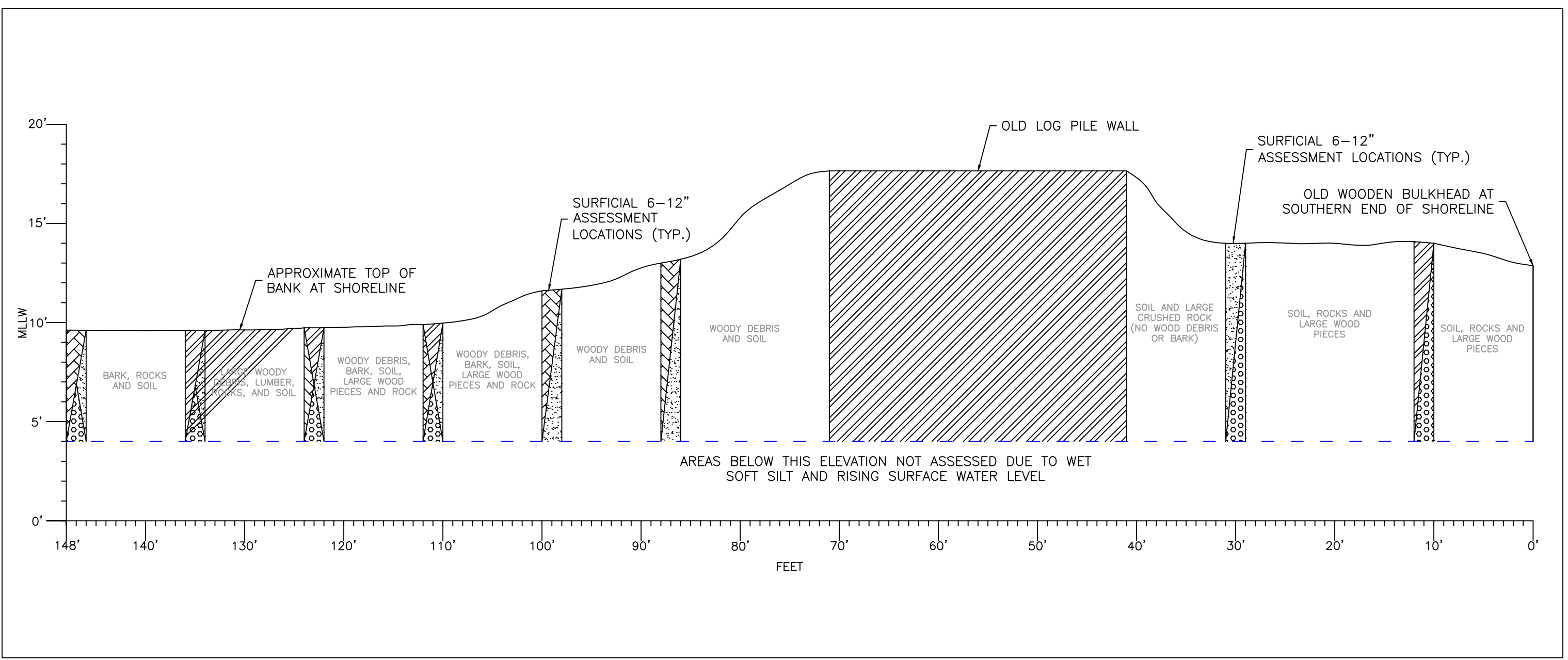
SOURCE: PREPARED FROM DRAWING PROVIDED BY SLR DATED MARCH 20, 2010.






NOTE: AERIAL PHOTOGRAPH FROM ESRI 2007 IMAGERY.

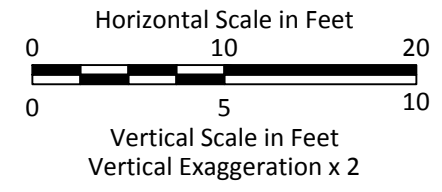


K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-003.dwg RI-FS FIG 5-2

Oct 27, 2010 1:05pm cdavidson



- LEGEND:**
-  APPROXIMATE WATER LINE AT TIME OF ASSESSMENT
 -  SAND/SOIL
 -  ROCK
 -  WOOD DEBRIS /WOOD BARK
 -  LARGE WOOD, STRUCTURAL, BULK HEAD



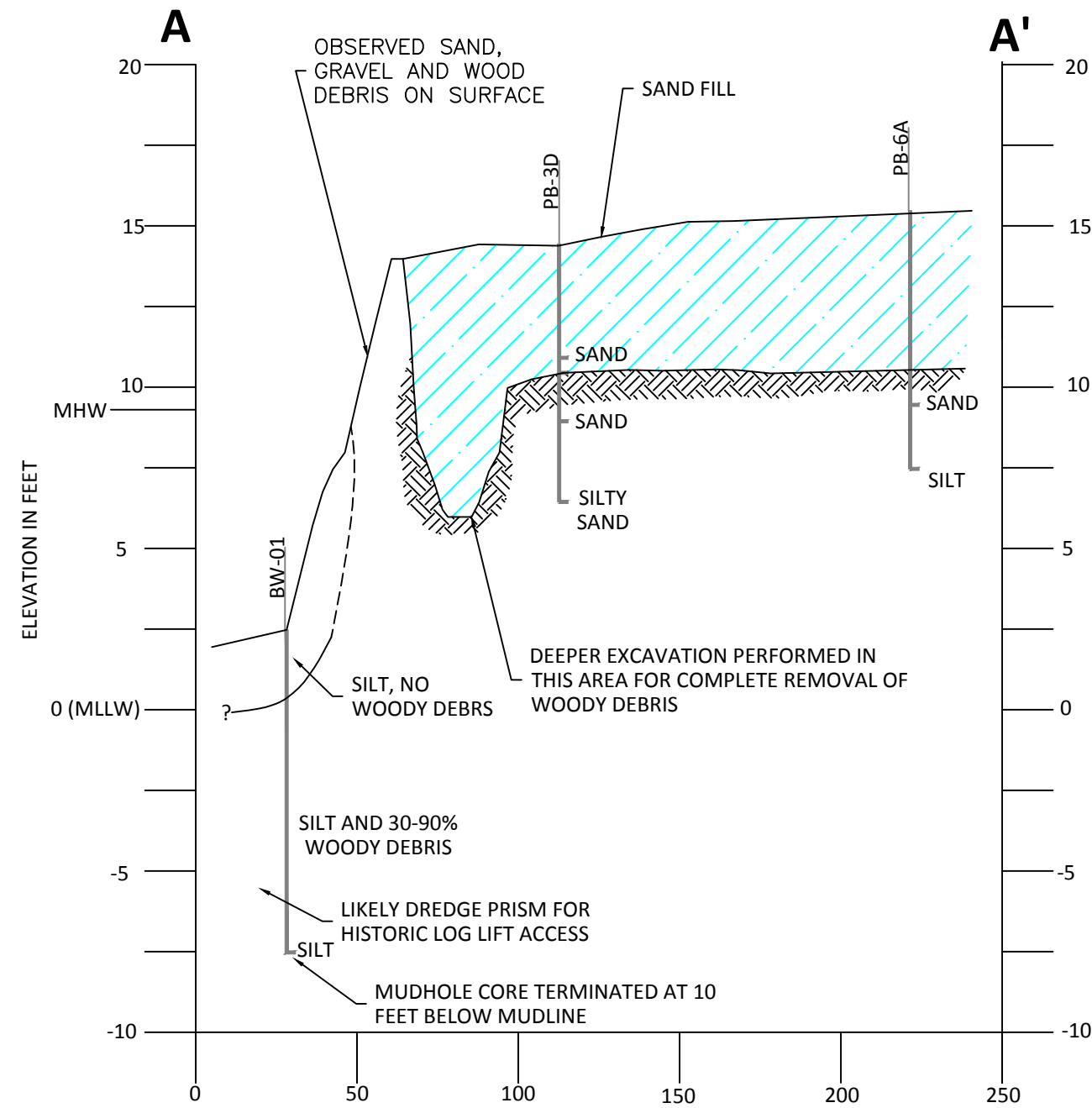
SOURCE: PREPARED FROM DRAWING PROVIDED BY SLR DATED MARCH 31, 2010.

NOTE: GREY TEXT INDICATES MATERIAL ASSUMED TO BE PRESENT BASED ON SURFACE OBSERVATIONS AND THE ADJACENT HAND TOOL EXCAVATED ASSESSMENT LOCATIONS.

Figure 5-2
Shoreline Survey
Bay Wood Products RI/FS



K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-004.dwg RI-FS FIG 5-3
 Oct 27, 2010 1:07pm cdavidson



LEGEND:

- SAND FILL PLACED ~1996 (APPROXIMATE PROFILE)
- SUBGRADE SOIL PRIMARILY SAND, SILT, AND GRAVEL

SOURCE: PREPARED FROM DRAWING PROVIDED BY SLR DATED APRIL 1, 2010.

NOTE: ELEVATIONS COMPILED FROM:

OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.

FEBRUARY 2005 FIELD SURVEY COMPLETED BY METRON AND ASSOCIATES INC., ARLINGTON, WASHINGTON

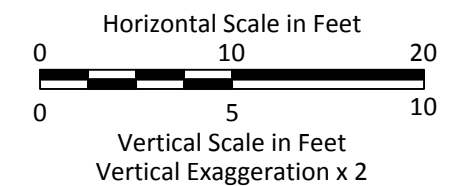


Figure 5-3
 Cross Section A-A'
 Bay Wood Products RI/FS

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-004.dwg RI/FS FIG 5-4
Apr 20, 2011 9:30am dholmer

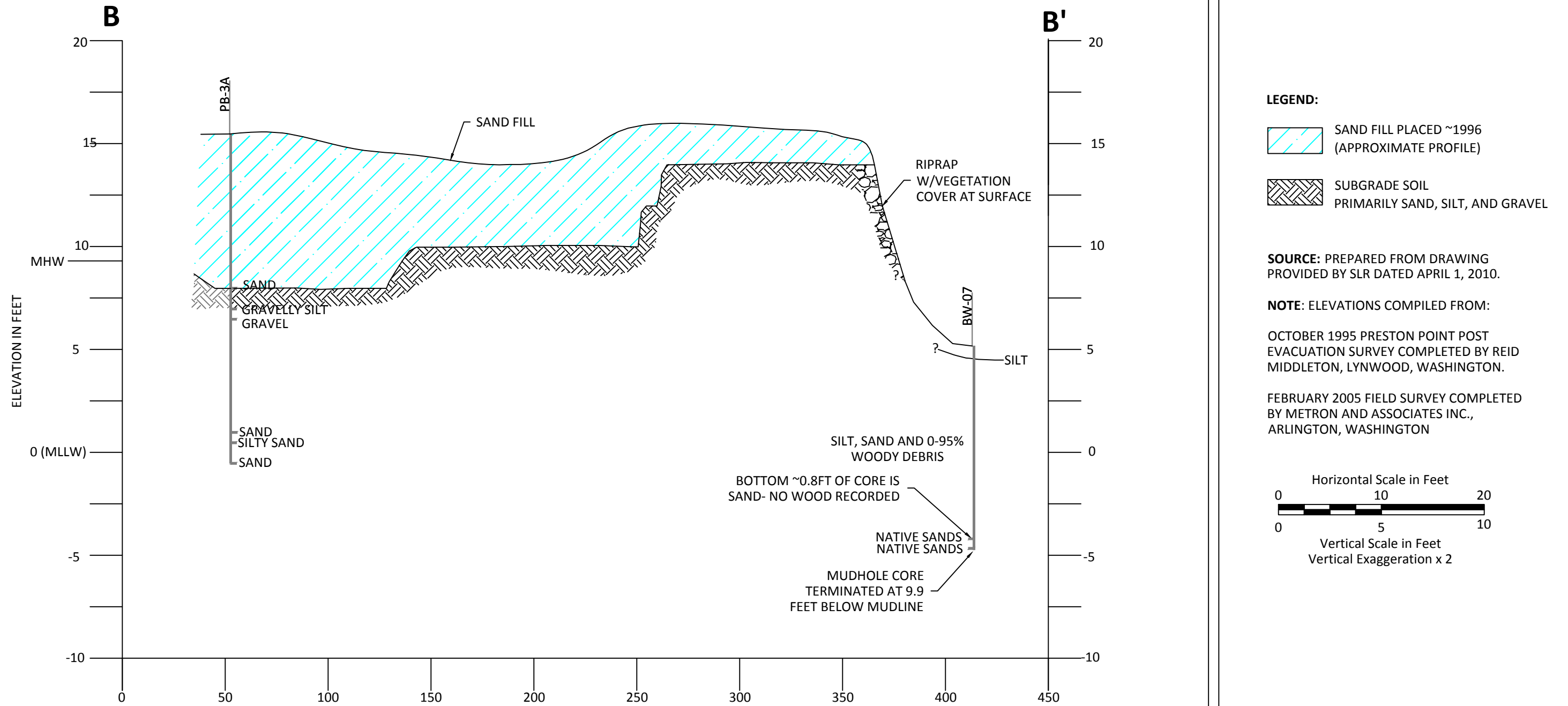
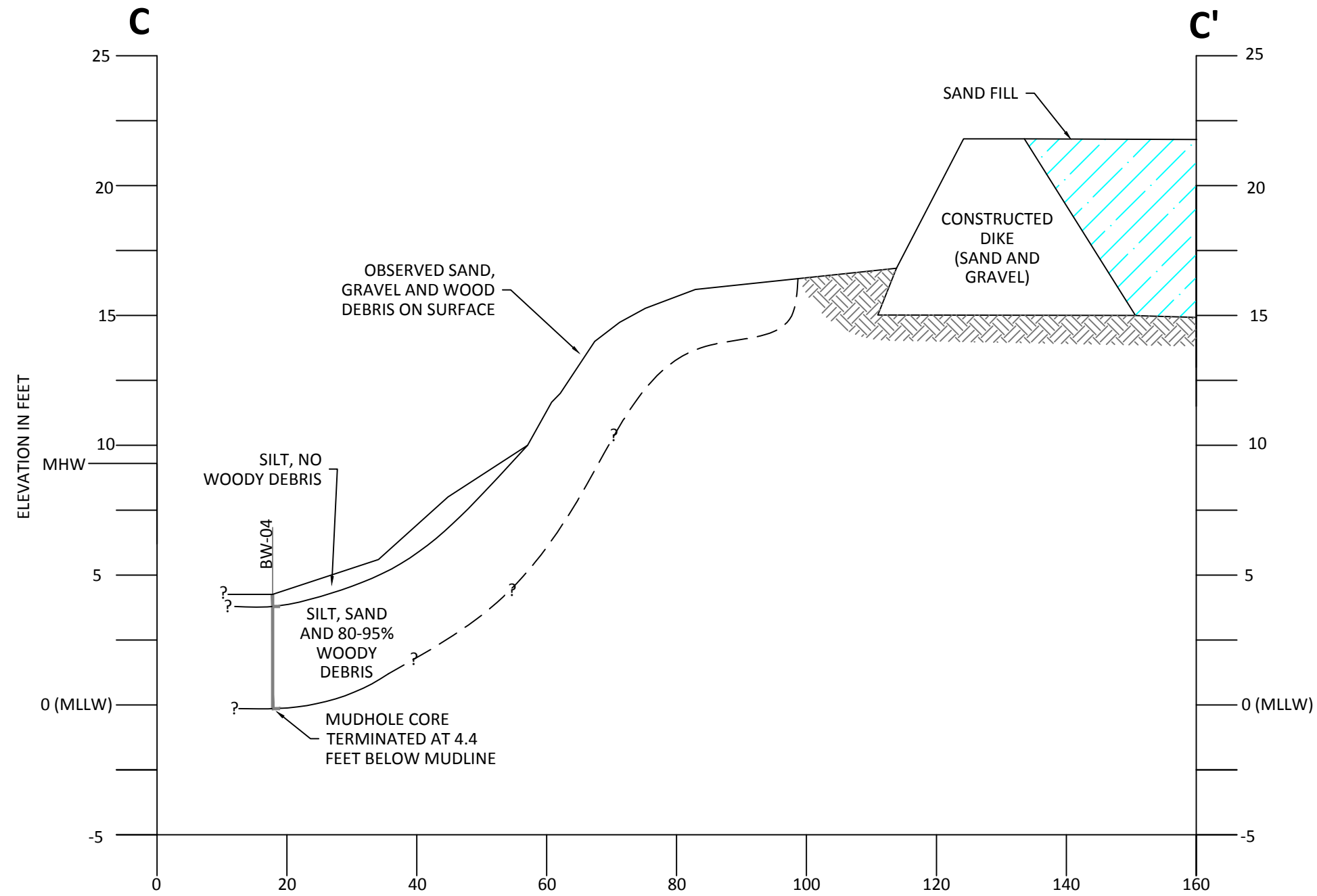




Figure 5-4
Cross Section B-B'
Bay Wood Products RI/FS

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-004.dwg RI-FS FIG 5-5
Oct 27, 2010 1:09pm cavidson



LEGEND:

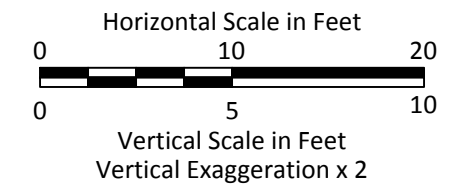
-  SAND FILL PLACED ~1996 (APPROXIMATE PROFILE)
-  SUBGRADE SOIL PRIMARILY SAND, SILT, AND GRAVEL

SOURCE: PREPARED FROM DRAWING PROVIDED BY SLR DATED APRIL 1, 2010.

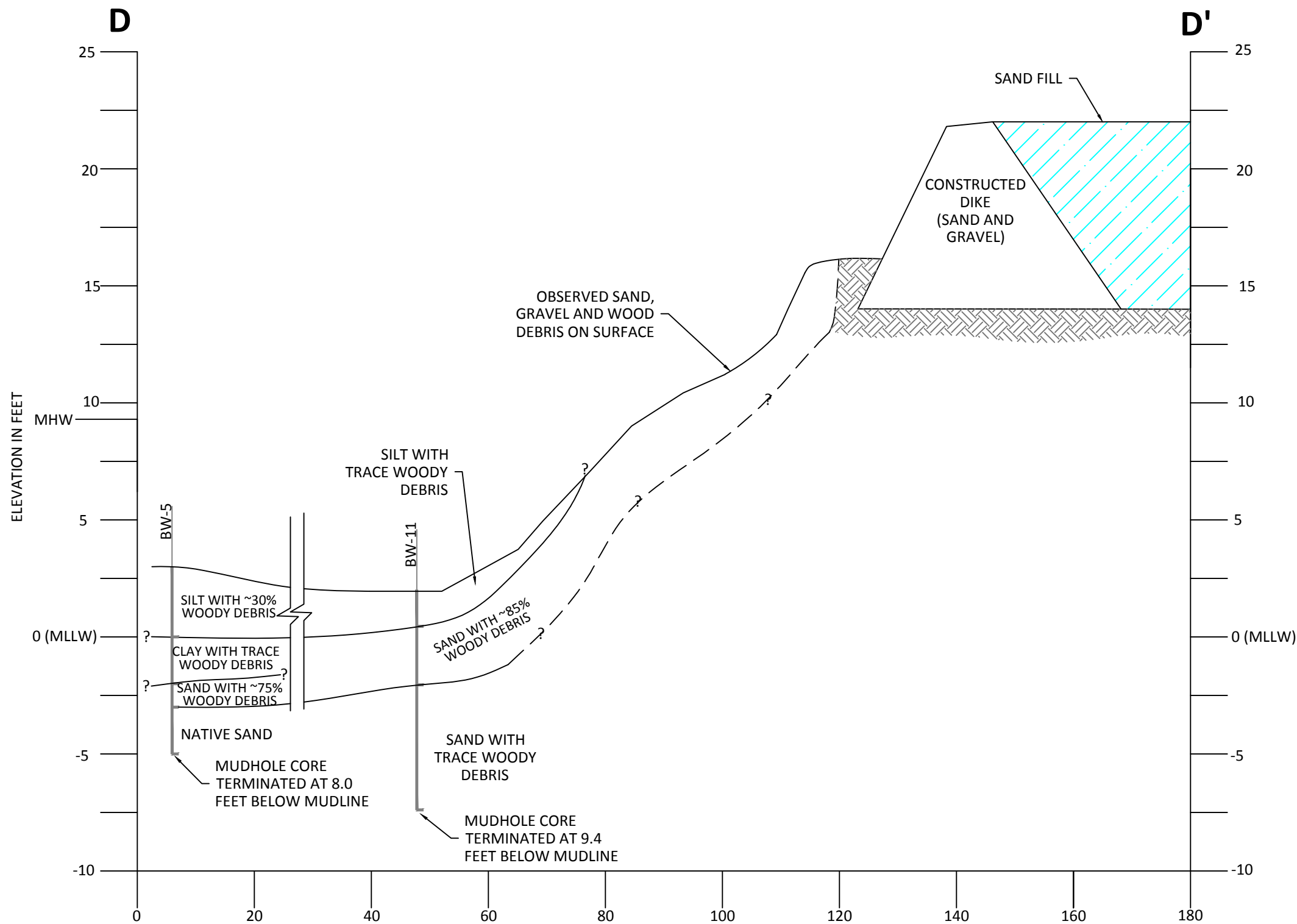
NOTE: ELEVATIONS COMPILED FROM:

OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.

FEBRUARY 2005 FIELD SURVEY COMPLETED BY METRON AND ASSOCIATES INC., ARLINGTON, WASHINGTON



K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-004.dwg RI-FS FIG 5-6
Oct 27, 2010 1:10pm cdavidson



LEGEND:

- SAND FILL PLACED ~1996 (APPROXIMATE PROFILE)
- SUBGRADE SOIL PRIMARILY SAND, SILT, AND GRAVEL

SOURCE: PREPARED FROM DRAWING PROVIDED BY SLR DATED APRIL 1, 2010.

NOTE: ELEVATIONS COMPILED FROM:
OCTOBER 1995 PRESTON POINT POST EVACUATION SURVEY COMPLETED BY REID MIDDLETON, LYNWOOD, WASHINGTON.
FEBRUARY 2005 FIELD SURVEY COMPLETED BY METRON AND ASSOCIATES INC., ARLINGTON, WASHINGTON

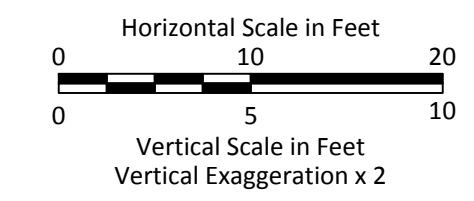


Figure 5-6
Cross Section D-D'
Bay Wood Products RI/FS



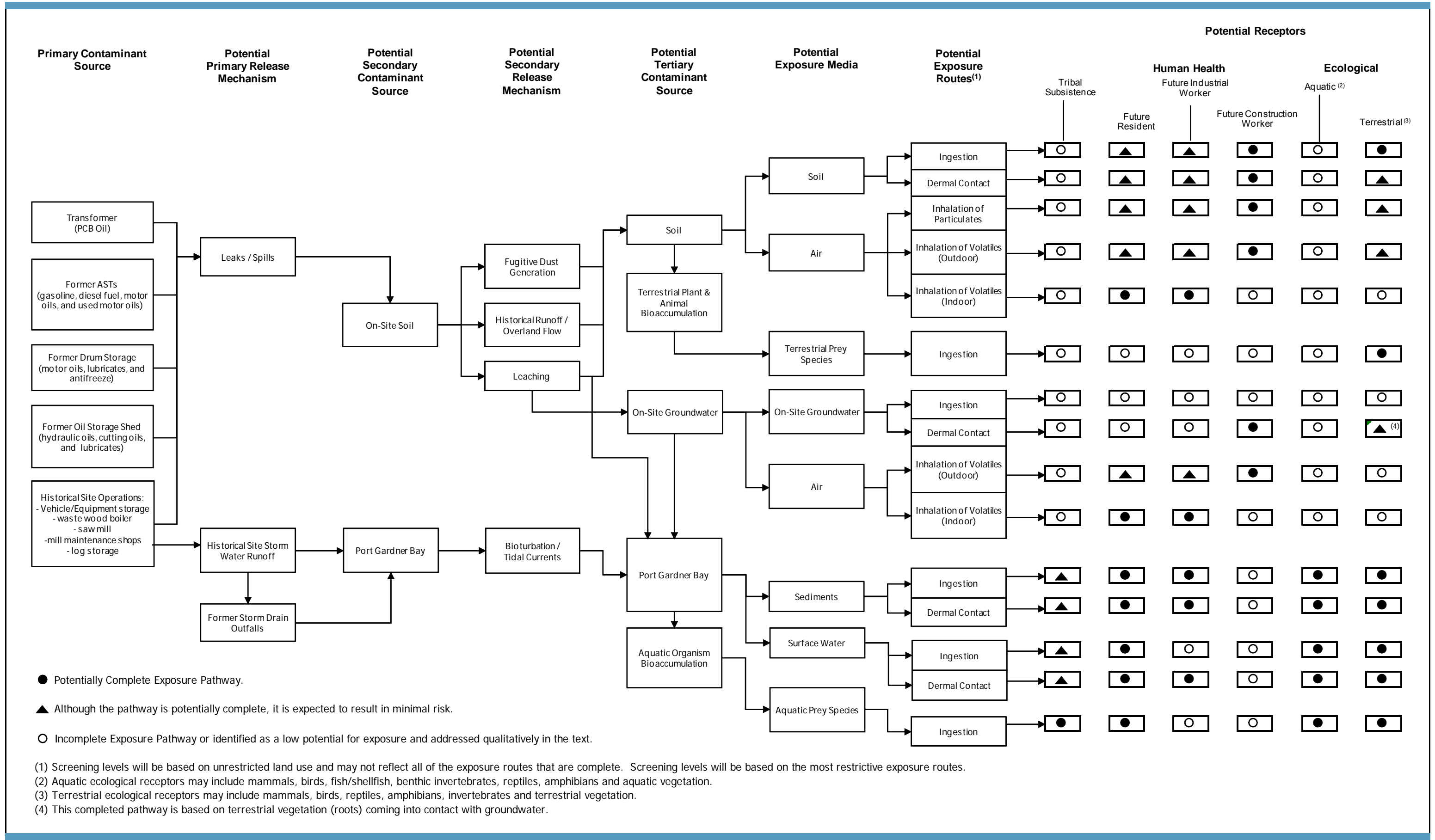
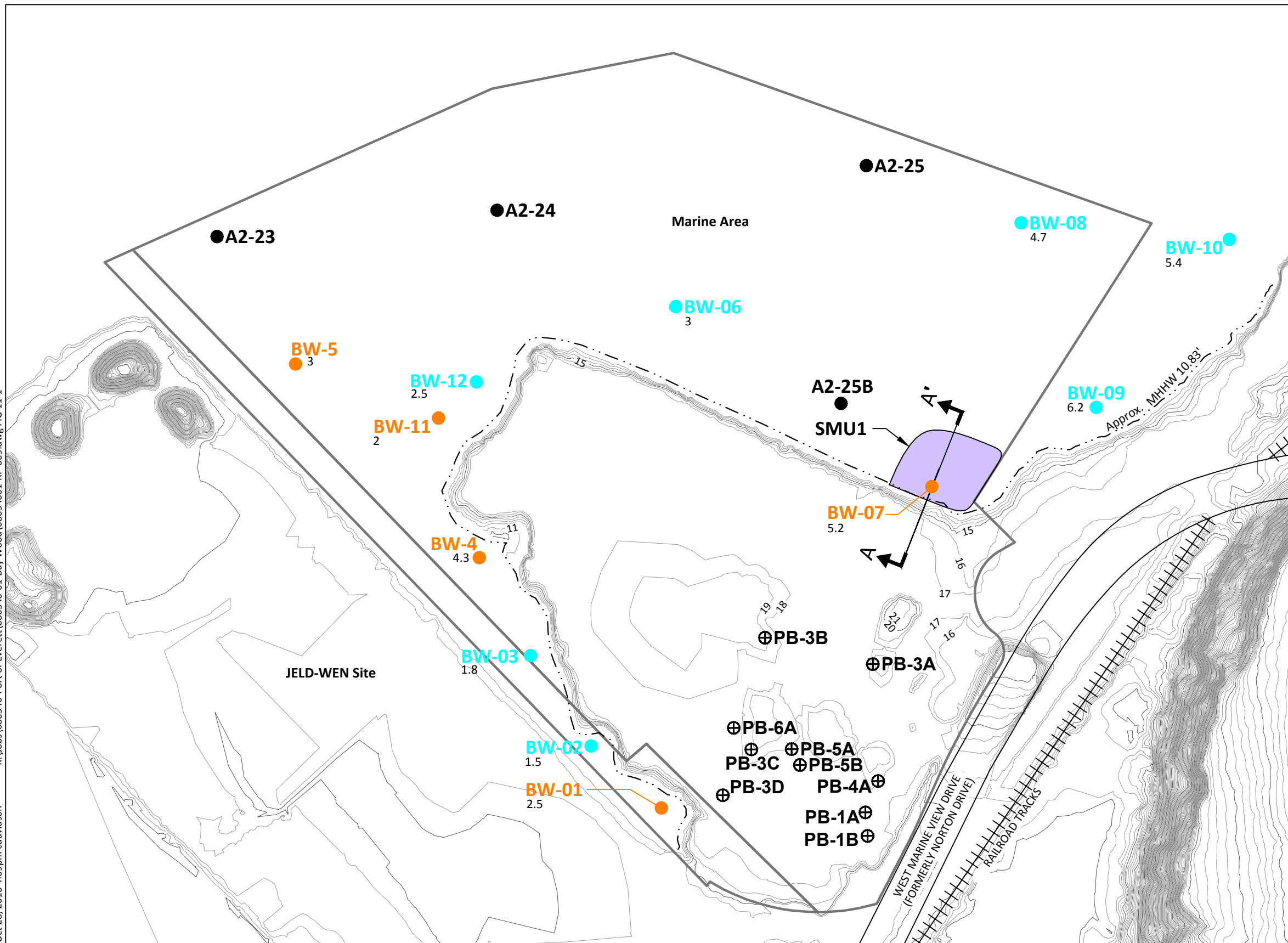


Figure 6-1
Upland Conceptual Site Model
Bay Wood Products RI/FS

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-009.dwg FIG 11-1
 Oct 28, 2010 4:09pm cdavidson



LEGEND:

- June 2009 Sampling Location
- December 2009 Sampling Location
- Previous Sampling Location
- ⊕ Geoprobe Boring (SLR 2009) (Approximate Location)
- 1.8 Sample Elevation in Feet (MLLW)
- 15— Topographic Contour Elevation in Feet (MLLW)
- - - MHHW Line approximated using LIDAR Topography Trends MHHW 10.83 Ft
- Tax Parcel
- ↑ AA' ↑ Cross Section Location
- SMU Location

SOURCE: Prepared from drawing provided by SLR dated March 20, 2010.
 Upland topography based on LIDAR data.

HORIZONTAL DATUM: NAD83 WA SP N
VERTICAL DATUM: MLLW

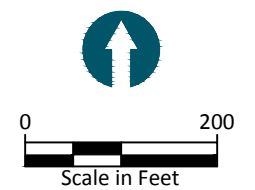
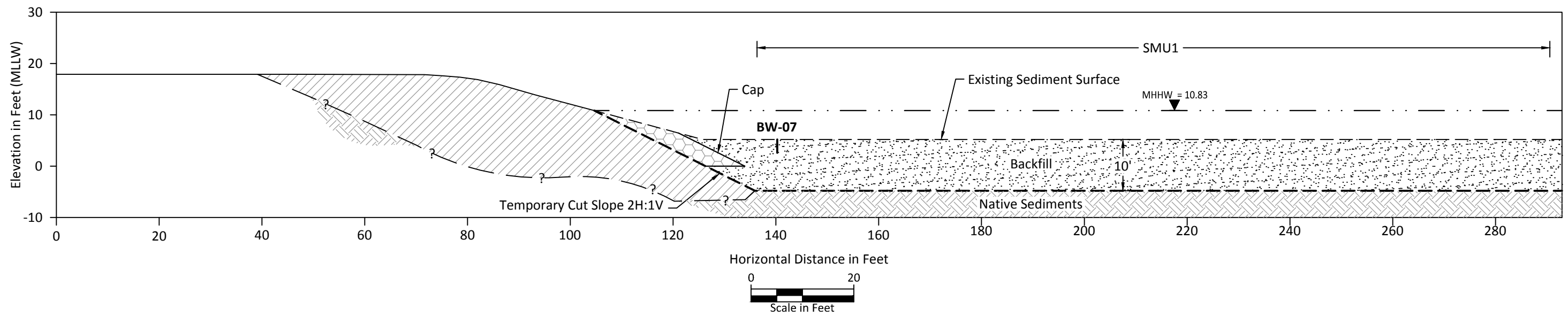


Figure 11-1

SMU-1 Plan View
 Bay Wood Products RI/FS

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\08054601-RP-008.dwg FIG 11-2 Alt 1

Oct 28, 2010 4:10pm cdavidson




LEGEND:

--- Assumed Ground Surface from LIDAR Trend and Sample Core Elevation Data

— Existing Ground Surface from LIDAR

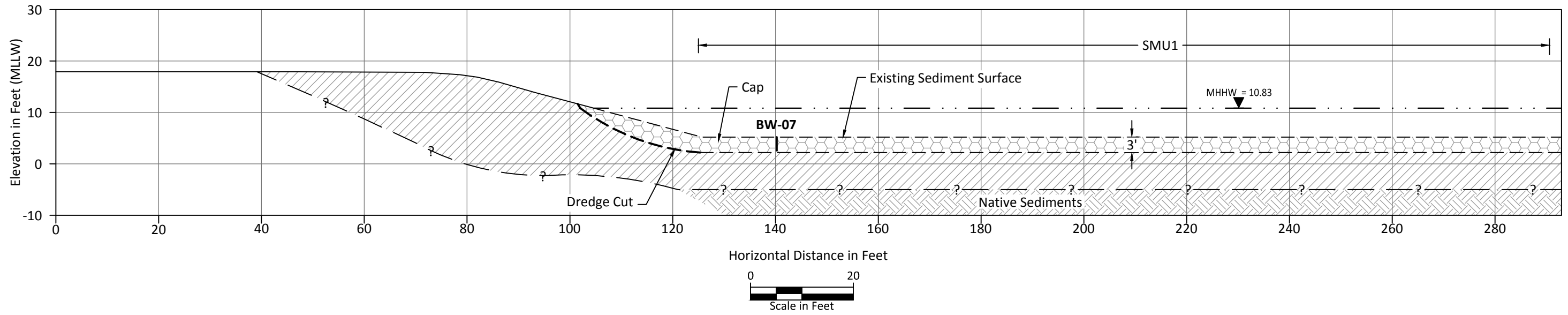
BW-07 Core Location and Number



 Woody Debris Potentially Remaining Post Remedy

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\080546-01-Alt 2

Oct 28, 2010 4:11pm cdavidson



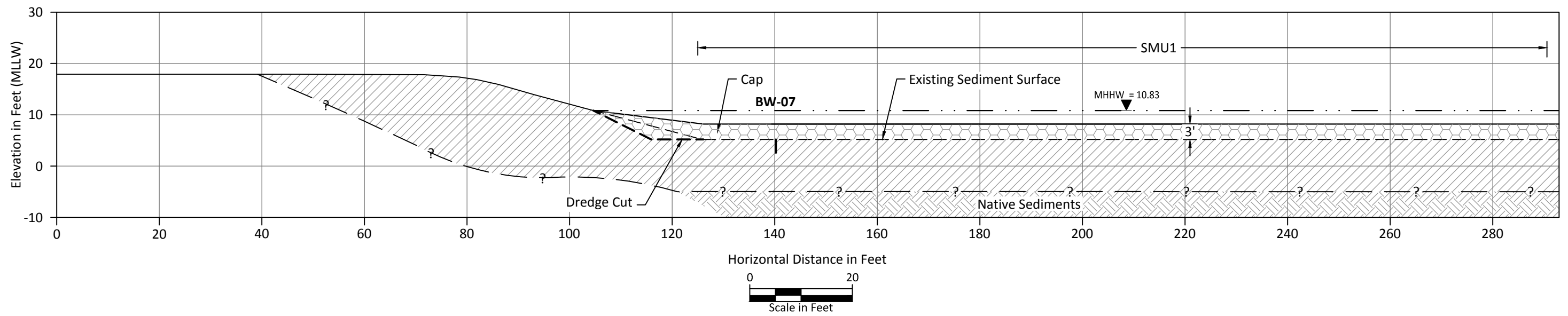
LEGEND:

- Assumed Ground Surface from LIDAR Trend and Sample Core Elevation Data
- Existing Ground Surface from LIDAR

Woody Debris Potentially Remaining Post Remedy


BW-07 Core Location and Number
|

K:\Jobs\080546-Port of Everett\080546-01-Bay Wood\080546-01-Bay Wood\080546-01-Alt 3



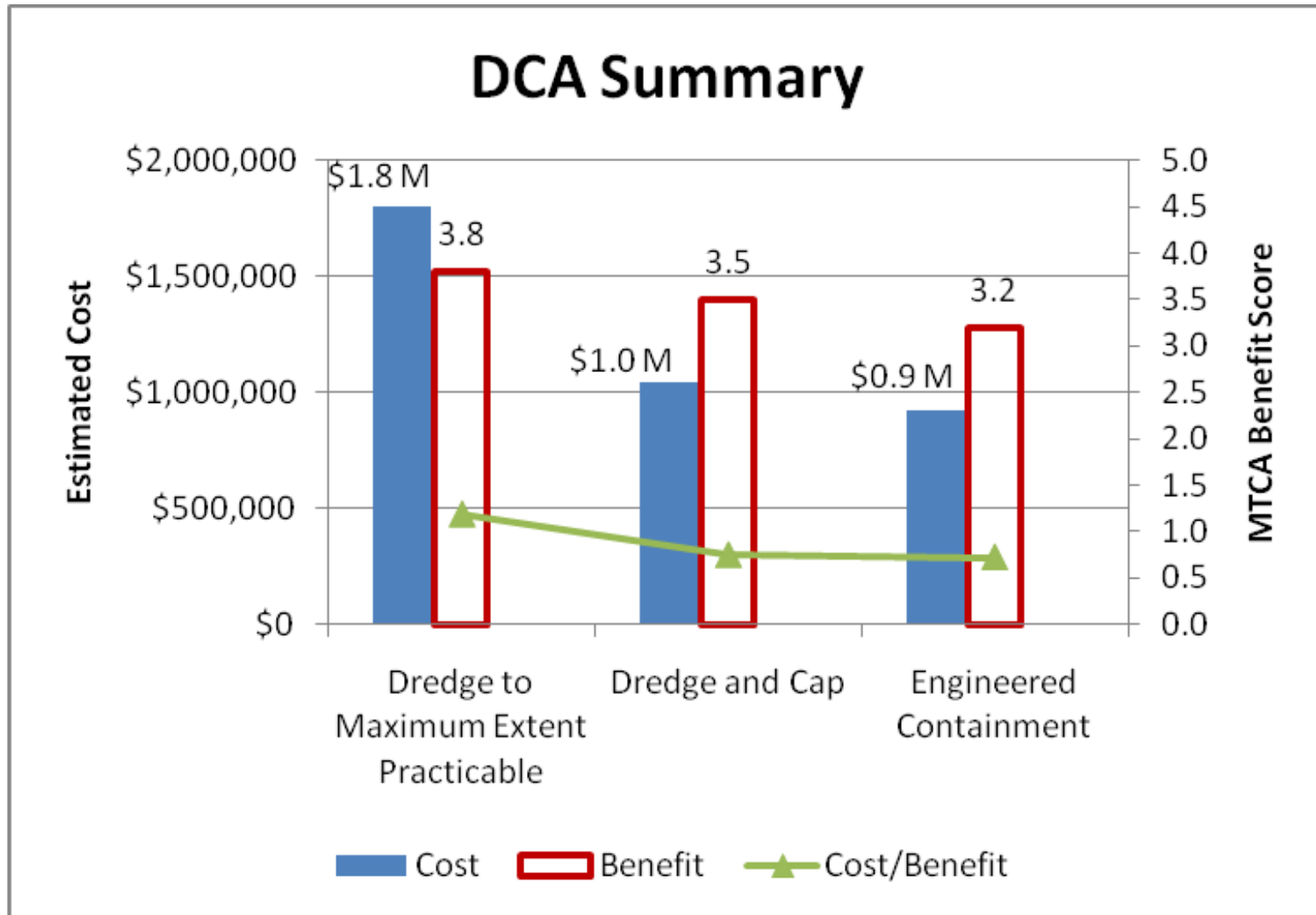
LEGEND:

- Assumed Ground Surface from LIDAR Trend and Sample Core Elevation Data
- Existing Ground Surface from LIDAR

 Woody Debris Potentially Remaining Post Remedy

BW-07 Core Location and Number
|

Oct 28, 2010 4:11pm cdavidson



APPENDIX A
SOIL BORING LOGS



1800 Blankenship Rd; Suite 440
 West Linn, Oregon 97068
 Telephone: (503) 723-4423
 Fax: (503) 723-4436

BORING NUMBER PB-1A

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 4.0 ft
LOGGED BY C.Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0		ML		0.5 SILT: brown, trace grass roots, moist SAND: brown, fine-grained, trace fine sub-rounded gravel, moist. Wet @ 4 feet. Becomes gray @ 5 feet	0
5		SP		▽	0
6.5		GW		Sandy GRAVEL: dark gray, fine to coarse, few fractured cobbles, few wood pieces, wet	0
8.0		SP		SAND: brown, fine-grained, few fines, wet	0
10	GP				0
12.0				Woody debris	0
13.0					
14.0		ML		SILT: dark gray, trace roots, wet	
Bottom of hole at 14.0 feet.					

GENERAL BH / TP / WELL BAY WOOD.GPJ GINT US.GDT 6/23/09



1800 Blankenship Rd; Suite 440
 West Linn, Oregon 97068
 Telephone: (503) 723-4423
 Fax: (503) 723-4436

BORING NUMBER PB-1B

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 4.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
0.5		ML		SILT: brown, moist, trace grass roots	
				SAND: brown, fine-grained, trace fine gravel, moist. Becomes wet @ 4.5'. Becomes gray @5.5	0.0
5		SP		▽	0.0
6.5		GM			
7.0				Silty GRAVEL: dark gray, fine, some silt, wet	
7.3				Asphalt	
		SP		SAND: brown, fine to medium-grained, trace fine gravel, wet. Little silt @8'. Asphalt @ 8.5'. From 9' to 12' no recovery - formation is too loose	0
10					
		SP		SAND: gray, fine to medium-grained, few fines, wet, soupy	
15	GP				0
15.0				Bottom of hole at 15.0 feet.	

GENERAL BH / TP / WELL BAY WOOD.GPJ GINT US.GDT 6/23/09



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 West Linn, Oregon 97068
 Telephone: (503) 723-4423
 Fax: (503) 723-4436

BORING NUMBER PB-2A

CLIENT Port of Everett PROJECT NAME Bay Wood
 PROJECT NUMBER 008.0339.00001 PROJECT LOCATION Everett, WA
 DATE STARTED 5/21/09 COMPLETED 5/21/09 GROUND ELEVATION _____ HOLE SIZE 2
 DRILLING DRILLING CONTRACTOR Cascade Drilling GROUND WATER LEVELS:
 DRILLING DRILLING METHOD Direct Push ▽ AT TIME OF DRILLING 4.0 ft
 LOGGED BY C. Lee CHECKED BY C. Kramer AT END OF ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0				
0.5		ML		Sandy SILT: brown, little fine-grained sand, moist
3.5		SP		SAND: brown, fine-grained, trace medium-grained sand, moist. Woody debris in sample tube @ 2.5'. Becomes dark gray, little wood debris @ 3.5'
4.0				▽
5.0		SP		SAND: brown, fine to medium-grained, wet
6.0		ML		SILT: gray, trace woody debris, wet
7.5		ML		Gravelly SILT: dark gray, some coarse gravel and cobble fragments, wet. Concrete debris @ 7'. Thin lense of woody debris @ 7.5'
7.5				SAND: dark gray, fine-grained, few fines, wet
12.0		SP		
Bottom of hole at 12.0 feet.				

GENERAL BH / TP / WELL BAY WOOD.GPJ GINT US.GDT 6/23/09



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 West Linn, Oregon 97068
 Telephone: (503) 723-4423
 Fax: (503) 723-4436

BORING NUMBER PB-3A

PAGE 1 OF 1

CLIENT Port of Everett PROJECT NAME Bay Wood
 PROJECT NUMBER 008.0339.00001 PROJECT LOCATION Everett, WA
 DATE STARTED 5/20/09 COMPLETED 5/20/09 GROUND ELEVATION _____ HOLE SIZE 2
 DRILLING DRILLING CONTRACTOR Cascade Drilling GROUND WATER LEVELS:
 DRILLING DRILLING METHOD Direct Push ∇ AT TIME OF DRILLING 6.0 ft
 LOGGED BY K Saganski CHECKED BY C. Kramer AT END OF ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
0 - 5		SW		SAND: brown, fine to coarse-grained, trace silt, trace fine gravel, moist. Becomes wet @ 6'	0.0
5 - 7.5				∇	0.0
7.5 - 8.5		ML		Gravelly SILT: gray, fine to coarse gravel, little fine sand, woody debris and concrete pieces, moist	
8.5 - 9.0		GP		GRAVEL and Brick: dark brown, some silt and sand, fine, moist	
9.0 - 14.5		SW		SAND: gray, fine to coarse-grained, trace silt, little gravel fine to coarse, wet	0.0
14.5 - 15.0		SM		Silty SAND: gray, fine, wet	0.0
15.0 - 16.0		SW		SAND: gray, fine to coarse-grained, little silt and trace coarse gravel, wet	
16.0				Bottom of hole at 16.0 feet.	

GENERAL BH / TP / WELL BAY WOOD.GPJ GINT US.GDT 6/23/09



1800 Blankenship Rd; Suite 440
 West Linn, Oregon 97068
 Telephone: (503) 723-4423
 Fax: (503) 723-4436

BORING NUMBER PB-3B

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/20/09 **COMPLETED** 5/20/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 4.0 ft
LOGGED BY K Saganski **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
0 - 4.7		SW		SAND: brown, fine to coarse-grained, trace silt, moist to wet	0.0
4.7 - 5.0		ML		SILT: some fine to coarse-grained sand	
5.0 - 7.7		SW		SAND: brown, fine to coarse-grained, few silt, trace fine gravel, wet	0.0
7.7 - 8.0		ML		SILT: brown, with fine to coarse gravel, little fine to medium-grained sand, trace brick pieces, moist	
8.0 - 11.6		SP		SAND: gray, fine to medium-grained, trace silt, wet. Woody debris @ 8.5'	0.0
11.6 - 12.0		GW		GRAVEL: fine to coarse, with silt, gray, little woody debris. little fine sand, wet	
12.0				Bottom of hole at 12.0 feet.	

GENERAL BH / TP / WELL BAY WOOD.GPJ GINT US.GDT 6/23/09



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 West Linn, Oregon 97068
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 Fax: (503) 723-4436

BORING NUMBER PB-3C

CLIENT Port of Everett PROJECT NAME Bay Wood
 PROJECT NUMBER 008.0339.00001 PROJECT LOCATION Everett, WA
 DATE STARTED 5/21/09 COMPLETED 5/21/09 GROUND ELEVATION _____ HOLE SIZE 2
 DRILLING DRILLING CONTRACTOR Cascade Drilling GROUND WATER LEVELS:
 DRILLING DRILLING METHOD Direct Push ∇ AT TIME OF DRILLING 2.5 ft
 LOGGED BY C. Lee CHECKED BY C. Kramer AT END OF ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
		SP		SAND: brown, fine-grained, moist, trace grass roots. No roots @ 0.5'. Trace wood chunks @ 2'. Becomes wet @ 2.5'	
			3.0 ∇		0.0
		ML		Sandy SILT: gray, some fine-grained sand	
			4.0		
5		SP		SAND: gray, fine to medium-grained, trace fines, wet	
			5.5		
	GP	MH		SILT: light brown, few brick pieces and woody debris, few fines, subangular gravel, wet	0.0
			7.0		
		SP		SAND: gray, fine-grained, few fines, wet	
			8.0		
				Bottom of hole at 8.0 feet.	

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BORING NUMBER PB-3D

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 4.0 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0				
		SP		SAND: brown, fine-grained, trace grass roots. Orange mottling and no roots @ 1'. Woody debris @ 2.5'
		SM		3.5 4.0 <input checked="" type="checkbox"/> Silty SAND: gray, fine-grained, some silt, trace fine gravel, wet
5		SP		SAND: brownish gray, fine to medium-grained, trace coarse sand, wet
	GP	SM		Silty SAND: gray, fine-grained, little fines, few fine subangular gravel, wet
				8.0 Bottom of hole at 8.0 feet.

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BORING NUMBER PB-4A

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 6/1/09 **COMPLETED** 6/1/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 4.0 ft
LOGGED BY K Saganski **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
0 - 5		SW		SAND: brown, fine to coarse-grained, trace silt and fine gravel, moist to wet	0.0
5 - 6.0				▽	
6.0 - 6.5		ML		SILT: gray, with some fine to coarse gravel, moist	1.2
6.5 - 9.0				Asphalt: moist to dry	
9.0 - 9.3				Asphalt and Woody debris: with some silty sand, fine to coarse, moist	
9.3 - 10.5	GP	SW		SAND: gray, fine to coarse-grained, trace silt, wet	0.1
10.5 - 12.0		ML		SILT: gray, plastic, trace organics, moist	
12.0				Bottom of hole at 12.0 feet.	

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 Fax: (503) 723-4436

BORING NUMBER PB-5A

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 2.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0					
		SP		SAND: brownish gray, fine-grained, moist, trace grass roots. No roots @ 1'. Becomes wet @2.5'	0.0
			▽		
		MH		3.5 4.5 SILT: dark gray, few bricks and wood, wet. Becomes brown @ 4'	
5		SP		SAND: brown, fine to medium-grained, wet	
		MH		6.0 SILT: light brown, few brick pieces and woody debris, wet	0.0
				7.5 Concrete debris	
		SM		8.0 Silty SAND: brown, fine to medium-grained, little silt, few fine to medium gravel, wet	
10	GP	SP		9.0 SAND: gray, fine-grained, few fine gravel, wet	0.0
				12.0 Bottom of hole at 12.0 feet.	

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BORING NUMBER PB-5B

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 2.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0				
0 - 5		SP		SAND: brown, fine-grained, trace grass roots, moist. No roots @ 1'. Becomes wet @ 2'. Becomes gray @ 4.5'
5 - 7.5		MH		SILT: light brown, little brick pieces and woody debris, wet
7.5 - 8.0		GM		Silty GRAVEL: gray, fine to medium, angular, little concrete debris, wet
8.0 - 12.0	GP	SP		SAND: gray, fine-grained, trace fine subangular gravel, wet
12.0				Bottom of hole at 12.0 feet.

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BORING NUMBER PB-6A

CLIENT Port of Everett **PROJECT NAME** Bay Wood
PROJECT NUMBER 008.0339.00001 **PROJECT LOCATION** Everett, WA
DATE STARTED 5/21/09 **COMPLETED** 5/21/09 **GROUND ELEVATION** _____ **HOLE SIZE** 2
DRILLING CONTRACTOR Cascade Drilling **GROUND WATER LEVELS:**
DRILLING METHOD Direct Push **AT TIME OF DRILLING** 5.5 ft
LOGGED BY C. Lee **CHECKED BY** C. Kramer **AT END OF** ---
NOTES _____ **AFTER DRILLING** ---

DEPTH (ft)	SAMPLE TYPE NUMBER	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0				
0.5				Organic topsoil
5		SP		SAND: brown, fine-grained, moist, trace grass roots. No roots @ 1.5'. Becomes fine to medium-grained @ 4'. Piece of broken glass in sampler and trace fine subangular gravel @ 5'
6.0	GP			<input checked="" type="checkbox"/> 6.0 SILT: gray, trace medium gravel, wet
8.0	ML			Bottom of hole at 8.0 feet.

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BORING NUMBER 3DA

PAGE 1 OF 1

CLIENT Port of Everett PROJECT NAME Bay Wood
 PROJECT NUMBER 108.00339.00001 PROJECT LOCATION _____
 DATE STARTED 11/30/10 COMPLETED 11/30/10 GROUND ELEVATION _____ HOLE SIZE 2.125-inch-diameter
 DRILLING CONTRACTOR Cascade Drilling GROUND WATER LEVELS:
 DRILLING METHOD Direct Push ▽ AT TIME OF DRILLING 3.0 ft
 LOGGED BY K Saganski CHECKED BY _____ AT END OF ---
 NOTES _____ AFTER DRILLING ---

DEPTH (ft)	INTERVAL	TYPE	NAME	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION
0							
		GP		100	SP		SAND , brown, fine- to medium-grained, little silt, moist to wet.
							3.0 ▽
					ML		SILT , brown to gray, moist.
5		GP		100	SP		SAND , brown to gray, fine- to medium-grained, little silt, wet.
							4.5
							7.5
							8.0
							CONCRETE.
					ML		SANDY SILT , dark brown to black, wet, peaty. @ 8.5 feet: ~2" thick wood with sheen and odor.
10		GP		100			10.0
					SP		SAND , brown to gray, fine- to coarse-grained, little silt, wet.
		GP		100			13.0

@ 13.0 feet: Wood debris.
 Boring completed at 13.0 feet.

REMARKS

Samples were collected on a continuous basis by using acetate liners within the drill rods.

▽ Water level at time of drilling.

APPENDIX B

UPLAND ANALYTICAL SUMMARY TABLES

Table B 1
SVOCs and PAHs in Soil

Sample Name	PB-1A-8	PB-1B-13.5	PB-3A-9FT	PB-3B-10.5FT	PB-3C-7FT	PB-3D-5.5FT	PB-4A-9.5	PB-5A-9FT	PB-5B	PB-6A-6FT				
Sample Date	5/21/2009	5/21/2009	5/20/2009	5/20/2009	5/21/2009	5/21/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009				
Sample Depth (ft)	8	13.5	9	10.5	7	5.5	9.5	9	8.5	6				
Semivolatile Organic Compounds (SVOCs) ^B in mg/Kg														
acenaphthylene	<0.0070	<0.0071	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.038	5	<0.036	
acetophenone	--	--	--	--	--	--	--	--	--	--	<0.038	5	--	
atrazine	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
benzaldehyde	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
biphenyl;1,1'	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
bis(2-chloroethyl)ether	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
bis(2-chloroethoxy) methane	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
bis(2-chloroisopropyl)ether	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
bis(2-chloro-1-methylethyl)ether	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
p-Bromodiphenyl ether	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
butylbenzylphthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
caprolactam	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
carbazole	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
chloro-3-methylphenol;4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
chloroaniline;4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
chlorophenol;2-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
chloronaphthalene;2-	<0.0070	<0.0071	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	<0.036	
chlorophenyl-phenyl ether; 4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dibenzofuran	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dichlorobenzidine;3,3-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dichlorophenol;2,4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
diethyl phthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
Dimethyl phthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dimethylphenol;2,4-	--	--	--	--	--	--	--	--	--	--	<0.38	J4	<0.35	J4
di-n-butyl phthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
di-n-octylphthalate	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dinitro-2-methylphenol;4,6-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dinitrophenol;2,4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dinitrotoluene;2,4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
dinitrotoluene;2,6-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
hexachlorobenzene	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
hexachlorobutadiene	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
hexachloroethane	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
isophorone	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
methylnaphthalene;2-	<0.0070	<0.0071	<0.0068	J3	<0.0073	J3	0.021	J	<0.0065	<0.0072	<0.38	<0.35	0.074	
methylphenol;2-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
methylphenol;4-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
nitronaniline;2-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	
nitronaniline;3-	--	--	--	--	--	--	--	--	--	--	<0.38	<0.35	--	

Table B 1
SVOCs and PAHs in Soil

Sample Name	PB-1A-8	PB-1B-13.5	PB-3A-9FT	PB-3B-10.5FT	PB-3C-7FT	PB-3D-5.5FT	PB-4A-9.5	PB-5A-9FT	PB-5B	PB-6A-6FT							
Sample Date	5/21/2009	5/21/2009	5/20/2009	5/20/2009	5/21/2009	5/21/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009							
Sample Depth (ft)	8	13.5	9	10.5	7	5.5	9.5	9	8.5	6							
nitronaniline;4-	--	--	--	--	--	--	--	<0.38	<0.35	--							
nitrobenzene	--	--	--	--	--	--	--	<0.38	<0.35	--							
nitrophenol;2-	--	--	--	--	--	--	--	<0.38	<0.35	--							
nitrophenol;4-	--	--	--	--	--	--	--	<0.38	<0.35	--							
nitrosodiphenylamine; N-	--	--	--	--	--	--	--	<0.38	<0.35	--							
nitroso-di-n-propylamine;N-	--	--	--	--	--	--	--	<0.38	<0.35	--							
pentachlorophenol	--	--	--	--	--	--	--	<0.38	<0.35	--							
phenol	--	--	--	--	--	--	--	<0.38	<0.35	--							
tetrachlorobenzene;1,2,4,5-	--	--	--	--	--	--	--	<0.057	4	--							
tetrachlorophenol;2,3,4,6-	--	--	--	--	--	--	--	<0.057	Q	--							
trichlorophenol;2,4,5-	--	--	--	--	--	--	--	<0.38	<0.35	--							
trichlorophenol;2,4,6-	--	--	--	--	--	--	--	<0.38	<0.35	--							
Carcinogenic Polycyclic Aromatic Compounds (cPAHs) ^c in mg/Kg																	
benzo[a]anthracene	0.0075	<0.0071	<0.0068	J3	<0.0073	J3	0.0096	J, J6	<0.0065	<0.0072	<0.38	<0.35	0.049	J			
benzo[a]pyrene	0.0078	<0.0071	<0.0068	J3	<0.0073	J3	0.0083	J, J6	0.0014	J	0.001	J	<0.38	<0.35	0.06		
benzo[b]fluoranthene	0.0068	J	<0.0071	<0.0068	J3	<0.0073	0.013	J, J6	0.0018	J	<0.0072	<0.38	<0.35	0.035	J		
benzo[k]fluoranthene	0.0033	J	<0.0071	<0.0068	J3	<0.0073	0.0083	J, J6	<0.0065	<0.0072	<0.38	<0.35	0.019	J			
chrysene	0.0075	0.0012	J	<0.0068	<0.0073	0.0063	J, J6	0.0013	J	0.0013	J	<0.38	<0.35	0.082	J		
dibenzo[a,h]anthracene	<0.0070	<0.0071	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.013	J			
indeno[1,2,3-cd]pyrene	0.0038	J	<0.0071	<0.0068	J3	<0.0073	J3	<0.032	J6	0.001	J	<0.0072	<0.38	<0.35	0.01	J	
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs) ^c in mg/Kg																	
acenaphthene	<0.0070	<0.0071	<0.0068	J3	0.0025	J, J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	<0.036				
anthracene	0.0057	J	<0.0071	<0.0068	<0.0073	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.0091	J				
benzo[ghi]perylene ^D	0.0049	J	<0.0071	<0.0068	J3	<0.0073	J3	0.0065	J3	0.0015	J	<0.0072	<0.38	<0.35	0.038		
fluoranthene	0.018	0.0018	J	<0.0068	J3	<0.0073	J3	0.013	J, J6	0.0028	J	0.0016	J	<0.38	<0.35	0.018	J
fluorene	<0.0070	<0.0071	<0.0068	J3	<0.0073	J3	<0.032	J6	<0.0065	<0.0072	<0.38	<0.35	0.02	J			
naphthalene	<0.0070	<0.0071	<0.0068	J3	0.0054	J, J3	0.013	J, J6	0.0044	J	<0.0072	<0.38	<0.35	0.029	J		
phenanthrene ^E	0.0099	0.0019	J	<0.0068	J3	<0.0073	J3	0.012	J, J6	0.0027	J	<0.0072	<0.38	<0.35	0.047		
pyrene	0.018	0.0021	J	<0.0068	J3	<0.0073	J3	0.017	J, J6	0.0022	J	0.0022	J	<0.38	<0.35	0.079	J

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

BOLD indicates detected above laboratory detection limit

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A - Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - SVOCs per EPA Method 8270C

C - cPAHs and PAHs analyzed per 8270 SIM (low level)

D - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate.

E - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

Laboratory Qualifiers

Q - (ESC) Sample held beyond the accepted holding time.

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

J4 - The associated batch QC was outside the established quality control range for accuracy.

J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Table B-2
SVOCs and PAHs in Groundwater

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009					
Semivolatile Organic Compounds^B (SVOCs) in µg/L																
acenaphthylene	<0.050	<0.050	<0.050 J3	<0.050 J3	<0.050	0.032	J	<0.050	<1.0	<1.0	<1.0	<0.050				
acetophenone	--	--	--	--	--	--	--	<50	<50	<50	--					
atrazine	--	--	--	--	--	--	--	<10	<10	<10	--					
benzaldehyde	--	--	--	--	--	--	--	<10	<10	<10	--					
biphenyl; 1,1-	--	--	--	--	--	--	--	<10	<10	<10	--					
bis(2-chloroethyl)ether	--	--	--	--	--	--	--	<10	<10	<10	--					
bis(2-chloroethoxy) methane	--	--	--	--	--	--	--	<10	<10	<10	--					
bis(2-chloroisopropyl) ether	--	--	--	--	--	--	--	<10	<10	<10	--					
bis(2-chloro-1-methylethyl)ether	--	--	--	--	--	--	--	<10	<10	<10	--					
bis(2-ethylhexyl) phthalate	--	--	--	--	--	--	--	<6.0	<6.0	<6.0	--					
bromophenyl-phenylether; 4-	--	--	--	--	--	--	--	<10	<10	<10	--					
butyl benzyl phthalate	--	--	--	--	--	--	--	<10	<10	<10	--					
caprolactam	--	--	--	--	--	--	--	<10	<10	<10	--					
carbazole	--	--	--	--	--	--	--	<10	<10	<10	--					
chloro-3-methylphenol;4-	--	--	--	--	--	--	--	<10	<10	<10	--					
chloroaniline;4-	--	--	--	--	--	--	--	<10	<10	<10	--					
chlorophenol;2-	--	--	--	--	--	--	--	<10	<10	<10	--					
chloronaphthalene;2-	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<10	<10	<10	<0.25					
chlorophenyl-phenyl ether;4-	--	--	--	--	--	--	--	<10	<10	<10	--					
dibenzofuran	--	--	--	--	--	--	--	<10	<10	<10	--					
dichlorobenzidine;3,3-	--	--	--	--	--	--	--	<10	<10	<10	--					
dichlorophenol;2,4-	--	--	--	--	--	--	--	<10	<10	<10	--					
diethyl phthalate	--	--	--	--	--	--	--	<10	<10	<10	--					
dimethyl phthalate	--	--	--	--	--	--	--	<10 J3	<10 J3	<10	--					
dimethylphenol;2,4-	--	--	--	--	--	--	--	<10	<10	<10	--					
di-n-butylphthalate	--	--	--	--	--	--	--	<10	<10	<10	--					
di-n-octylphthalate	--	--	--	--	--	--	--	<10	<10	<10	--					
dinitro-2-methylphenol: 4,6-	--	--	--	--	--	--	--	<10	<10	<10	--					
dinitrophenol;2,4-	--	--	--	--	--	--	--	<10	<10	<10	--					
dinitrotoluene;2,4-	--	--	--	--	--	--	--	<10	<10	<10	--					
dinitrotoluene;2,6-	--	--	--	--	--	--	--	<10	<10	<10	--					
hexachlorobenzene	--	--	--	--	--	--	--	<10	<10	<10	--					
hexachlorobutadiene	--	--	--	--	--	--	--	<10	<10	<10	--					
hexachlorocyclopentadiene	--	--	--	--	--	--	--	<10	<10	<10	--					
hexachloroethane	--	--	--	--	--	--	--	<10	<10	<10	--					
isophorone	--	--	--	--	--	--	--	<10	<10	<10	--					
methylnaphthalene; 2	0.038	J	0.097	J	<0.25	<0.25	<0.25	0.064	J	0.015	J	<10	<10	<10	0.026	J
methylphenol;2-	--	--	--	--	--	--	--	<10	<10	<10	--					

Table B-2
SVOCs and PAHs in Groundwater

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009							
methylphenol;4-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitroaniline;2-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitroaniline;3-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitroaniline;4-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitrobenzene	--	--	--	--	--	--	--	<10	<10	<10	--							
nitrophenol;2-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitrophenol;4-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitrosodiphenylamine; N-	--	--	--	--	--	--	--	<10	<10	<10	--							
nitroso-di-n-propylamine;N-	--	--	--	--	--	--	--	<10	<10	<10	--							
pentachlorophenol	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	--							
phenol	--	--	--	--	--	--	--	<10	<10	<10	--							
tetrachlorobenzene;1,2,4,5-	--	--	--	--	--	--	--	<50	<50	<50	--							
tetrachlorophenol;2,3,4,6-	--	--	--	--	--	--	--	<50	<50	<50	--							
trichlorophenol;2,4,5-	--	--	--	--	--	--	--	<50	<50	<50	--							
trichlorophenol;2,4,6-	--	--	--	--	--	--	--	<10	<10	<10	--							
Carcinogenic Polycyclic Aromatic Compounds(cPAHs)^D in µg/L																		
benzo[a]anthracene	<0.050	<0.050	<0.050	<0.050	<0.050	0.076	<0.050	J3	<1.0	<1.0	<0.050							
benzo[a]pyrene	<0.050	J3	<0.050	<0.050	J3	<0.050	0.045	J	<0.050	J3	<0.050							
benzo[b]fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	0.083	<0.050		<1.0	<1.0	<0.050							
benzo[k]fluoranthene	<0.050	<0.050	<0.050	<0.050	<0.050	0.026	J	<0.050	<1.0	<1.0	<0.050							
chrysene	<0.050	J3	0.028	J	<0.050	<0.050	0.068		<0.050	<1.0	<0.050							
dibenzo[a,h]anthracene	<0.050	J3	<0.050	<0.050	J3	<0.050	<0.050	<0.050	<1.0	<1.0	<0.050							
indeno[1,2,3-cd]pyrene	<0.050	J3	<0.050	<0.050	J3	<0.050	0.029	J	<0.050	J3	<0.050							
Non-Carcinogenic PAHs (PAHs)^D in µg/L																		
acenaphthene	<0.050	J3	0.021	J	<0.050	J3	<0.050	J3	0.043	J	0.15	<0.050	<1.0	<1.0	<1.0	<0.050		
anthracene	0.019	J	0.02	J	<0.050	J3	<0.050	J3	<0.050		0.07	<0.050	<1.0	<1.0	<1.0	<0.050		
benzo[ghi]perylene ^F	<0.050	J3	<0.050	<0.050	J3	<0.050	J3	<0.050		0.044	J	<0.050	<1.0	<1.0	<1.0	<0.050		
fluoranthene	0.05		0.067		<0.050		<0.050		0.021	J	0.26	<0.050	<1.0	<1.0	<1.0	0.027	J	
fluorene	0.013	J	0.028	J	<0.050	J3	<0.050	J3	0.017	J	0.069	<0.050	<1.0	<1.0	<1.0	0.013	J	
naphthalene	0.061	J	0.22	J	<0.25		<0.25		<0.25		0.11	J	<0.25	<5.0	<5.0	<5.0	0.074	J
phenanthrene ^G	0.042	J	0.061		<0.050		<0.050		0.021	J	0.21	<0.050	<1.0	<1.0	<1.0	0.038	J	
pyrene	0.033	J, J3	0.05		<0.050		<0.050		<0.050		0.18	<0.050	<1.0	<1.0	<1.0	<0.050		

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

BOLD indicates detected above the laboratory detection limit

<0.05 indicates detected below the detection limit of 0.05 micrograms/liter (µg/L)

A - Groundwater SLV calculated as shown in Attachment 2 of Work Plan

B - SVOCs per EPA Method 8270C

C - SLV adjusted based on revised PQLs provided to Ecology in April 16, 2009 email

D- cPAHs and PAHs analyzed per 8270 SIM (low level)

E - Value for cPAHs from Benzo(a)pyrene

F - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate.

G - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

**Table B-3
VOCs in Soil**

Sample Name	PB-1A-8		PB-1B-13.5		PB-3A-9FT		PB-3B-10.5FT		PB-4A-9.5		PB-5A-9FT		PB-5B		PB-6A-6FT	
Sample Date	5/21/2009		5/21/2009		5/20/2009		5/20/2009		6/1/2009		5/21/2009		5/21/2009		5/21/2009	
Sample Depth (ft)	8		13.5		9		10.5		9.5		9		8.5		6	
Volatile Organic Compounds (VOCs) ^B in mg/Kg																
acetone	<0.058		<0.059		<0.057		<0.060		0.05	J	<0.29		0.043	J	0.04	J
benzene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
bromochloromethane	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
bromodichloromethane	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
bromoform	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
bromomethane	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
butanone;2- (MEK)	<0.012		<0.012		0.0033	J	<0.012		<0.012		<0.057		0.0071	J	0.005	J
carbon disulfide	<0.0012		0.0041		<0.0011		<0.0012		0.0039		<0.0057		<0.0011		0.0013	
carbon tetrachloride	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
chlorobenzene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
chloroethane	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
chloroform	<0.0058		<0.0059		<0.0057		0.00064	J	<0.0060		<0.029		<0.0054		<0.0060	
chloromethane	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
cyclohexane	<0.0012	Q	<0.0012	Q	<0.0011	Q	<0.0012	Q	<0.0012		<0.0011	Q	<0.0012	Q	<0.0012	Q
dibromochloromethane	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dibromo-3-chloropropane;1,2-	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
dibromoethane; 1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichlorobenzene; 1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichlorobenzene; 1,3-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichlorobenzene; 1,4-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichlorodifluoromethane	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
dichloroethane;1,1-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloroethane;1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloroethylene;1,1-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloroethylene;1,2-,cis	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloroethylene;1,2-,trans	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloropropane;1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloropropene;1,3-,cis	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dichloropropene;1,3-,trans	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
dioxane;1,4-	<0.12	Q	<0.12	Q	<0.11	Q	<0.12	Q	<0.12		<0.11	Q	<0.12	Q	<0.12	Q
ethylbenzene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
hexanone-2	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
isopropylbenzene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
methyl tert-butyl ether	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
methylene chloride	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
methyl acetate	<0.023	Q	<0.024	Q	<0.033	Q	<0.024	Q	<0.024	Q	<0.023	Q	<0.024	Q	<0.024	Q
methylcyclohexane	<0.0012	Q	<0.0012	Q	<0.0011	Q	<0.0012	Q	<0.0012	Q	<0.0011	Q	<0.0012	Q	<0.0012	Q
methyl-2-pentanone; 4-	<0.012		<0.012		<0.011		<0.012		<0.012		<0.057		<0.011		<0.012	

**Table B-3
VOCs in Soil**

Sample Name	PB-1A-8 5/21/2009 8		PB-1B-13.5 5/21/2009 13.5		PB-3A-9FT 5/20/2009 9		PB-3B-10.5FT 5/20/2009 10.5		PB-4A-9.5 6/1/2009 9.5		PB-5A-9FT 5/21/2009 9		PB-5B 5/21/2009 8.5		PB-6A-6FT 5/21/2009 6	
styrene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
tetrachloroethane;1,1,2,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
tetrachloroethylene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
toluene	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
trichlorobenzene;1,2,3-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
trichlorobenzene; 1,2,4-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
trichloroethane; 1,1,1-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
trichloroethane; 1,1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
1,1,2-	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
trichloroethylene	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
trichlorofluoromethane	<0.0058		<0.0059		<0.0057		<0.0060		<0.0060		<0.029		<0.0054		<0.0060	
vinyl chloride	<0.0012		<0.0012		<0.0011		<0.0012		<0.0012		<0.0057		<0.0011		<0.0012	
xylenes	<0.0035		<0.0035		<0.0034		<0.0036		<0.0036		<0.017		<0.0032		<0.0036	

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

BOLD indicates detected above laboratory detection limit

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A - Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - VOCs per EPA Method 8260

Laboratory Qualifiers

Q - (ESC) Sample held beyond the accepted holding time.

J - (EPA) - Estimated value below the lowest calibration point.

Confidence correlates with concentration.

**Table B-4
VOCs in Groundwater**

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009
Volatile Organic Compounds (VOCs)^B in µg/L										
acetone	<25	12 J	<25	<25	12 J	<25	<50	<25	<50	<25
benzene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
bromochloromethane	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
bromodichloromethane	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
bromoform	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
bromomethane	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
butanone;2- (MEK)	<2.5	<10	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<10	<2.5
carbon disulfide	<0.50	0.64 J	0.52	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	J4 <0.50
carbon tetrachloride	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
chlorobenzene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
chloroethane	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
chloroform	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
chloromethane	<0.50	<2.5	<0.50	<0.50	<0.50	<0.50	<2.5	<0.50	<2.5	<0.50
cyclohexane	<1.0	Q	<1.0	Q	<1.0	Q	<1.0	Q	<1.0	Q
dibromo-3-chloropropane;1,2-	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<5.0	<1.0
dibromochloromethane	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
dibromoethane; 1,2-	<0.50	J4, J3	<1.0	<0.50	J4, J3	<0.50	J4, J3	<1.0	<0.50	J4, J3
dichlorobenzene; 1,2-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichlorobenzene; 1,3-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichlorobenzene; 1,4-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichlorodifluoromethane	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
dichloroethane;1,1-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloroethane;1,2-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloroethylene;1,1-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloroethylene;1,2-,cis	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloroethylene;1,2-,trans	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	J4 <0.50
dichloropropane;1,2-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloropropene;1,3-,cis	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
dichloropropene;1,3-,trans	<0.50	J3	<1.0	<0.50	J3	<0.50	J3	<0.50	J3	<0.50
dioxane;1,4-	<100	Q	<100	Q	<100	Q	<100	Q	<100	Q
ethylbenzene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
hexanone-2	<2.5	<10	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<10	<2.5
isopropylbenzene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
methyl acetate	<20	<20	Q	<20	Q	<20	Q	<20	Q	<20
methyl-2-pentanone; 4- (MIK)	<2.5	<10	<2.5	<2.5	<2.5	<2.5	<10	<2.5	<10	<2.5
methyl tert-butyl ether	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
methylene chloride	<2.5	<5.0	<2.5	<2.5	<2.5	<2.5	<5.0	<2.5	<5.0	<2.5
methylcyclohexane	<1.0	<1.0	Q	<1.0	Q	<1.0	Q	<1.0	Q	<1.0
styrene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
tetrachloroethane;1,1,2,2-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
tetrachloroethylene	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50

**Table B-4
VOCs in Groundwater**

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009
toluene	<0.50	0.31 J	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	0.86
trichloro-1,2,2-trifluoroethane;1,1,2-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
trichlorobenzene; 1,2,3-	<0.50 J3	<1.0	<0.50 J3	<0.50 J3	<0.50 J3	<0.50 J3	<1.0	<0.50 J3	<1.0	<0.50 J3
trichlorobenzene; 1,2,4-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
trichloroethane; 1,1,1-	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
trichloroethane; 1,1,2-	<0.50 Q	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
trichloroethylene	<0.50 Q	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
trichlorofluoromethane	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<5.0	<0.50
vinyl chloride	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50
xylenes (total)	<1.5	<3.0	<1.5	<1.5	<1.5	<1.5	<3.0	<1.5	<3.0	<1.5

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

BOLD indicates detected above laboratory detection limit

<2.5 indicates detected below the detection limit of 2.5 micrograms/liter (µg/L)

A - Groundwater SLVs calculated as shown in Attachment 2 of Work Plan

B - VOCs per EPA Method 8260

C - PCL adjusted based on revised PQLs provided to Ecology in April 16, 2009 email

Laboratory Qualifiers

Q - (ESC) Sample held beyond the accepted holding time.

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

J4 - The associated batch QC was outside the established quality control range for accuracy.

**Table B-5
Metals, PCBs and TPH in Soil**

Sample Name	PB-1A-8	PB-1B-13.5	PB-2A-7.5	PB-3A-9FT	PB-3B-10.5FT	PB-3C-7FT	PB-3D-5.5FT	PB-4A-9.5	PB-5A-9FT	PB-5B	PB-6A-6FT						
Sample Date	5/21/2009	5/21/2009	6/1/2009	5/20/2009	5/20/2009	5/21/2009	5/21/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009						
Sample Depth (ft)	8	13.5	7.5	9	10.5	7	5.5	9.5	9	8.5	6						
Metals^B (mg/Kg)																	
Antimony	3.2	3.3	--	<1.1	<1.2	<1.1	<1.1	<1.2	<1.1	--	<1.2						
Arsenic	4.1	4	--	<5.7	0	0.66	J, P1	<1.1	<1.1	<2.3	0	1.4					
Beryllium	<1.2 ^F	0	<1.2	0	--	0.66		0.56	0.68	0.87	0.8	0.73	--	0.78			
Cadmium	0.36	0.35	--	<0.28	<0.30	<0.26	<0.27	<0.30	<0.29	--	<0.30						
Chromium ^C	27	32	--	27	29	29	32	45	32	--	36						
Copper	14	16	--	9	17	18	26	8.3	7.2	--	25						
Lead	4.3	5.4	--	2.2	4.4	5.6	3.8	8.2	1.1	P1	--	13					
Nickel	28	40	--	38	25	38	42	82	78	--	25						
Selenium	<1.2	<1.2	--	<1.1	<1.2	<5.3	0	<2.2	0	<1.2	<2.3	0	--	<1.2			
Silver	0.9	0.94	--	<0.57	<0.60	<0.53	<0.54	<0.60	<0.57	--	<0.60						
Thallium	9.5	8.7	--	<5.7	0	<6.0	0	<5.3	0	<11.	0	<6.0	0				
Zinc	42	41	--	33	46	38	41	54	31	--	40						
Mercury	0.0079	J	0.02	J	--	0.0045	J	0.23	0.019	J	0.022	0.0042	J	0.0058	J	--	0.036
Polychlorinated Biphenyls (PCBs)^D																	
Aroclor 1016	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1221	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1232	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1242	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1248	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1254	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Aroclor 1260	--	--	<0.019	<0.019	<0.020	<0.018	<0.018	<0.020	--	--	<0.020						
Total PCBs^E	--	--	ND	ND	ND	ND	ND	ND	ND	--	--	ND					
Total Petroleum Hydrocarbons -Identification^F																	
Gasoline Range (C7-C10)	<4.7	<4.7	<4.5	<4.5	<4.8	<4.2	<4.4	<4.8	<4.6	<4.3	<4.8						
Mineral Spirits	<4.7	<4.7	<4.5	<4.5	<4.8	<4.2	<4.4	<4.8	<4.6	<4.3	<4.8						
Kerosene (C9-C16)	<4.7	<4.7	<4.5	<4.5	<4.8	<4.2	<4.4	<4.8	<4.6	<4.3	<4.8						
Diesel (C7-C26)	<4.7	<4.7	<4.5	<4.5	<4.8	26	<4.4	<4.8	19	<4.3	18						
#6 Fuel Oil (C10-C32)	<4.7	<4.7	<4.5	<4.5	<4.8	<4.2	<4.4	<4.8	<4.6	<4.3	<4.8						
Hydraulic Fluid (C12-C33)	<4.7	<4.7	<4.5	<4.5	<4.8	<4.2	<4.4	<4.8	<4.6	<4.3	<4.8						
Motor Oil (C16-C40)	<12.	16	<11.	<11.	4.2	J	450	17	<12.	550	4.1	J	530				
Total Petroleum Hydrocarbons (TPH)^G																	
Gasoline Range Organics	--	--	--	--	--	--	--	--	--	--	--						
Diesel Range Organics	--	<4.7	--	--	--	42	1.7	J	--	76	--	47					
Heavy Oil Range Organics	--	12	--	--	--	550	16	--	620	--	490						

Notes:

Shading indicates detected concentration greater than SLV (Work Plan preliminary cleanup level)

BOLD indicates detected above laboratory detection limit

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A- Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - Metals per EPA Method 6020, Mercury per EPA Method 7470A

C - Chromium VI

D - PCBs per EPA Method 8082

E - PCB value is a total value for all PCBs

F - Total Petroleum Hydrocarbons Identification per NWTPH Method

G - Total Petroleum Hydrocarbons Gasoline Range per NWTPH-Gx Method and Diesel and Residual Range per NWTPH-Dx Method

H - 100 mg/kg for gasoline mixtures without benzene and the total of ethyl benzene, toluene and xylene are less than 1% of the gasoline mixture; 30 mg/kg for all other mixtures.

Laboratory Qualifiers

O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination.

The detection limit is elevated in order to reflect the necessary dilution.

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

P1 - RPD value not applicable for sample concentrations less than 5 times the reporting limit.

**Table B-6
Metals, PCBs and TPH in Groundwater**

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-2A-GW 6/1/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009						
Metals^B (µg/L)																	
Antimony, Total	1.4	1.5	--	0.36	J	0.35	J	0.71	J	1.9	0.57	J	--	--	1.4		
Antimony, Dissolved	0.6	J	0.55	J	--	0.86	J	0.62	J	<1.0	0.41	J	<1.0	--	0.52	J	
Difference ^C - Antimony	0.8		0.95			-0.5		-0.27		0.71		1.49		0.57		0.88	
Arsenic, Total	18		9.4		--	7.7		10		1.6	53		5.4		--	12	
Arsenic, Dissolved	2.2		5.8		--	1.2		0.89	J	0.69	J	2.5		3.2		2.2	
Difference - Arsenic	15.8		3.6			6.5		9.11		0.91	50.5		2.2			9.8	
Beryllium, Total	<2.0		<2.0		--	0.76	J	1.5	J	<2.0	1.1	J	<2.0		--	<2.0	
Beryllium, Dissolved	<2.0		<2.0		--	<2.0		<2.0		<2.0	<2.0		0.94	J	--	0.9	J
Difference - Beryllium	0		0			0.76		1.5		0	1.1		-0.94			-0.9	
Cadmium, Total	<5.0		2.4	J	--	1.3	J	3.2	J	1.4	J	2.9	J	<5.0		<5.0	
Cadmium, Dissolved	<5.0		<5.0		--	1.4	J	0.89	J	0.93	J	<5.0		<5.0		<5.0	
Difference - Cadmium	0		2.4			-0.1		2.31		0.47	2.9		0			0	
Chromium ^D , - Total	17		14		--	24		64		<10	43		3.4	J	--	24	
Chromium, Dissolved	<10		2.3	J	--	<10		<10		<10	6.8	J	<10		--	<10	
Difference - Chromium	17		11.7			24		64		0	36.2		3.4			24	
Copper, Total	11	J	9.9	J	--	23		38		<20	77		<20		--	31	
Copper, Dissolved	<20		<20		--	<20		<20		<20	28		<20		--	<20	
Difference - Copper	11		9.9			23		38		0	49		0			31	
Lead, Total	2.9	J	<5.0		--	11		20		7.2	25		<5.0		--	12	
Lead, Dissolved	<5.0		<5.0		--	<5.0		<5.0		<5.0	<5.0		<5.0		--	<5.0	
Difference - Lead	2.9		0			11		20		7.2	25		0			12	
Nickel, Total	44		38		--	18	J	46		30	56		<20		--	35	
Nickel, Dissolved	<20		<20		--	<20		12	J	13	J	30		<20		<20	
Difference - Nickel	44		38			18		34		17	26		0			35	
Selenium, Total	<20		<20		--	<20	B3	9.1	J, B	<20	17	J	6.7	J	--	<20	
Selenium, Dissolved	7.8	J, B	7.8	J, B	--	<20		<20		<20	<20		<20		--	<20	
Difference - Selenium	-7.8		-7.8			0		9.1		0	17		6.7			0	
Silver, Total	<10		4.4	J	--	7.4	J	<10		<10	<10		<10		--	<10	
Silver, Dissolved	8.2	J	4.7	J	--	<10		<10		<10	<10		<10		--	5.1	J
Difference - Silver	-8.2		-0.3			7.4		0		0	0		0			-5.1	
Thallium, Total	0.68	J	0.65	J	--	<1.0		<1.0		<1.0	<1.0		<1.0		--	0.61	J
Thallium, Dissolved	<1.0		<1.0		--	<1.0		<1.0		<1.0	<1.0		<1.0		--	<1.0	
Difference - Thallium	0.68		0.65			0		0		0	0		0			0.61	
Zinc, Total	42		<30		--	76		86		<30	56		35		--	42	
Zinc, Dissolved	<30		<30		--	<30		<30		19	J	<30	<30		--	<30	
Difference - Zinc	42		0			76		86		-19	56		35			42	
Mercury, Total	<0.20		<0.20		--	<0.20		<0.20		<0.20	<0.20		<0.20		--	<0.20	
Mercury, Dissolved	<0.20		<0.20		--	<0.20		<0.20		<0.20	<0.20		<0.20		--	<0.20	
Difference - Mercury	0		0		--	0		0		0	0		0		--	0	

**Table B-6
Metals, PCBs and TPH in Groundwater**

Sample Name Sample Date	PB-1A-GW 5/21/2009	PB-1B-GW 5/21/2009	PB-2A-GW 6/1/2009	PB-3A-GW 5/20/2009	PB-3B-GW 5/20/2009	PB-3C-GW 5/21/2009	PB-3D-GW 5/21/2009	PB-4A-GW 6/1/2009	PB-5A-GW 5/21/2009	PB-5B-GW-2 6/1/2009	PB-6A-GW 5/21/2009
Polychlorinated Biphenyls^E (PCBs) (µg/L)											
Aroclor 1016	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1221	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1232	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1242	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1248	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1254	--	--	--	--	--	--	--	--	--	--	<0.50
Aroclor 1260	--	--	--	--	--	--	--	--	--	--	<0.50
Total PCBs ^F	--	--	--	--	--	--	--	--	--	--	ND
Total Petroleum Hydrocarbons -Identification^G (µg/L)											
Gasoline Range (C7-C10)	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Mineral Spirits	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Kerosene (C9-C16)	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Diesel (C7-C26)	<100	76 J	<100	<100	<100	<100	64 J	100	740	47 J	<100
#6 Fuel Oil (C10-C32)	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Hydraulic Fluid (C12-C33)	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Motor Oil (C16-C40)	<500	<500	<500	<500	<500	<500	<500	<500	990	<500	<500
Total Petroleum Hydrocarbons (TPH)^H (µg/L)											
TPH-Gx	--	--	--	--	--	--	--	--	--	--	--
Diesel Range Organics	--	--	--	--	--	--	--	63 J	400	--	--
Heavy Oil Range Organics	--	--	--	--	--	--	--	<250	360	--	--

Notes:

Shading indicates detected concentration greater than SLV (Work Plan preliminary cleanup level or listed value)

Box indicates dissolved metal concentration greater than total metal concentration

<2.0 indicates detected below the detection limit of 2.0 micrograms/liter (µg/L)

BOLD indicates detected above laboratory detection limit

A - Groundwater SLVs calculated as shown in Attachment 2 of Work Plan

B - Metals per EPA Method 6020, Mercury per EPA Method 7470A

C - Difference = total metal concentration minus dissolved metal concentration (value less than 1 indicated dissolved metal concentration greater than total metal concentration)

D - Chromium VI

E - PCBs per EPA Method 8082

F - PCB value is a total value for all PCBs

G - Total Petroleum Hydrocarbons Identification per NWTPH Method

H - Total Petroleum Hydrocarbons Gasoline Range per NWTPH-Gx Method and Diesel and Heavy Oil Range per NWTPH-Dx Method

I - Gasoline Range Organics 1,000 µg/L with no detectable benzene in groundwater, 800 µg/L if present in groundwater

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

B - (EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.

B3 - (ESC) - The indicated compound was found in the associated method blank, but all reported samples were non-detect.

**Table B-7
Dioxins and Furans in Soil**

Sample Name Sampling Date Parameter	PB-3A-9 5/20/2009				PB-3B-10.5 5/20/2009				PB-5A-9 5/21/2009			
	Value	TEF ^A	TEQ ^B (DL) = 0 ^C	TEQ(DL) = 0.5 ^D	Value	TEF	TEQ(DL) = 0	TEQ(DL) = .5	Value	TEF	TEQ(DL) = 0	TEQ(DL) = .5
DIOXINS AND FURANS^F (pg/g)												
2,3,7,8-Tetra CDD ^G	<0.163	1.00	0	0.0815	<0.127	1.00	0	0.0635	<0.142	1.00	0	0.071
1,2,3,7,8-Penta CDD	<0.147	1.00	0	0.0735	0.335	1.00	0.335	0.335	<0.166	1.00	0	0.083
1,2,3,4,7,8-Hexa CDD	<0.150	0.100	0	0.0075	1.40	0.100	0.14	0.14	<0.170	0.100	0	0.0085
1,2,3,6,7,8-Hexa CDD	<0.160	0.100	0	0.008	13.4	0.100	1.34	1.34	2.13	0.100	0.213	0.213
1,2,3,7,8,9-Hexa CDD	<0.155	0.100	0	0.00774	7.45	0.100	0.745	0.745	0.761	0.100	0.0761	0.0761
1,2,3,4,6,7,8-Hepta CDD	1.83	0.0100	0.0183	0.0183	599	0.0100	5.99	5.99	59.3	0.0100	0.593	0.593
Octa CDD	15.8	0.000300	0.00474	0.00474	3000	0.000300	0.90	0.90	587	0.000300	0.1761	0.1761
Total Tetra CDD	<0.163	--	--	--	1.55	--	--	--	0.375	--	--	--
Total Penta CDD	<0.147	--	--	--	6.06	--	--	--	<0.166	--	--	--
Total Hexa CDD	0.191	--	--	--	142	--	--	--	11.6	--	--	--
Total Hepta CDD	2.97	--	--	--	1170	--	--	--	106	--	--	--
2,3,7,8-Tetra CDF ^H	1.08	0.100	0.108	0.108	0.275	0.100	0.0275	0.0275	0.478	0.100	0.0478	0.0478
1,2,3,7,8-Penta CDF	0.198	0.0300	0.00594	0.00594	0.205	0.0300	0.00615	0.00615	<0.157	0.0300	0	0.002355
2,3,4,7,8-Penta CDF	0.406	0.300	0.1218	0.1218	0.258	0.300	0.0774	0.0774	0.284	0.300	0.0852	0.0852
1,2,3,4,7,8-Hexa CDF	0.343	0.100	0.0343	0.0343	0.800	0.100	0.08	0.08	0.554	0.100	0.0554	0.0554
1,2,3,6,7,8-Hexa CDF	0.184	0.100	0.0184	0.0184	0.649	0.100	0.0649	0.0649	0.360	0.100	0.036	0.036
2,3,4,6,7,8-Hexa CDF	<0.152	0.100	0	0.0076	0.502	0.100	0.0502	0.0502	<0.224 ^I	0.100	0	0.0112
1,2,3,7,8,9-Hexa CDF	<0.153	0.100	0	0.00765	0.121	0.100	0.0121	0.0121	<0.164	0.100	0	0.0082
1,2,3,4,6,7,8-Hepta CDF	<0.654 ^I	0.0100	0	0.00327	17.0	0.0100	0.17	0.17	<10.7 ^I	0.0100	0	0.0535
1,2,3,4,7,8,9-Hepta CDF	<0.257	0.0100	0	0.001285	0.677	0.0100	0.00677	0.00677	0.549	0.0100	0.00549	0.00549
Octa CDF	1.26	0.000300	0.00038	0.000378	15.5	0.000300	0.00465	0.00465	32.9	0.000300	0.00987	0.00987
Total Tetra CDF	3.44	--	--	--	1.11	--	--	--	0.944	--	--	--
Total Penta CDF	1.59	--	--	--	5.19	--	--	--	3.46	--	--	--
Total Hexa CDF	0.952	--	--	--	25.0	--	--	--	15.6	--	--	--
Total Hepta CDF	0.881	--	--	--	47.3	--	--	--	24.5	--	--	--
TOTAL TOXIC EQUIVALENCY ^J	--	--	0.31	0.51	--	--	9.9	10.0	--	--	1.30	1.54

Notes:

BOLD indicates detected above laboratory detection limit

<0.163 indicates detected below the detection limit of 0.163 picograms per gram (pg/g)

All units in pg/g

Value = Laboratory detected value in pg/g

A - TEF = Toxic Equivalency Factor from the WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

B - TEQ = Toxic Equivalency Quotient is Laboratory Value * TEF

C - TEQ with value of 0 given for detection limit

D - TEQ with value of 1/2 detection limit

E - Soil SLV calculated as shown in Attachment 2 of Work Plan

F - Dioxins/Furans per EPA Method 1613

G - CDD = Chloro Dibenzo-p-Dioxin

H - CDF = Chloro Dibenzo-p-Furan

I - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit

J - Total Toxic Equivalency = The sum of Toxic Equivalent Quotients for the congeners tested

**Table B-8
Metals, PAHs and SVOCs in Stockpile Soils**

Sample Name Sample Date	SP-E1-C 6/2/2009	SP-E2-C 6/2/2009	SP-E3-C 6/2/2009	SP-E4-C 6/2/2009	SP-E4-C 6/2/2009	SP-E5-C 6/2/2009	SP-E6-C 6/2/2009	SP-E7-C 6/2/2009	SP-M1-C 6/2/2009	SP-M2-C 6/2/2009	SP-M3-C 6/2/2009	SP-M3-C 6/2/2009	SP-M4-C 6/2/2009	SP-M5-C 6/2/2009	SP-W1-C 6/2/2009	SP-W1-C 6/2/2009	SP-W2-C 6/2/2009
Metals^B (mg/kg)																	
Antimony	<1.2	<1.3	<1.2	<1.1	--	<1.1	<1.0	<1.0	<1.3	<1.4	<1.0	--	<1.2	<1.1	<1.2	--	<1.2
Arsenic	3.1	2.4	2.2	2.9	--	1.7	5.6	10	3.5	3.8	2.6	--	2.3	1.1	J	3.1	2.6
Beryllium	0.69	0.67	0.71	0.63	--	0.67	0.55	0.55	0.68	0.77	0.57	--	0.8	0.51		0.68	0.62
Cadmium	<0.31	<0.32	<0.30	<0.29	--	<0.27	<0.26	<0.26	<0.32	<0.35	<0.26	--	<0.29	<0.28	<0.30	--	<0.30
Chromium ^C	40	37	42	34	--	36	26	27	40	45	26	--	37	31	38	--	39
Copper	44	64	41	33	--	33	32	38	52	53	22	--	39	19	36	--	28
Lead	11	15	9.5	10	--	10	14	36	15	20	7	--	10	3.7	10	--	6.2
Nickel	34	34	37	34	--	33	28	32	35	36	34	--	36	32	37	--	36
Selenium	<1.2	<1.3	<1.2	<1.1	--	<1.1	<1.0	<1.0	<1.3	<1.4	<1.0	--	<1.2	<1.1	<1.2	--	<1.2
Silver	<0.61	<0.64	<0.60	<0.57	--	<0.54	<0.53	<0.53	<0.63	<0.70	<0.51	--	<0.58	<0.56	<0.60	--	<0.60
Thallium	<6.1	O <6.4	O <6.0	O <5.7	O --	O <5.4	O <5.3	O <5.3	O <6.3	O <7.0	O <5.1	O --	O <5.8	O <5.6	O <6.0	O --	O <6.0
Zinc	51	60	54	57	--	51	65	180	130	76	47	--	64	38	55	--	47
Mercury	0.077	0.093	0.071	0.069	--	0.081	0.072	0.044	0.11	0.11	0.035	--	0.088	0.038	0.072	--	0.066
Semivolatile Organic Compounds (SVOCs)^D (mg/kg)																	
acenaphthylene	--	--	--	--	<0.038	--	--	--	--	--	--	<0.034	--	--	--	<0.040	--
acetophenone	--	--	--	--	<0.038	--	--	--	--	--	--	<0.034	--	--	--	<0.040	--
atrazine	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
benzaldehyde	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
biphenyl;1,1'	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
bis(2-chloroethyl)ether	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
bis(2-chloroethoxy) methane	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
bis(2-chloroisopropyl)ether	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
bis(2-chloro-1-methylethyl)ether	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
bis(2-ethylhexyl) phthalate	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O --
p-Bromodiphenyl ether	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
butylbenzylphthalate	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O --
caprolactam	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
carbazole	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
chloro-3-methylphenol;4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
chloroaniline;4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
chlorophenol;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
chloronaphthalene;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
chlorophenyl-phenyl ether; 4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dibenzofuran	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dichlorobenzidine;3,3-	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O --
dichlorophenol;2,4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
diethyl phthalate	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
Dimethyl phthalate	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dimethylphenol;2,4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
di-n-butyl phthalate	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
di-n-octylphthalate	--	--	--	--	<3.8	--	--	--	--	--	--	<0.34	--	--	--	<7.9	O --
dinitro-2-methylphenol;4,6-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dinitrophenol;2,4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dinitrotoluene;2,4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
dinitrotoluene;2,6-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
hexachlorobenzene	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
hexachlorobutadiene	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--

**Table B-8
Metals, PAHs and SVOCs in Stockpile Soils**

Sample Name Sample Date	SP-E1-C 6/2/2009	SP-E2-C 6/2/2009	SP-E3-C 6/2/2009	SP-E4-C 6/2/2009	SP-E4-C 6/2/2009	SP-E5-C 6/2/2009	SP-E6-C 6/2/2009	SP-E7-C 6/2/2009	SP-M1-C 6/2/2009	SP-M2-C 6/2/2009	SP-M3-C 6/2/2009	SP-M3-C 6/2/2009	SP-M4-C 6/2/2009	SP-M5-C 6/2/2009	SP-W1-C 6/2/2009	SP-W1-C 6/2/2009	SP-W2-C 6/2/2009
hexachlorocyclopentadiene	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
hexachloroethane	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
isophorone	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
methylnaphthalene;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
methylphenol;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
methylphenol;4-	--	--	--	--	<0.38	J4	--	--	--	--	--	<0.34	J4	--	--	<0.40	J4
nitronaniline;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitronaniline;3-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitronaniline;4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitrobenzene	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitrophenol;2-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitrophenol;4-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitrosodiphenylamine; N-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
nitroso-di-n-propylamine;N-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
pentachlorophenol	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
phenol	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
tetrachlorobenzene;1,2,4,5-	--	--	--	--	<0.057	--	--	--	--	--	--	<0.051	--	--	--	<0.060	--
tetrachlorophenol;2,3,4,6-	--	--	--	--	<0.057	--	--	--	--	--	--	<0.051	--	--	--	<0.060	--
trichlorophenol;2,4,5-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
trichlorophenol;2,4,6-	--	--	--	--	<0.38	--	--	--	--	--	--	<0.34	--	--	--	<0.40	--
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^E																	
benzo[a]anthracene	0.75	0.072	0.051	0.15	<3.8	0.1	0.023	0.14	0.15	0.18	0.087	<0.34	0.05	0.011	0.058	<7.9	0.047
benzo[a]pyrene	0.15	0.04	0.026	0.08	0.081 J	0.038	0.022	0.08	0.072	0.1	0.076	<0.34	0.032	0.0058 J	0.024	0.046 J	0.031
benzo[b]fluoranthene	0.6	0.088	0.079	0.21	0.19 J	0.1	0.03	0.14	0.23	0.25	0.067	<0.34	0.072	0.018	0.065	0.14 J	0.09
benzo[k]fluoranthene	0.11	0.046	0.026	0.095	0.11 J	0.042	0.013	0.072	0.07	0.11	0.04	<0.34	0.022	0.0072	0.034	0.067 J	0.038
chrysene	0.82	0.15	0.089	0.24	0.44 J	0.13	0.022	0.097	0.2	0.31	0.084	<0.34	0.06	0.022	0.11	<7.9	0.075
dibenzo[a,h]anthracene	0.032	0.012	0.0095	0.019	<0.38	0.012	0.005 J	0.014	0.016	0.013	0.0098	<0.34	0.0055 J	0.0012 J	0.0032 J	<0.40	0.0045 J
indeno[1,2,3-cd]pyrene	0.065	0.026	0.022	0.037	<0.38	0.023	0.014	0.028	0.035	0.043	0.017	<0.34	0.011	0.003 J	0.0086	<0.40	0.01
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)^E																	
acenaphthene	0.011	0.0067 J	0.0068 J	0.0029 J	<0.38	0.022	0.0025 J	0.0099	0.024	0.026	0.0026 J	<0.34	0.011	0.0056 J	0.0053 J	<0.40	0.0043 J
anthracene	0.07	0.046	0.029	0.044	0.033 J	0.05	0.01	0.035	0.077	0.1	0.015	<0.34	0.029	0.0098	0.034	<0.40	0.024
benzo[ghi]perylene ^F	0.058	0.026	0.022	0.032	<0.38	0.022	0.015	0.026	0.032	0.039	0.018	<0.34	0.011	0.0027 J	0.0079	<0.40	0.0075
fluoranthene	2.2	0.068	0.11	0.25	0.4	0.24	0.053	0.14	0.3	0.71	0.089	0.024 J	0.14	0.025	0.13	0.32 J	0.076
fluorene	0.02	0.017	0.0093	0.011	<0.38	0.024	0.0044 J	0.012	0.029	0.048	0.0048 J	<0.34	0.016	0.0098	0.012	<0.40	0.0068 J
naphthalene	0.046	0.028	0.038	0.0081	<0.38	0.03	0.0066	0.017	0.13	0.098	0.0076	<0.34	0.04	0.088	0.023	0.035 J	0.01
phenanthrene ^G	0.081	0.06	0.041	0.06	0.095 J	0.093	0.034	0.044	0.096	0.24	0.02	<0.34	0.069	0.017	0.048	0.11 J	0.02
pyrene	1.1	0.075	0.089	0.16	0.53 J	0.1	0.039	0.086	0.2	0.25	0.096	<0.34	0.092	0.016	0.065	<7.9	0.054

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates detected concentration greater than SLV

<0.058 indicates detected below the detection limit of 0.058 mg/kg

BOLD indicates detected above laboratory detection limit

A - Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - Metals per EPA Method 6020, Mercury per EPA Method 7470A

C - Chromium VI

D - SVOCs per EPA Method 8270C

E - cPAHs and PAHs analyzed per 8270 SIM (low level)

F - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate

G - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

P1 - RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Table B-9
cPAH TEQs in Soil and Groundwater

Sample Name Sample Depth (ft) Sample Date	PB-1A-8 8 5/21/2009			PB-1B-13.5 13.5 5/21/2009			PB-3A-9 9 5/20/2009			PB-3B-10.5 10.5 5/20/2009			PB-5A-9 9 5/21/2009			PB-3D-5.5 5.5 5/21/2009			PB-4A-9.5 9.5 6/1/2009			PB-5A-9 9 5/21/2009			PB-5B 8.5 5/21/2009			PB-6A-6 6 5/21/2009		
	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ
	Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^B in soil (mg/Kg)																													
benzo[a]anthracene	0.008	0.1	8E-04	1	0.1	4E-04	8	0.1	3E-04	3	0.1	4E-04	0.01	0.1	1E-03	5	0.1	3E-04	2	0.1	4E-04	<0.38	0.1	0.019	<0.35	0.1	0.018	0.049	0.1	0.005
benzo[a]pyrene	0.008	1	0.008	1	1	0.004	8	1	0.003	3	1	0.004	0.008	1	0.008	0.001	1	0.001	0.001	1	0.001	<0.38	1	0.19	<0.35	1	0.175	0.06	1	0.06
benzo[b]fluoranthene	0.007	0.1	7E-04	1	0.1	4E-04	8	0.1	3E-04	3	0.1	4E-04	0.013	0.1	0.001	0.002	0.1	2E-04	2	0.1	4E-04	<0.38	0.1	0.019	<0.35	0.1	0.018	0.035	0.1	0.004
benzo[k]fluoranthene	0.003	0.1	3E-04	1	0.1	4E-04	8	0.1	3E-04	3	0.1	4E-04	0.008	0.1	8E-04	5	0.1	3E-04	2	0.1	4E-04	<0.38	0.1	0.019	<0.35	0.1	0.018	0.019	0.1	0.002
chrysene	0.008	0.01	8E-05	0.001	0.01	1E-05	8	0.01	3E-05	3	0.01	4E-05	0.006	0.01	6E-05	0.001	0.01	1E-05	0.001	0.01	1E-05	<0.38	0.01	0.002	<0.35	0.01	0.002	0.082	0.01	8E-04
e	0	0.1	4E-04	1	0.1	4E-04	8	0.1	3E-04	3	0.1	4E-04	<0.032	0.1	0.002	5	0.1	3E-04	2	0.1	4E-04	<0.38	0.1	0.019	<0.35	0.1	0.018	0.013	0.1	0.001
cd]pyrene	0.004	0.1	4E-04	1	0.1	4E-04	8	0.1	3E-04	3	0.1	4E-04	<0.032	0.1	0.002	0.001	0.1	1E-04	2	0.1	4E-04	<0.38	0.1	0.019	<0.35	0.1	0.018	0.01	0.1	0.001
Total TEQ^C			0.010			0.005			0.005			0.006			0.015			0.003			0.001			0.287			0.264			0.073

Sample Name	PB-1A-GW			PB-1B-GW			PB-3A-GW			PB-3B-GW			PB-3C-GW			PB-3D-GW			PB-4A-GW			PB-5A-GW			PB-5B-GW			PB-5B-GW-2			PB-6A-6FT		
	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^B in groundwater in µg/L																																	
benzo[a]anthracene	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	0.076	0.1	0.008	<0.050	0.1	0.003	<1.0	0.1	0.05	<1.0	0.1	0.05	<1.0	0.1	0.05	<0.050	0.1	0.003
benzo[a]pyrene	<0.050	1	0.025	<0.050	1	0.025	<0.050	1	0.025	<0.050	1	0.025	<0.050	1	0.025	0.045	1	0.045	<0.050	1	0.025	<1.0	1	0.5	<1.0	1	0.5	<1.0	1	0.5	<0.050	1	0.025
benzo[b]fluoranthene	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	0.083	0.1	0.008	<0.050	0.1	0.003	<1.0	0.1	0.05	<1.0	0.1	0.05	<1.0	0.1	0.05	<0.050	0.1	0.003
benzo[k]fluoranthene	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	0.026	0.1	0.003	<0.050	0.1	0.003	<1.0	0.1	0.05	<1.0	0.1	0.05	<1.0	0.1	0.05	<0.050	0.1	0.003
chrysene	<0.050	0.01	3E-04	0.028	0.01	3E-04	<0.050	0.01	3E-04	<0.050	0.01	3E-04	<0.050	0.01	3E-04	0.068	0.01	7E-04	<0.050	0.01	3E-04	<1.0	0.01	0.005	<1.0	0.01	0.005	<1.0	0.01	0.005	<0.050	0.01	3E-04
e	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<1.0	0.1	0.05	<1.0	0.1	0.05	<1.0	0.1	0.05	<0.050	0.1	0.003
cd]pyrene	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	<0.050	0.1	0.003	0.029	0.1	0.003	<0.050	0.1	0.003	<1.0	0.1	0.05	<1.0	0.1	0.05	<1.0	0.1	0.05	<0.050	0.1	0.003
Total TEQ^C			0.038			0.038			0.038			0.038			0.038			0.070			0.038			0.755			0.755			0.755			0.038

Notes:

Shading indicates PQL higher than selected SLV

Shading indicates detected concentration greater than SLV

BOLD indicates detected above laboratory detection limit

Value - Concentrations identified during initial RI investigation

TEF - Toxicity Equivalency Factor (TEF) as presented in Ecology memo: Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures Using Toxicity Equivalency Factors

TEQ - TEQ for individual congeners

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A - Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - cPAHs analyzed per 8270 SIM (low level)

C - Total TEQ for all cPAHs

D - Value for cPAHs from Benzo(a)pyrene

Table B-10
cPAH TEQs in Stockpile Soils

Sample Name Sample Date	SP-E1-C 6/2/2009			SP-E2-C 6/2/2009			SP-E3-C 6/2/2009			SP-E4-C 6/2/2009			SP-E4-C 6/2/2009			SP-E5-C 6/2/2009			SP-E6-C 6/2/2009			SP-E7-C 6/2/2009			SP-M1-C 6/2/2009		
	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ
	Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^B																										
benzo[a]anthracene	0.75	0.1	0.075	0.072	0.1	0.007	0.051	0.1	0.005	0.15	0.1	0.015	<3.8	0.1	0.19	0.1	0.1	0.01	0.023	0.1	0.002	0.14	0.1	0.014	0.15	0.1	0.015
benzo[a]pyrene	0.15	1	0.15	0.04	1	0.04	0.026	1	0.026	0.08	1	0.08	0.081	1	0.081	0.038	1	0.038	0.022	1	0.022	0.08	1	0.08	0.072	1	0.072
benzo[b]fluoranthene	0.6	0.1	0.06	0.088	0.1	0.009	0.079	0.1	0.008	0.21	0.1	0.021	0.19	0.1	0.019	0.1	0.1	0.01	0.03	0.1	0.003	0.14	0.1	0.014	0.23	0.1	0.023
benzo[k]fluoranthene	0.11	0.1	0.011	0.046	0.1	0.005	0.026	0.1	0.003	0.095	0.1	0.01	0.11	0.1	0.011	0.042	0.1	0.004	0.013	0.1	0.001	0.072	0.1	0.007	0.07	0.1	0.007
chrysene	0.82	0.01	0.008	0.15	0.01	0.002	0.089	0.01	9E-04	0.24	0.01	0.002	0.44	0.01	0.004	0.13	0.01	0.001	0.022	0.01	2E-04	0.097	0.01	1E-03	0.2	0.01	0.002
dibenzo[a,h]anthracene	0.032	0.1	0.003	0.012	0.1	0.001	0.01	0.1	1E-03	0.019	0.1	0.002	<0.38	0.1	0.19	0.012	0.1	0.001	0.005	0.1	5E-04	0.014	0.1	0.001	0.016	0.1	0.002
indeno[1,2,3-cd]pyrene	0.065	0.1	0.007	0.026	0.1	0.003	0.022	0.1	0.002	0.037	0.1	0.004	<0.38	0.1	0.19	0.023	0.1	0.002	0.014	0.1	0.001	0.028	0.1	0.003	0.035	0.1	0.004
Total TEQ^C			0.314			0.066			0.046			0.134			0.685			0.067			0.031			0.120			0.124

Sample Name Sample Date	SP-M2-C 6/2/2009			SP-M3-C 6/2/2009			SP-M3-C 6/2/2009			SP-M4-C 6/2/2009			SP-M5-C 6/2/2009			SP-W1-C 6/2/2009			SP-W1-C 6/2/2009			SP-W2-C 6/2/2009			
	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	Value	TEF	TEQ	
	Carcinogenic Polycyclic Aromatic Compounds (cPAHs)^B																								
benzo[a]anthracene	0.18	0.1	0.018	0.087	0.1	0.009	<0.34	0.1	0.017	0.05	0.1	0.005	0.011	0.1	0.001	0.058	0.1	0.006	<7.9	0.1	0.395	0.047	0.1	0.005	
benzo[a]pyrene	0.1	1	0.1	0.076	1	0.076	<0.34	1	0.17	0.032	1	0.032	0.006	1	0.006	0.024	1	0.024	0.046	1	0.046	0.031	1	0.031	
benzo[b]fluoranthene	0.25	0.1	0.025	0.067	0.1	0.007	<0.34	0.1	0.017	0.072	0.1	0.007	0.018	0.1	0.002	0.065	0.1	0.007	0.14	0.1	0.014	0.09	0.1	0.009	
benzo[k]fluoranthene	0.11	0.1	0.011	0.04	0.1	0.004	<0.34	0.1	0.017	0.022	0.1	0.002	0.007	0.1	7E-04	0.034	0.1	0.003	0.067	0.1	0.007	0.038	0.1	0.004	
chrysene	0.31	0.01	0.003	0.084	0.01	8E-04	<0.34	0.01	0.002	0.06	0.01	6E-04	0.022	0.01	2E-04	0.11	0.01	0.001	<7.9	0.01	0.04	0.075	0.01	8E-04	
dibenzo[a,h]anthracene	0.013	0.1	0.001	0.01	0.1	1E-03	<0.34	0.1	0.017	0.006	0.1	6E-04	0.001	0.1	1E-04	0.003	0.1	3E-04	<0.40	0.1	0.02	0.005	0.1	5E-04	
indeno[1,2,3-cd]pyrene	0.043	0.1	0.004	0.017	0.1	0.002	<0.34	0.1	0.017	0.011	0.1	0.001	0.003	0.1	3E-04	0.009	0.1	9E-04	<0.40	0.1	0.02	0.01	0.1	0.001	
Total TEQ^C			0.163			0.099			0.257			0.049			0.010			0.042			0.541			0.051	

Notes:

Shading indicates PQL higher than selected SLV (Work Plan preliminary cleanup level)

Shading indicates concentration greater than SLV

<0.058 indicates detected below the detection limit of 0.058 mg/kg

BOLD indicates detected above laboratory detection limit

Value - Concentrations identified during initial RI investigation

TEF - Toxicity Equivalency Factor (TEF) as presented in Ecology memo: Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures Using Toxicity Equivalency Factors

TEQ - Toxicity Equivalency Quotient (TEQ) for individual congeners

<0.058 indicates detected below the detection limit of 0.058 mg/kg

A - Soil SLVs calculated as shown in Attachment 2 of Work Plan

B - Chlorinated polycyclic aromatic hydrocarbons (cPAHs) analyzed per 8270 SIM (low level)

C - Total TEQ for all cPAHs

D - Value for cPAHs from Benzo(a)pyrene

APPENDIX C

UPLAND LABORATORY DATA PACKAGES



Fremont
Analytical

2930 Westlake Ave N Suite 100
Seattle, WA 98109
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

SLR

Attn: Scott Miller

1800 Blankenship Rd., Suite 440
West Linn, WA 97068

RE: Baywood

Fremont Project No: CHM101208-10

SLR Project No: 108.00339.00001

December 14th, 2010

Scott:

Enclosed are the analytical results for the **Baywood** water sample (Sample ID: PB-3D) submitted to Fremont Analytical on December 8th, 2010

Sample Receipt: The sample was received in good condition – in the proper containers, properly sealed, labeled and within holding time. The sample was contained in 1 - 1L Amber and 2 – 250mL HDPE bottles preserved with HNO₃. The sample was received in a cooler with gel ice, with a cooler temperature of 5.5°C, which is within the laboratory recommended cooler temperature range (<4°C - 10°C). The sample was stored in a refrigeration unit at the USEPA-recommended temperature of 4°C ± 2°C. There were no sample receipt issues to report.

Sample Analysis: Examination of the sample was conducted for the presence of the following:

- **Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)**
- **Total Metals EPA Method 200.8**
- **Dissolved Metals by EPA Method 200.8**

These applications were performed under Washington State Department of Ecology accreditation parameters. All appropriate Quality Assurance / Quality Control method parameters have been applied.

Laboratory Notations (SW6020 – Total Metals Matrix): The *relative percent difference (RPD%)* between the sample and the sample duplicate was outside of the laboratory recommended limit for *Selenium* (38%, limit = 30%). All other RPD% were within range. The *Selenium Laboratory Control Sample (LCS)* and *Matrix Spike (MS) and MS Duplicate (MSD)* recoveries were within range.

Please contact the laboratory if you should have any questions about the results,

Thank you for using Fremont Analytical!

Sincerely,

Michael Dee
Sr. Chemist / Principal
mikedee@fremontanalytical.com

www.fremontanalytical.com

Analysis of Polyaromatic Hydrocarbons in Water by EPA Method 8270

Project: Baywood
Client: SLR
Client Project #: 108.00339.00001
Lab Project #: CHM101208-10

EPA 8270 (SIM) (µg/L)	MRL	Method Blank	LCS	Duplicate		RPD %	MS 101202-16-2
				PB-3D	PB-3D		
Date Extracted		12/10/10	12/10/10	12/10/10	12/10/10		12/10/10
Date Analyzed		12/10/10	12/10/10	12/10/10	12/10/10		12/10/10
Matrix				Water	Water		Water
Naphthalene	0.05	nd		0.07	0.08	13%	
1-Methylnaphthalene	0.05	nd		0.05	0.06	7%	
2-Methylnaphthalene	0.05	nd		nd	nd		
Acenaphthene	0.05	nd	97.0%	0.05	0.06	7%	79.5%
Acenaphthylene	0.05	nd		nd	nd		
Fluorene	0.05	nd		nd	nd		
Phenanthrene	0.05	nd		0.05	0.05	0.3%	
Anthracene	0.05	nd		nd	nd		
Fluoranthene	0.05	nd		nd	nd		
Pyrene	0.05	nd	104%	nd	nd		108%
Benzo(a)anthracene	0.05	nd		nd	nd		
Chrysene	0.05	nd		nd	nd		
Benzo(b)fluoranthene	0.05	nd		nd	nd		
Benzo(k)fluoranthene	0.05	nd		nd	nd		
Benzo(a)pyrene	0.05	nd		nd	nd		
Indeno(1,2,3-cd)pyrene	0.05	nd		nd	nd		
Dibenzo(a,h)anthracene	0.05	nd		nd	nd		
Benzo(g,h,i)perylene	0.05	nd		nd	nd		
<i>Total PAH Carcinogens</i>				0.0	0.0		

Total PAH Carcinogens Defined as:

Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene & Dibenzo(a,h)anthracene

Surrogate Recovery

(Surr 1) 2-Fluorobiphenyl	89%	95%	109%	115%	119%
(Surr 2) p-Terphenyl	89%	95%	95%	97%	101%

"nd" Indicates not detected at listed reporting limits
 "int" Indicates that interference prevents determination
 "J" Indicates estimated value
 "MRL" Indicates Method Reporting Limit
 "LCS" Indicates Laboratory Control Sample
 "MS" Indicates Matrix Spike
 "MSD" Indicates Matrix Spike Duplicate
 "RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%

Acceptable Recovery Limits:

Surrogates = 65% to 135%
 LCS, LCSD, MS, MSD = 50% to 150%
 Surrogate Concentration = 4.0 µg/L
 Spike Concentration = 8.0 µg/L

Analysis of Total Metals in Water by EPA Method 200.8

Project: Baywood
Client: SLR
Client Project #: 108.00339.00001
Lab Project #: CHM101208-10

EPA 200.8 (µg/L)	MRL	Method Blank	LCS	PB-3D	Duplicate		MS	MSD	RPD %
					PB-3D	PB-3D	101208-7-1	101208-7-1	
Date Extracted		12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	
Date Analyzed		12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	
Matrix				Water	Water		Water	Water	
Arsenic (As)	1.0	nd	89.2%	3.90	4.15	6%	103%	103%	0%
Copper (Cu)	0.50	nd	91.8%	26.6	26.5	0.2%	115%	116%	1%
Nickel (Ni)	0.50	nd	88.9%	24.1	25.9	7%	112%	109%	3%
Lead (Pb)	1.0	nd	88.2%	5.00	5.65	12%	113%	115%	2%
Selenium (Se)	1.0	nd	94.0%	8.15	5.55	38%	86.9%	88.3%	2%
Silver (Ag)	0.20	nd	100%	nd	nd		128%	124%	3%

"nd" Indicates no detection at the listed reporting limits
 "int" Indicates that interference prevents determination
 "J" Indicates estimated value
 "MRL" Indicates Method Reporting Limit
 "LCS" Indicates Laboratory Control Sample
 "MS" Indicates Matrix Spike
 "MSD" Indicates Matrix Spike Duplicate
 "RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%

Acceptable Recovery Limits:

LCS: 85% to 115%
 MS/MSD: 70% to 130%

Spike Concentrations:

As, Cu, Ni = 100 µg/L
 Pb = 50 µg/L
 Se = 25 µg/L
 Ag = 10 µg/L

Analysis of Dissolved Metals by EPA Method 200.8

Project: Baywood
Client: SLR
Client Project #: 108.00339.00001
Lab Project #: CHM101208-10

EPA 200.8 (µg/L)	MRL	Method Blank	LCS	PB-3D	Duplicate		MS	MSD	RPD %
					PB-3D	RPD %	101208-7-1	101208-7-1	
Date Extracted		12/13/10	12/13/10	12/13/10	12/13/10		12/13/10	12/13/10	
Date Analyzed		12/13/10	12/13/10	12/13/10	12/13/10		12/13/10	12/13/10	
Matrix				Water	Water		Water	Water	
Arsenic (As)	1.0	nd	95.9%	nd	nd		82.9%	99.1%	18%
Copper (Cu)	0.50	nd	102%	6.55	5.55	17%	85.3%	86.8%	2%
Nickel (Ni)	0.50	nd	99.4%	7.80	8.45	8%	85.9%	91.5%	6%
Lead (Pb)	1.0	nd	104%	nd	nd		99.2%	94.8%	5%
Selenium (Se)	1.0	nd	102%	nd	nd		90.8%	88.6%	2%
Silver (Ag)	0.20	nd	117%	nd	nd		101%	99.4%	1%

"nd" Indicates no detection at the listed reporting limits

"int" Indicates that interference prevents determination

"J" Indicates estimated value

"MRL" Indicates Method Reporting Limit

"LCS" Indicates Laboratory Control Sample

"MS" Indicates Matrix Spike

"MSD" Indicates Matrix Spike Duplicate

"RPD" Indicates Relative Percent Difference

Acceptable RPD is determined to be less than 30%

Acceptable Recovery Limits:

LCS: 85% to 115%

MS/MSD: 70% to 130%

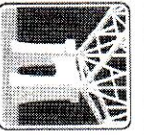
Spike Concentrations:

As, Cu, Ni = 100 µg/L

Pb = 50 µg/L

Se = 25 µg/L

Ag = 10 µg/L



Fremont

Chain of Custody Record

2930 Westlake Ave. N. Suite 100
Seattle, WA 98109

Tel: 206-352-3790
Fax: 206-352-7178

Date: Dec 7 2010

Page: 1 of 1

Laboratory Project No (Internal): CHM101208-10

Client: SLR

Project Name: Bay Woods

Address: 1900 Blankenship Rd

Location: Everett

City, State, Zip: West Linn, WA 97268

Tel: (503) 732-4423

Collected by: Aislin Muth

Reports To (PM): Scott Miller

Fax:

Email: SMILLER@SLR.COM

Project No: 108.00339.00001

Sample Name	Time	Sample Type (Matrix)	Container Type	Date of Collection	VOA 8260	VOA 8021B BTEX	NWTPH-Gx	NWTPH-HCID	NWTPH-Dx/Dx Ext.	SEMI VOL 8270C	PAH 8270	PCBs 8082	CI PESTICIDES 8081	CI HERBICIDES 8151A	Metals* Total (T) Dissolved (D)	Anions (IC)**	Comments/Depth
1 PB-3D	1355	W	#8C 303								X				T D		
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

*Metals per email
From S.M. 12/10/10

*Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al AS B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

**Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

*Center for Sample Analysis

Relinquished	Date/Time	Received	Date/Time
x <u>NSM SILVA</u>	<u>12/7/10 04:15</u>	x <u>SLR (S)</u>	<u>12/10/10 14:45</u>
x <u>NSM SILVA</u>	<u>12/8/2010</u>	x <u>SLR (S)</u>	<u>12/10/2010</u>

Sample Receipt:
 Good? Y
 Cooler Temperature: 5.5
 Seals Intact? N/A
 Total Number of Containers: 2
 TAT --> 24HR 48HR Standard

L404399

SLR International Corp. -
West Linn, OR

SLRWLOR-BAYWOOD

Billing Information:
SLR International Corp.
Accounts Payable
1800 Blankenship Rd, Ste 440
West Linn, OR 97068

Report to: Chris Kramer

Email to: ckramer@slrcorp.com, smiller@slrcorp.com

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

ESC
L.A.B S.C.I.E.N.C.E.S
12065 Lebanon Road
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Project Description: Bay Wood Project - Everett, WA
City/State Collected: Everett, WA
Phone: 503-723-4423
FAX: 503-723-4436
Client Project #: 008.0339.00001
ESC Key: SLRWLOR-BAYWOOD
Collected by: C. Kramer
Site/Facility ID#: P.O.#:

Priority Pollutant Metals = M6010PP
PAHs = SV8270PAHSIM
VOCs Full List = GW-V8260, SS-V8260LL
PCBs = SV8082
SVOCs Full List = SV8270PCP
Dioxins/Furans - HOLD

Dx / PCP

CoCode SLRWLOR (lab use only)
Template/Prelogin
Shipped Via: B096

Collected by (signature): *[Signature]*
Immediately Packed on Ice N (Y)
Rush? (Lab MUST Be Notified)
____ Same Day200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%
Date Results Needed:
Email? ___No___Yes
FAX? ___No___Yes

Sample ID	Comp/Grab	Matrix*	Depth #	Date	Time	JE	HCID	Priority Pollutant Metals = M6010PP	PAHs = SV8270PAHSIM	VOCs Full List = GW-V8260, SS-V8260LL	PCBs = SV8082	SVOCs Full List = SV8270PCP	Dioxins/Furans - HOLD	Remarks/Contaminant	Sample # (lab only)
PB-3A-9		SS	9	5/20/09	1045	6	X	X	X	X				HOLD	01
PB-3A-GW		GW	-		1100	112	X	H	X	X					L403723
PB-3B-10.5		SS	10.5			6	X	X	X	X					02
PB-3B-GW		GW	-			11	X	H	X	X					
GP-302-1		SS	1			2							H	X	HOLD
GP-302-3.5		SS	3.5			2							H	X	
GP-302-GW		GW	-			2							H		
GP-307-4		SS	4		1510	6	X							HOLD	
GP-307-GW		GW	-		1515	11	X							HOLD	

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other
Remarks: X = Run H = Hold for possible follow-up
TOTAL and Dissolved Lab filtration for GW metals
Temp _____ Flow _____ Other _____

Relinquished by: (Signature) <i>[Signature]</i>	Date: 5/20/09	Time: 1500	Received by: (Signature)	Samples returned via: <input type="checkbox"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 35°	Bottles Received: 35
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 5-21-09	Time: 09:00
				pH Checked:	NC:

4632 6262 8642
9632 6262 8620 Relogged from L403723

Jonah Huckabay

L404 399

From: Jarred Willis
Sent: Tuesday, May 26, 2009 4:26 PM
To: Login; Subouts
Cc: Melvin L. Mitchell; Janice Cozby
Subject: L403723-01 and -03 - Log for Dioxins and Furans by method 1613B and send to Maxxam

Attachments: Picture (Metafile)

Please log L403723-01 and -03 for Dioxins and Furans by method 1613B, and send the 8 oz containers (originally on hold) to Maxxam analytical.

Login:
Please log under MISC-SUB and add the comment "MISC-SUB = Dioxins and Furans by method 1613B".

Thanks,

Jarred Willis

Technical Service Representative (TSR)

E-mail: jwillis@esclabsciences.com

Phone: 800-767-5859 Ext. 9678

Direct: (615) 773-9678

www.esclabsciences.com



Your P.O. #: S11863



Your Project #: L404399
Your C.O.C. #: NA

Attention: Janice Cozby
Environmental Science Corp
TN
12065 Lebanon Rd
Mt Juliet, TN
USA TN 37122

Report Date: 2009/07/08

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A962867
Received: 2009/05/28, 11:58


Sample Matrix: SOLID
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Dioxins/Furans in Soil (1613B) (1)	1	2009/06/19	2009/06/26	BRL SOP-00410	EPA 1613B mod.
Dioxins/Furans in Soil (1613B) (1)	1	2009/07/06	2009/07/06	BRL SOP-00410	EPA 1613B mod.
MOISTURE	2	N/A	2009/06/01	CAM SOP-00445	McKeague 2nd ed 1978

(1) Soils are reported on a dry weight basis unless otherwise specified.

Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.

Encryption Key

 Ancy Sebastian
08 Jul 2009 17:05:28 -04:00

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

ANCY SEBASTIAN, C.Tech., Senior Project Manager, Air Toxics
Email: Ancy.Sebastian@MaxxamAnalytics.com
Phone# (905) 817-5831

=====
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. SCC and CALA have approved this reporting process and electronic report format.

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Total cover pages: 1

Maxxam Job #: A962867
 Report Date: 2009/07/08

Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

PB-3A-9

PB-3B-10.5

RESULTS OF ANALYSES OF SOLID

Maxxam ID		CP5524	CP5524	CP5525			
Sampling Date		2009/05/20 10:45	2009/05/20 10:45	2009/05/20			
COC Number		NA	NA	NA			
	Units	L404399-01	L404399-01 Lab-Dup	L404399-02	DL	QC Batch	MDL

Moisture	%	14	14	19	0.2	1832936	0.2
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RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A962867
 Report Date: 2009/07/08

 Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

PB-3A-9
DIOXINS AND FURANS BY HRMS (SOLID)

Maxxam ID		CP5524						
Sampling Date		2009/05/20 10:45						
COC Number		NA		TOXIC EQUIVALENCY		# of		
	Units	L404399-01	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL

2,3,7,8-Tetra CDD *	pg/g	<0.163	0.163	1.00	0.163	N/A	1852547	2.00
1,2,3,7,8-Penta CDD	pg/g	<0.147	0.147	1.00	0.147	N/A	1852547	10.0
1,2,3,4,7,8-Hexa CDD	pg/g	<0.150	0.150	0.100	0.0150	N/A	1852547	10.0
1,2,3,6,7,8-Hexa CDD	pg/g	<0.160	0.160	0.100	0.0160	N/A	1852547	10.0
1,2,3,7,8,9-Hexa CDD	pg/g	<0.155	0.155	0.100	0.0155	N/A	1852547	10.0
1,2,3,4,6,7,8-Hepta CDD	pg/g	1.83	0.140	0.0100	0.0183	N/A	1852547	10.0
Octa CDD	pg/g	15.8	0.316	0.000300	0.00474	N/A	1852547	20.0
Total Tetra CDD	pg/g	<0.163	0.163	N/A	N/A	N/A	1852547	N/A
Total Penta CDD	pg/g	<0.147	0.147	N/A	N/A	N/A	1852547	N/A
Total Hexa CDD	pg/g	0.191	0.157	N/A	N/A	N/A	1852547	N/A
Total Hepta CDD	pg/g	2.97	0.140	N/A	N/A	N/A	1852547	N/A
2,3,7,8-Tetra CDF **	pg/g	1.08	0.175	0.100	0.108	N/A	1852547	2.00
1,2,3,7,8-Penta CDF	pg/g	0.198	0.158	0.0300	0.00594	N/A	1852547	10.0
2,3,4,7,8-Penta CDF	pg/g	0.406	0.151	0.300	0.122	N/A	1852547	10.0
1,2,3,4,7,8-Hexa CDF	pg/g	0.343	0.149	0.100	0.0343	N/A	1852547	10.0
1,2,3,6,7,8-Hexa CDF	pg/g	0.184	0.161	0.100	0.0184	N/A	1852547	10.0
2,3,4,6,7,8-Hexa CDF	pg/g	<0.152	0.152	0.100	0.0152	N/A	1852547	10.0
1,2,3,7,8,9-Hexa CDF	pg/g	<0.153	0.153	0.100	0.0153	N/A	1852547	10.0
1,2,3,4,6,7,8-Hepta CDF	pg/g	<0.654 (1)	0.654	0.0100	0.00654	N/A	1852547	10.0
1,2,3,4,7,8,9-Hepta CDF	pg/g	<0.257	0.257	0.0100	0.00257	N/A	1852547	10.0
Octa CDF	pg/g	1.26	0.381	0.000300	0.000378	N/A	1852547	20.0
Total Tetra CDF	pg/g	3.44	0.175	N/A	N/A	N/A	1852547	N/A
Total Penta CDF	pg/g	1.59	0.154	N/A	N/A	N/A	1852547	N/A
Total Hexa CDF	pg/g	0.952	0.154	N/A	N/A	N/A	1852547	N/A
Total Hepta CDF	pg/g	0.881	0.242	N/A	N/A	N/A	1852547	N/A
TOTAL TOXIC EQUIVALENCY	pg/g	N/A	N/A	N/A	0.708	N/A	N/A	N/A

N/A = Not Applicable

RDL = Reportable Detection Limit

EDL = Estimated Detection Limit

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,

The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

EDL = Estimated Detection Limit

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: A962867
 Report Date: 2009/07/08

Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

DIOXINS AND FURANS BY HRMS (SOLID)

Maxxam ID		CP5524						
Sampling Date		2009/05/20 10:45						
COC Number		NA		TOXIC EQUIVALENCY		# of		
	Units	L404399-01	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL

Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	60	N/A	N/A	N/A	N/A	1852547	N/A
C13-1234678 HeptaCDD	%	91	N/A	N/A	N/A	N/A	1852547	N/A
C13-1234678 HeptaCDF **	%	87	N/A	N/A	N/A	N/A	1852547	N/A
C13-123478 HexaCDD	%	84	N/A	N/A	N/A	N/A	1852547	N/A
C13-123478 HexaCDF	%	88	N/A	N/A	N/A	N/A	1852547	N/A
C13-1234789 HeptaCDF	%	84	N/A	N/A	N/A	N/A	1852547	N/A
C13-123678 HexaCDD	%	94	N/A	N/A	N/A	N/A	1852547	N/A
C13-123678 HexaCDF	%	87	N/A	N/A	N/A	N/A	1852547	N/A
C13-12378 PentaCDD	%	104	N/A	N/A	N/A	N/A	1852547	N/A
C13-12378 PentaCDF	%	80	N/A	N/A	N/A	N/A	1852547	N/A
C13-123789 HexaCDF	%	83	N/A	N/A	N/A	N/A	1852547	N/A
C13-234678 HexaCDF	%	84	N/A	N/A	N/A	N/A	1852547	N/A
C13-23478 PentaCDF	%	86	N/A	N/A	N/A	N/A	1852547	N/A
C13-2378 TetraCDD	%	63	N/A	N/A	N/A	N/A	1852547	N/A
C13-2378 TetraCDF	%	69	N/A	N/A	N/A	N/A	1852547	N/A
C13-OCDD	%	96	N/A	N/A	N/A	N/A	1852547	N/A

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 * CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
 TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
 The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.
 EDL = Estimated Detection Limit
 WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Maxxam Job #: A962867
 Report Date: 2009/07/08

 Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

PB-3B-10.5
DIOXINS AND FURANS BY HRMS (SOLID)

Maxxam ID		CP5525						
Sampling Date		2009/05/20						
COC Number		NA		TOXIC EQUIVALENCY		# of		
	Units	L404399-02	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL
2,3,7,8-Tetra CDD *	pg/g	<0.127	0.127	1.00	0.127	N/A	1861839	2.00
1,2,3,7,8-Penta CDD	pg/g	0.335	0.115	1.00	0.335	N/A	1861839	10.0
1,2,3,4,7,8-Hexa CDD	pg/g	1.40	0.121	0.100	0.140	N/A	1861839	10.0
1,2,3,6,7,8-Hexa CDD	pg/g	13.4	0.128	0.100	1.34	N/A	1861839	10.0
1,2,3,7,8,9-Hexa CDD	pg/g	7.45	0.125	0.100	0.745	N/A	1861839	10.0
1,2,3,4,6,7,8-Hepta CDD	pg/g	599	0.125	0.0100	5.99	N/A	1861839	10.0
Octa CDD	pg/g	3000	0.200	0.000300	0.900	N/A	1861839	20.0
Total Tetra CDD	pg/g	1.55	0.127	N/A	N/A	N/A	1861839	N/A
Total Penta CDD	pg/g	6.06	0.115	N/A	N/A	N/A	1861839	N/A
Total Hexa CDD	pg/g	142	0.126	N/A	N/A	N/A	1861839	N/A
Total Hepta CDD	pg/g	1170	0.125	N/A	N/A	N/A	1861839	N/A
2,3,7,8-Tetra CDF **	pg/g	0.275	0.109	0.100	0.0275	N/A	1861839	2.00
1,2,3,7,8-Penta CDF	pg/g	0.205	0.131	0.0300	0.00615	N/A	1861839	10.0
2,3,4,7,8-Penta CDF	pg/g	0.258	0.124	0.300	0.0774	N/A	1861839	10.0
1,2,3,4,7,8-Hexa CDF	pg/g	0.800	0.102	0.100	0.0800	N/A	1861839	10.0
1,2,3,6,7,8-Hexa CDF	pg/g	0.649	0.110	0.100	0.0649	N/A	1861839	10.0
2,3,4,6,7,8-Hexa CDF	pg/g	0.502	0.104	0.100	0.0502	N/A	1861839	10.0
1,2,3,7,8,9-Hexa CDF	pg/g	0.121	0.105	0.100	0.0121	N/A	1861839	10.0
1,2,3,4,6,7,8-Hepta CDF	pg/g	17.0	0.120	0.0100	0.170	N/A	1861839	10.0
1,2,3,4,7,8,9-Hepta CDF	pg/g	0.677	0.135	0.0100	0.00677	N/A	1861839	10.0
Octa CDF	pg/g	15.5	0.208	0.000300	0.00465	N/A	1861839	20.0
Total Tetra CDF	pg/g	1.11	0.109	N/A	N/A	N/A	1861839	N/A
Total Penta CDF	pg/g	5.19	0.127	N/A	N/A	N/A	1861839	N/A
Total Hexa CDF	pg/g	25.0	0.105	N/A	N/A	N/A	1861839	N/A
Total Hepta CDF	pg/g	47.3	0.127	N/A	N/A	N/A	1861839	N/A
TOTAL TOXIC EQUIVALENCY	pg/g	N/A	N/A	N/A	10.1	N/A	N/A	N/A
Surrogate Recovery (%)								
37CL4 2378 Tetra CDD	%	83	N/A	N/A	N/A	N/A	1861839	N/A

N/A = Not Applicable
 RDL = Reportable Detection Limit
 EDL = Estimated Detection Limit
 QC Batch = Quality Control Batch
 * CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
 TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
 The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.
 EDL = Estimated Detection Limit
 WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Maxxam Job #: A962867
 Report Date: 2009/07/08

Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

DIOXINS AND FURANS BY HRMS (SOLID)

Maxxam ID		CP5525						
Sampling Date		2009/05/20						
COC Number		NA		TOXIC EQUIVALENCY		# of		
	Units	L404399-02	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL
C13-1234678 HeptaCDD *	%	100	N/A	N/A	N/A	N/A	1861839	N/A
C13-1234678 HeptaCDF **	%	102	N/A	N/A	N/A	N/A	1861839	N/A
C13-123478 HexaCDD	%	96	N/A	N/A	N/A	N/A	1861839	N/A
C13-123478 HexaCDF	%	101	N/A	N/A	N/A	N/A	1861839	N/A
C13-1234789 HeptaCDF	%	98	N/A	N/A	N/A	N/A	1861839	N/A
C13-123678 HexaCDD	%	103	N/A	N/A	N/A	N/A	1861839	N/A
C13-123678 HexaCDF	%	100	N/A	N/A	N/A	N/A	1861839	N/A
C13-12378 PentaCDD	%	113	N/A	N/A	N/A	N/A	1861839	N/A
C13-12378 PentaCDF	%	85	N/A	N/A	N/A	N/A	1861839	N/A
C13-123789 HexaCDF	%	94	N/A	N/A	N/A	N/A	1861839	N/A
C13-234678 HexaCDF	%	95	N/A	N/A	N/A	N/A	1861839	N/A
C13-23478 PentaCDF	%	91	N/A	N/A	N/A	N/A	1861839	N/A
C13-2378 TetraCDD	%	90	N/A	N/A	N/A	N/A	1861839	N/A
C13-2378 TetraCDF	%	79	N/A	N/A	N/A	N/A	1861839	N/A
C13-OCDD	%	107	N/A	N/A	N/A	N/A	1861839	N/A

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 * CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
 TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
 The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.
 EDL = Estimated Detection Limit
 WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Maxxam Job #: A962867
 Report Date: 2009/07/08

Environmental Science Corp
 Client Project #: L404399

Your P.O. #: S11863

Test Summary

Maxxam ID CP5524 **Collected** 2009/05/20
Sample ID L404399-01 **Shipped**
Matrix SOLID **Received** 2009/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	1852547	2009/06/19	2009/06/26	OBC
MOISTURE	BAL	1832936	N/A	2009/06/01	TMS

Maxxam ID CP5524 Dup **Collected** 2009/05/20
Sample ID L404399-01 **Shipped**
Matrix SOLID **Received** 2009/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
MOISTURE	BAL	1832936	N/A	2009/06/01	TMS

Maxxam ID CP5525 **Collected** 2009/05/20
Sample ID L404399-02 **Shipped**
Matrix SOLID **Received** 2009/05/28

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	1861839	2009/07/06	2009/07/06	KKS
MOISTURE	BAL	1832936	N/A	2009/06/01	TMS

Maxxam Job #: A962867
Report Date: 2009/07/08

Environmental Science Corp
Client Project #: L404399

Your P.O. #: S11863

GENERAL COMMENTS

Temperature up on receipt was 8c

Results relate only to the items tested.

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L404399
 P.O. #: S11863
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA962867

QA/QC Batch Num Init	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1832936 MYG	RPD - Sample/Sample Dup	Moisture	2009/06/01	0.7		%	50
1852547 OBC	MATRIX SPIKE	37CL4 2378 Tetra CDD	2009/06/26		29	%	35 - 197
	MATRIX SPIKE						
	DUP	37CL4 2378 Tetra CDD	2009/06/26		65	%	35 - 197
	MATRIX SPIKE	C13-1234678 HeptaCDD	2009/06/26		99	%	23 - 140
	MATRIX SPIKE						
	DUP	C13-1234678 HeptaCDD	2009/06/26		97	%	23 - 140
	MATRIX SPIKE	C13-1234678 HeptaCDF	2009/06/26		93	%	28 - 143
	MATRIX SPIKE						
	DUP	C13-1234678 HeptaCDF	2009/06/26		92	%	28 - 143
	MATRIX SPIKE	C13-123478 HexaCDD	2009/06/26		86	%	32 - 141
	MATRIX SPIKE						
	DUP	C13-123478 HexaCDD	2009/06/26		91	%	32 - 141
	MATRIX SPIKE	C13-123478 HexaCDF	2009/06/26		84	%	26 - 152
	MATRIX SPIKE						
	DUP	C13-123478 HexaCDF	2009/06/26		93	%	26 - 152
	MATRIX SPIKE	C13-1234789 HeptaCDF	2009/06/26		98	%	26 - 138
	MATRIX SPIKE						
	DUP	C13-1234789 HeptaCDF	2009/06/26		95	%	26 - 138
	MATRIX SPIKE	C13-123678 HexaCDD	2009/06/26		94	%	28 - 130
	MATRIX SPIKE						
	DUP	C13-123678 HexaCDD	2009/06/26		98	%	28 - 130
	MATRIX SPIKE	C13-123678 HexaCDF	2009/06/26		84	%	26 - 123
	MATRIX SPIKE						
	DUP	C13-123678 HexaCDF	2009/06/26		91	%	26 - 123
	MATRIX SPIKE	C13-12378 PentaCDD	2009/06/26		93	%	25 - 181
	MATRIX SPIKE						
	DUP	C13-12378 PentaCDD	2009/06/26		113	%	25 - 181
	MATRIX SPIKE	C13-12378 PentaCDF	2009/06/26		64	%	24 - 185
	MATRIX SPIKE						
	DUP	C13-12378 PentaCDF	2009/06/26		86	%	24 - 185
	MATRIX SPIKE	C13-123789 HexaCDF	2009/06/26		83	%	29 - 147
	MATRIX SPIKE						
	DUP	C13-123789 HexaCDF	2009/06/26		88	%	29 - 147
	MATRIX SPIKE	C13-234678 HexaCDF	2009/06/26		82	%	28 - 136
	MATRIX SPIKE						
	DUP	C13-234678 HexaCDF	2009/06/26		87	%	28 - 136
	MATRIX SPIKE	C13-23478 PentaCDF	2009/06/26		86	%	21 - 178
	MATRIX SPIKE						
	DUP	C13-23478 PentaCDF	2009/06/26		97	%	21 - 178
	MATRIX SPIKE	C13-2378 TetraCDD	2009/06/26		30	%	25 - 164
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDD	2009/06/26		69	%	25 - 164
	MATRIX SPIKE	C13-2378 TetraCDF	2009/06/26		39	%	24 - 169
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDF	2009/06/26		75	%	24 - 169
	MATRIX SPIKE	C13-OCDD	2009/06/26		112	%	17 - 157
	MATRIX SPIKE						
	DUP	C13-OCDD	2009/06/26		106	%	17 - 157
	MATRIX SPIKE						
	(CP5524)	2,3,7,8-Tetra CDD	2009/06/26		90	%	67 - 158
	MATRIX SPIKE						
	DUP (CP5524)	2,3,7,8-Tetra CDD	2009/06/26		91	%	67 - 158

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L404399
 P.O. #: S11863
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Quality Assurance Report (Continued)
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1852547 OBC	MS/MSD RPD	2,3,7,8-Tetra CDD	2009/06/26	1.1		%	25
	MATRIX SPIKE (CP5524)	1,2,3,7,8-Penta CDD	2009/06/26		101	%	70 - 142
	MATRIX SPIKE DUP (CP5524)	1,2,3,7,8-Penta CDD	2009/06/26		102	%	70 - 142
	MS/MSD RPD	1,2,3,7,8-Penta CDD	2009/06/26	1		%	25
	MATRIX SPIKE (CP5524)	1,2,3,4,7,8-Hexa CDD	2009/06/26		109	%	70 - 164
	MATRIX SPIKE DUP (CP5524)	1,2,3,4,7,8-Hexa CDD	2009/06/26		110	%	70 - 164
	MS/MSD RPD	1,2,3,4,7,8-Hexa CDD	2009/06/26	0.9		%	25
	MATRIX SPIKE (CP5524)	1,2,3,6,7,8-Hexa CDD	2009/06/26		97	%	76 - 134
	MATRIX SPIKE DUP (CP5524)	1,2,3,6,7,8-Hexa CDD	2009/06/26		92	%	76 - 134
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDD	2009/06/26	5.3		%	25
	MATRIX SPIKE (CP5524)	1,2,3,7,8,9-Hexa CDD	2009/06/26		107	%	64 - 162
	MATRIX SPIKE DUP (CP5524)	1,2,3,7,8,9-Hexa CDD	2009/06/26		105	%	64 - 162
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDD	2009/06/26	1.9		%	25
	MATRIX SPIKE (CP5524)	1,2,3,4,6,7,8-Hepta CDD	2009/06/26		94	%	70 - 140
	MATRIX SPIKE DUP (CP5524)	1,2,3,4,6,7,8-Hepta CDD	2009/06/26		94	%	70 - 140
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDD	2009/06/26	0		%	25
	MATRIX SPIKE (CP5524)	Octa CDD	2009/06/26		97	%	78 - 144
	MATRIX SPIKE DUP (CP5524)	Octa CDD	2009/06/26		96	%	78 - 144
	MS/MSD RPD	Octa CDD	2009/06/26	1.0		%	25
	MATRIX SPIKE (CP5524)	Total Tetra CDD	2009/06/26		34	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Tetra CDD	2009/06/26		35	%	N/A
	MS/MSD RPD	Total Tetra CDD	2009/06/26	1.2		%	25
	MATRIX SPIKE (CP5524)	Total Penta CDD	2009/06/26		194	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Penta CDD	2009/06/26		196	%	N/A
	MS/MSD RPD	Total Penta CDD	2009/06/26	0.9		%	25
	MATRIX SPIKE (CP5524)	Total Hexa CDD	2009/06/26		600	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Hexa CDD	2009/06/26		588	%	N/A
	MS/MSD RPD	Total Hexa CDD	2009/06/26	2.0		%	25
	MATRIX SPIKE (CP5524)	Total Hepta CDD	2009/06/26		184	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Hepta CDD	2009/06/26		182	%	N/A
	MS/MSD RPD	Total Hepta CDD	2009/06/26	0.9		%	25
	MATRIX SPIKE (CP5524)	2,3,7,8-Tetra CDF	2009/06/26		81	%	75 - 158
	MATRIX SPIKE DUP (CP5524)	2,3,7,8-Tetra CDF	2009/06/26		86	%	75 - 158

Environmental Science Corp
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 Client Project #: L404399
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Quality Assurance Report (Continued)

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1852547 OBC	MS/MSD RPD	2,3,7,8-Tetra CDF	2009/06/26	6.0		%	25
	MATRIX SPIKE (CP5524)	1,2,3,7,8-Penta CDF	2009/06/26		103	%	80 - 134
	MATRIX SPIKE DUP (CP5524)	1,2,3,7,8-Penta CDF	2009/06/26		104	%	80 - 134
	MS/MSD RPD	1,2,3,7,8-Penta CDF	2009/06/26	1		%	25
	MATRIX SPIKE (CP5524)	2,3,4,7,8-Penta CDF	2009/06/26		100	%	68 - 160
	MATRIX SPIKE DUP (CP5524)	2,3,4,7,8-Penta CDF	2009/06/26		103	%	68 - 160
	MS/MSD RPD	2,3,4,7,8-Penta CDF	2009/06/26	3.0		%	25
	MATRIX SPIKE (CP5524)	1,2,3,4,7,8-Hexa CDF	2009/06/26		103	%	72 - 134
	MATRIX SPIKE DUP (CP5524)	1,2,3,4,7,8-Hexa CDF	2009/06/26		102	%	72 - 134
	MS/MSD RPD	1,2,3,4,7,8-Hexa CDF	2009/06/26	1		%	25
	MATRIX SPIKE (CP5524)	1,2,3,6,7,8-Hexa CDF	2009/06/26		97	%	84 - 130
	MATRIX SPIKE DUP (CP5524)	1,2,3,6,7,8-Hexa CDF	2009/06/26		97	%	84 - 130
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDF	2009/06/26	0		%	25
	MATRIX SPIKE (CP5524)	2,3,4,6,7,8-Hexa CDF	2009/06/26		97	%	70 - 156
	MATRIX SPIKE DUP (CP5524)	2,3,4,6,7,8-Hexa CDF	2009/06/26		97	%	70 - 156
	MS/MSD RPD	2,3,4,6,7,8-Hexa CDF	2009/06/26	0		%	25
	MATRIX SPIKE (CP5524)	1,2,3,7,8,9-Hexa CDF	2009/06/26		97	%	78 - 130
	MATRIX SPIKE DUP (CP5524)	1,2,3,7,8,9-Hexa CDF	2009/06/26		103	%	78 - 130
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDF	2009/06/26	6.0		%	25
	MATRIX SPIKE (CP5524)	1,2,3,4,6,7,8-Hepta CDF	2009/06/26		93	%	82 - 122
	MATRIX SPIKE DUP (CP5524)	1,2,3,4,6,7,8-Hepta CDF	2009/06/26		95	%	82 - 122
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDF	2009/06/26	2.1		%	25
	MATRIX SPIKE (CP5524)	1,2,3,4,7,8,9-Hepta CDF	2009/06/26		95	%	78 - 138
	MATRIX SPIKE DUP (CP5524)	1,2,3,4,7,8,9-Hepta CDF	2009/06/26		95	%	78 - 138
	MS/MSD RPD	1,2,3,4,7,8,9-Hepta CDF	2009/06/26	0		%	25
	MATRIX SPIKE (CP5524)	Octa CDF	2009/06/26		95	%	63 - 170
	MATRIX SPIKE DUP (CP5524)	Octa CDF	2009/06/26		94	%	63 - 170
	MS/MSD RPD	Octa CDF	2009/06/26	1.1		%	25
	MATRIX SPIKE (CP5524)	Total Tetra CDF	2009/06/26		33	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Tetra CDF	2009/06/26		37	%	N/A
	MS/MSD RPD	Total Tetra CDF	2009/06/26	10.4		%	25
	MATRIX SPIKE (CP5524)	Total Penta CDF	2009/06/26		392	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Penta CDF	2009/06/26		401	%	N/A

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Quality Assurance Report (Continued)

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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1852547 OBC	MS/MSD RPD	Total Penta CDF	2009/06/26	2.3		%	25
	MATRIX SPIKE (CP5524)	Total Hexa CDF	2009/06/26		754	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Hexa CDF	2009/06/26		763	%	N/A
	MS/MSD RPD	Total Hexa CDF	2009/06/26	1.3		%	25
	MATRIX SPIKE (CP5524)	Total Hepta CDF	2009/06/26		361	%	N/A
	MATRIX SPIKE DUP (CP5524)	Total Hepta CDF	2009/06/26		364	%	N/A
	MS/MSD RPD	Total Hepta CDF	2009/06/26	0.6		%	25
	Spiked Blank	37CL4 2378 Tetra CDD	2009/06/26		73	%	35 - 197
		C13-1234678 HeptaCDD	2009/06/26		101	%	23 - 140
		C13-1234678 HeptaCDF	2009/06/26		98	%	28 - 143
		C13-123478 HexaCDD	2009/06/26		93	%	32 - 141
		C13-123478 HexaCDF	2009/06/26		96	%	26 - 152
		C13-1234789 HeptaCDF	2009/06/26		98	%	26 - 138
		C13-123678 HexaCDD	2009/06/26		100	%	28 - 130
		C13-123678 HexaCDF	2009/06/26		93	%	26 - 123
		C13-12378 PentaCDD	2009/06/26		98	%	25 - 181
		C13-12378 PentaCDF	2009/06/26		89	%	24 - 185
		C13-123789 HexaCDF	2009/06/26		91	%	29 - 147
		C13-234678 HexaCDF	2009/06/26		91	%	28 - 136
		C13-23478 PentaCDF	2009/06/26		92	%	21 - 178
		C13-2378 TetraCDD	2009/06/26		79	%	25 - 164
		C13-2378 TetraCDF	2009/06/26		82	%	24 - 169
		C13-OCDD	2009/06/26		116	%	17 - 157
		2,3,7,8-Tetra CDD	2009/06/26		91	%	67 - 158
		1,2,3,7,8-Penta CDD	2009/06/26		103	%	70 - 142
		1,2,3,4,7,8-Hexa CDD	2009/06/26		110	%	70 - 164
		1,2,3,6,7,8-Hexa CDD	2009/06/26		91	%	76 - 134
		1,2,3,7,8,9-Hexa CDD	2009/06/26		104	%	64 - 162
		1,2,3,4,6,7,8-Hepta CDD	2009/06/26		99	%	70 - 140
		Octa CDD	2009/06/26		97	%	78 - 144
		2,3,7,8-Tetra CDF	2009/06/26		87	%	75 - 158
		1,2,3,7,8-Penta CDF	2009/06/26		103	%	80 - 134
		2,3,4,7,8-Penta CDF	2009/06/26		102	%	68 - 160
		1,2,3,4,7,8-Hexa CDF	2009/06/26		104	%	72 - 134
		1,2,3,6,7,8-Hexa CDF	2009/06/26		101	%	84 - 130
		2,3,4,6,7,8-Hexa CDF	2009/06/26		97	%	70 - 156
		1,2,3,7,8,9-Hexa CDF	2009/06/26		98	%	78 - 130
		1,2,3,4,6,7,8-Hepta CDF	2009/06/26		111	%	82 - 122
		1,2,3,4,7,8,9-Hepta CDF	2009/06/26		100	%	78 - 138
		Octa CDF	2009/06/26		97	%	63 - 170
	Method Blank	37CL4 2378 Tetra CDD	2009/06/26		82	%	35 - 197
		C13-1234678 HeptaCDD	2009/06/26		102	%	23 - 140
		C13-1234678 HeptaCDF	2009/06/26		91	%	28 - 143
		C13-123478 HexaCDD	2009/06/26		94	%	32 - 141
		C13-123478 HexaCDF	2009/06/26		96	%	26 - 152
		C13-1234789 HeptaCDF	2009/06/26		90	%	26 - 138
		C13-123678 HexaCDD	2009/06/26		102	%	28 - 130
		C13-123678 HexaCDF	2009/06/26		96	%	26 - 123
		C13-12378 PentaCDD	2009/06/26		106	%	25 - 181
		C13-12378 PentaCDF	2009/06/26		92	%	24 - 185
		C13-123789 HexaCDF	2009/06/26		90	%	29 - 147

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 Client Project #: L404399
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1852547 OBC	Method Blank	C13-234678 HexaCDF	2009/06/26		91	%	28 - 136	
		C13-23478 PentaCDF	2009/06/26		94	%	21 - 178	
		C13-2378 TetraCDD	2009/06/26		89	%	25 - 164	
		C13-2378 TetraCDF	2009/06/26		90	%	24 - 169	
		C13-OCDD	2009/06/26		102	%	17 - 157	
		2,3,7,8-Tetra CDD	2009/06/26		ND, EDL=0.160		pg/g	
		1,2,3,7,8-Penta CDD	2009/06/26		ND, EDL=0.160		pg/g	
		1,2,3,4,7,8-Hexa CDD	2009/06/26		ND, EDL=0.130		pg/g	
		1,2,3,6,7,8-Hexa CDD	2009/06/26		ND, EDL=0.139		pg/g	
		1,2,3,7,8,9-Hexa CDD	2009/06/26		ND, EDL=0.135		pg/g	
		1,2,3,4,6,7,8-Hepta CDD	2009/06/26		ND, EDL=0.153		pg/g	
		Octa CDD	2009/06/26	0.474, EDL=0.206			pg/g	
		Total Tetra CDD	2009/06/26	ND, EDL=0.160			pg/g	
		Total Penta CDD	2009/06/26	ND, EDL=0.160			pg/g	
		Total Hexa CDD	2009/06/26	ND, EDL=0.136			pg/g	
		Total Hepta CDD	2009/06/26	ND, EDL=0.153			pg/g	
		2,3,7,8-Tetra CDF	2009/06/26	0.268, EDL=0.134			pg/g	
		1,2,3,7,8-Penta CDF	2009/06/26	ND, EDL=0.142			pg/g	
		2,3,4,7,8-Penta CDF	2009/06/26	0.240, EDL=0.135			pg/g	
		1,2,3,4,7,8-Hexa CDF	2009/06/26	ND, EDL=0.119			pg/g	
		1,2,3,6,7,8-Hexa CDF	2009/06/26	ND, EDL=0.128			pg/g	
		2,3,4,6,7,8-Hexa CDF	2009/06/26	ND, EDL=0.121			pg/g	
		1,2,3,7,8,9-Hexa CDF	2009/06/26	ND, EDL=0.122			pg/g	
		1,2,3,4,6,7,8-Hepta CDF	2009/06/26	ND, EDL=0.234 (1)			pg/g	
		1,2,3,4,7,8,9-Hepta CDF	2009/06/26	ND, EDL=0.166			pg/g	
		Octa CDF	2009/06/26	ND, EDL=0.213			pg/g	
		Total Tetra CDF	2009/06/26	0.473, EDL=0.134			pg/g	
		Total Penta CDF	2009/06/26	0.240, EDL=0.139			pg/g	
		Total Hexa CDF	2009/06/26	ND, EDL=0.123			pg/g	
		Total Hepta CDF	2009/06/26	ND, EDL=0.234 (1)			pg/g	
1861839 KKS	MATRIX SPIKE DUP	37CL4 2378 Tetra CDD	2009/07/06		73	%	35 - 197	
		37CL4 2378 Tetra CDD	2009/07/06		62	%	35 - 197	
		C13-1234678 HeptaCDD	2009/07/06		96	%	23 - 140	
		C13-1234678 HeptaCDD	2009/07/06		99	%	23 - 140	
		C13-1234678 HeptaCDF	2009/07/06		106	%	28 - 143	
		C13-1234678 HeptaCDF	2009/07/06		105	%	28 - 143	
		C13-123478 HexaCDD	2009/07/06		92	%	32 - 141	
		C13-123478 HexaCDD	2009/07/06		96	%	32 - 141	
		C13-123478 HexaCDF	2009/07/06		99	%	26 - 152	
		C13-123478 HexaCDF	2009/07/06		104	%	26 - 152	
		C13-1234789 HeptaCDF	2009/07/06		98	%	26 - 138	
		C13-1234789 HeptaCDF	2009/07/06		99	%	26 - 138	
		C13-123678 HexaCDD	2009/07/06		99	%	28 - 130	
		C13-123678 HexaCDD	2009/07/06		106	%	28 - 130	
		C13-123678 HexaCDF	2009/07/06		96	%	26 - 123	
		C13-123678 HexaCDF	2009/07/06		101	%	26 - 123	
		C13-12378 PentaCDD	2009/07/06		108	%	25 - 181	

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 Client Project #: L404399
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QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	MATRIX SPIKE						
	DUP	C13-12378 PentaCDD	2009/07/06		136	%	25 - 181
	MATRIX SPIKE	C13-12378 PentaCDF	2009/07/06		62	%	24 - 185
	MATRIX SPIKE						
	DUP	C13-12378 PentaCDF	2009/07/06		86	%	24 - 185
	MATRIX SPIKE	C13-123789 HexaCDF	2009/07/06		91	%	29 - 147
	MATRIX SPIKE						
	DUP	C13-123789 HexaCDF	2009/07/06		92	%	29 - 147
	MATRIX SPIKE	C13-234678 HexaCDF	2009/07/06		88	%	28 - 136
	MATRIX SPIKE						
	DUP	C13-234678 HexaCDF	2009/07/06		94	%	28 - 136
	MATRIX SPIKE	C13-23478 PentaCDF	2009/07/06		65	%	21 - 178
	MATRIX SPIKE						
	DUP	C13-23478 PentaCDF	2009/07/06		98	%	21 - 178
	MATRIX SPIKE	C13-2378 TetraCDD	2009/07/06		79	%	25 - 164
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDD	2009/07/06		68	%	25 - 164
	MATRIX SPIKE	C13-2378 TetraCDF	2009/07/06		50	%	24 - 169
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDF	2009/07/06		63	%	24 - 169
	MATRIX SPIKE	C13-OCDD	2009/07/06		104	%	17 - 157
	MATRIX SPIKE						
	DUP	C13-OCDD	2009/07/06		100	%	17 - 157
	MATRIX SPIKE	2,3,7,8-Tetra CDD	2009/07/06		92	%	67 - 158
	MATRIX SPIKE						
	DUP	2,3,7,8-Tetra CDD	2009/07/06		89	%	67 - 158
	MS/MSD RPD	2,3,7,8-Tetra CDD	2009/07/06	3.3		%	25
	MATRIX SPIKE	1,2,3,7,8-Penta CDD	2009/07/06		107	%	70 - 142
	MATRIX SPIKE						
	DUP	1,2,3,7,8-Penta CDD	2009/07/06		106	%	70 - 142
	MS/MSD RPD	1,2,3,7,8-Penta CDD	2009/07/06	0.9		%	25
	MATRIX SPIKE	1,2,3,4,7,8-Hexa CDD	2009/07/06		112	%	70 - 164
	MATRIX SPIKE						
	DUP	1,2,3,4,7,8-Hexa CDD	2009/07/06		114	%	70 - 164
	MS/MSD RPD	1,2,3,4,7,8-Hexa CDD	2009/07/06	1.8		%	25
	MATRIX SPIKE	1,2,3,6,7,8-Hexa CDD	2009/07/06		93	%	76 - 134
	MATRIX SPIKE						
	DUP	1,2,3,6,7,8-Hexa CDD	2009/07/06		94	%	76 - 134
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDD	2009/07/06	1.1		%	25
	MATRIX SPIKE	1,2,3,7,8,9-Hexa CDD	2009/07/06		106	%	64 - 162
	MATRIX SPIKE						
	DUP	1,2,3,7,8,9-Hexa CDD	2009/07/06		102	%	64 - 162
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDD	2009/07/06	3.8		%	25
	MATRIX SPIKE	1,2,3,4,6,7,8-Hepta CDD	2009/07/06		98	%	70 - 140
	MATRIX SPIKE						
	DUP	1,2,3,4,6,7,8-Hepta CDD	2009/07/06		94	%	70 - 140
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDD	2009/07/06	4.2		%	25
	MATRIX SPIKE	Octa CDD	2009/07/06		91	%	78 - 144
	MATRIX SPIKE						
	DUP	Octa CDD	2009/07/06		90	%	78 - 144
	MS/MSD RPD	Octa CDD	2009/07/06	1.1		%	25
	MATRIX SPIKE	Total Tetra CDD	2009/07/06		36	%	N/A
	MATRIX SPIKE						
	DUP	Total Tetra CDD	2009/07/06		35	%	N/A
	MS/MSD RPD	Total Tetra CDD	2009/07/06	2.2		%	25

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L404399
 P.O. #: S11863
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA962867

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	MATRIX SPIKE	Total Penta CDD	2009/07/06		211	%	N/A
	DUP	Total Penta CDD	2009/07/06		209	%	N/A
	MS/MSD RPD	Total Penta CDD	2009/07/06	1		%	25
	MATRIX SPIKE	Total Hexa CDD	2009/07/06		615	%	N/A
	DUP	Total Hexa CDD	2009/07/06		612	%	N/A
	MS/MSD RPD	Total Hexa CDD	2009/07/06	0.6		%	25
	MATRIX SPIKE	Total Hepta CDD	2009/07/06		199	%	N/A
	DUP	Total Hepta CDD	2009/07/06		190	%	N/A
	MS/MSD RPD	Total Hepta CDD	2009/07/06	4.7		%	25
	MATRIX SPIKE	2,3,7,8-Tetra CDF	2009/07/06		88	%	75 - 158
	DUP	2,3,7,8-Tetra CDF	2009/07/06		85	%	75 - 158
	MS/MSD RPD	2,3,7,8-Tetra CDF	2009/07/06	3.5		%	25
	MATRIX SPIKE	1,2,3,7,8-Penta CDF	2009/07/06		106	%	80 - 134
	DUP	1,2,3,7,8-Penta CDF	2009/07/06		105	%	80 - 134
	MS/MSD RPD	1,2,3,7,8-Penta CDF	2009/07/06	0.9		%	25
	MATRIX SPIKE	2,3,4,7,8-Penta CDF	2009/07/06		107	%	68 - 160
	DUP	2,3,4,7,8-Penta CDF	2009/07/06		109	%	68 - 160
	MS/MSD RPD	2,3,4,7,8-Penta CDF	2009/07/06	1.9		%	25
	MATRIX SPIKE	1,2,3,4,7,8-Hexa CDF	2009/07/06		107	%	72 - 134
	DUP	1,2,3,4,7,8-Hexa CDF	2009/07/06		105	%	72 - 134
	MS/MSD RPD	1,2,3,4,7,8-Hexa CDF	2009/07/06	1.9		%	25
	MATRIX SPIKE	1,2,3,6,7,8-Hexa CDF	2009/07/06		102	%	84 - 130
	DUP	1,2,3,6,7,8-Hexa CDF	2009/07/06		100	%	84 - 130
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDF	2009/07/06	2.0		%	25
	MATRIX SPIKE	2,3,4,6,7,8-Hexa CDF	2009/07/06		101	%	70 - 156
	DUP	2,3,4,6,7,8-Hexa CDF	2009/07/06		104	%	70 - 156
	MS/MSD RPD	2,3,4,6,7,8-Hexa CDF	2009/07/06	2.9		%	25
	MATRIX SPIKE	1,2,3,7,8,9-Hexa CDF	2009/07/06		100	%	78 - 130
	DUP	1,2,3,7,8,9-Hexa CDF	2009/07/06		100	%	78 - 130
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDF	2009/07/06	0		%	25
	MATRIX SPIKE	1,2,3,4,6,7,8-Hepta CDF	2009/07/06		97	%	82 - 122
	DUP	1,2,3,4,6,7,8-Hepta CDF	2009/07/06		98	%	82 - 122
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDF	2009/07/06	1.0		%	25
	MATRIX SPIKE	1,2,3,4,7,8,9-Hepta CDF	2009/07/06		98	%	78 - 138
	DUP	1,2,3,4,7,8,9-Hepta CDF	2009/07/06		101	%	78 - 138
	MS/MSD RPD	1,2,3,4,7,8,9-Hepta CDF	2009/07/06	3.0		%	25
	MATRIX SPIKE	Octa CDF	2009/07/06		101	%	63 - 170
	DUP	Octa CDF	2009/07/06		99	%	63 - 170
	MS/MSD RPD	Octa CDF	2009/07/06	2.0		%	25
	MATRIX SPIKE	Total Tetra CDF	2009/07/06		36	%	N/A
	DUP	Total Tetra CDF	2009/07/06		35	%	N/A

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L404399
 P.O. #: S11863
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA962867

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	MS/MSD RPD	Total Tetra CDF	2009/07/06	2.7		%	25
	MATRIX SPIKE	Total Penta CDF	2009/07/06		425	%	N/A
	MATRIX SPIKE						
	DUP	Total Penta CDF	2009/07/06		426	%	N/A
	MS/MSD RPD	Total Penta CDF	2009/07/06	0.09		%	25
	MATRIX SPIKE	Total Hexa CDF	2009/07/06		811	%	N/A
	MATRIX SPIKE						
	DUP	Total Hexa CDF	2009/07/06		809	%	N/A
	MS/MSD RPD	Total Hexa CDF	2009/07/06	0.3		%	25
	MATRIX SPIKE	Total Hepta CDF	2009/07/06		385	%	N/A
	MATRIX SPIKE						
	DUP	Total Hepta CDF	2009/07/06		393	%	N/A
	MS/MSD RPD	Total Hepta CDF	2009/07/06	2.1		%	25
	Spiked Blank	37CL4 2378 Tetra CDD	2009/07/06		35	%	35 - 197
		C13-1234678 HeptaCDD	2009/07/06		98	%	23 - 140
		C13-1234678 HeptaCDF	2009/07/06		107	%	28 - 143
		C13-123478 HexaCDD	2009/07/06		92	%	32 - 141
		C13-123478 HexaCDF	2009/07/06		100	%	26 - 152
		C13-1234789 HeptaCDF	2009/07/06		104	%	26 - 138
		C13-123678 HexaCDD	2009/07/06		102	%	28 - 130
		C13-123678 HexaCDF	2009/07/06		96	%	26 - 123
		C13-12378 PentaCDD	2009/07/06		103	%	25 - 181
		C13-12378 PentaCDF	2009/07/06		86	%	24 - 185
		C13-123789 HexaCDF	2009/07/06		93	%	29 - 147
		C13-234678 HexaCDF	2009/07/06		93	%	28 - 136
		C13-23478 PentaCDF	2009/07/06		103	%	21 - 178
		C13-2378 TetraCDD	2009/07/06		36	%	25 - 164
		C13-2378 TetraCDF	2009/07/06		55	%	24 - 169
		C13-OCDD	2009/07/06		101	%	17 - 157
		2,3,7,8-Tetra CDD	2009/07/06		89	%	67 - 158
		1,2,3,7,8-Penta CDD	2009/07/06		102	%	70 - 142
		1,2,3,4,7,8-Hexa CDD	2009/07/06		113	%	70 - 164
		1,2,3,6,7,8-Hexa CDD	2009/07/06		99	%	76 - 134
		1,2,3,7,8,9-Hexa CDD	2009/07/06		104	%	64 - 162
		1,2,3,4,6,7,8-Hepta CDD	2009/07/06		95	%	70 - 140
		Octa CDD	2009/07/06		102	%	78 - 144
		2,3,7,8-Tetra CDF	2009/07/06		85	%	75 - 158
		1,2,3,7,8-Penta CDF	2009/07/06		105	%	80 - 134
		2,3,4,7,8-Penta CDF	2009/07/06		110	%	68 - 160
		1,2,3,4,7,8-Hexa CDF	2009/07/06		104	%	72 - 134
		1,2,3,6,7,8-Hexa CDF	2009/07/06		100	%	84 - 130
		2,3,4,6,7,8-Hexa CDF	2009/07/06		99	%	70 - 156
		1,2,3,7,8,9-Hexa CDF	2009/07/06		98	%	78 - 130
		1,2,3,4,6,7,8-Hepta CDF	2009/07/06		106	%	82 - 122
		1,2,3,4,7,8,9-Hepta CDF	2009/07/06		98	%	78 - 138
		Octa CDF	2009/07/06		108	%	63 - 170
	Method Blank	37CL4 2378 Tetra CDD	2009/07/06		94	%	35 - 197
		C13-1234678 HeptaCDD	2009/07/06		85	%	23 - 140
		C13-1234678 HeptaCDF	2009/07/06		90	%	28 - 143
		C13-123478 HexaCDD	2009/07/06		91	%	32 - 141
		C13-123478 HexaCDF	2009/07/06		99	%	26 - 152
		C13-1234789 HeptaCDF	2009/07/06		84	%	26 - 138
		C13-123678 HexaCDD	2009/07/06		98	%	28 - 130
		C13-123678 HexaCDF	2009/07/06		99	%	26 - 123
		C13-12378 PentaCDD	2009/07/06		87	%	25 - 181

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L404399
 P.O. #: S11863
 Project name:

Quality Assurance Report (Continued)
 Maxxam Job Number: GA962867

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	Method Blank	C13-12378 PentaCDF	2009/07/06		79	%	24 - 185
		C13-123789 HexaCDF	2009/07/06		88	%	29 - 147
		C13-234678 HexaCDF	2009/07/06		91	%	28 - 136
		C13-23478 PentaCDF	2009/07/06		83	%	21 - 178
		C13-2378 TetraCDD	2009/07/06		89	%	25 - 164
		C13-2378 TetraCDF	2009/07/06		85	%	24 - 169
		C13-OCDD	2009/07/06		79	%	17 - 157
		2,3,7,8-Tetra CDD	2009/07/06	ND, EDL=0.105		pg/g	
		1,2,3,7,8-Penta CDD	2009/07/06	ND, EDL=0.117		pg/g	
		1,2,3,4,7,8-Hexa CDD	2009/07/06	ND, EDL=0.0976		pg/g	
		1,2,3,6,7,8-Hexa CDD	2009/07/06	ND, EDL=0.104		pg/g	
		1,2,3,7,8,9-Hexa CDD	2009/07/06	ND, EDL=0.101		pg/g	
		1,2,3,4,6,7,8-Hepta CDD	2009/07/06	0.152, EDL=0.101		pg/g	
		Octa CDD	2009/07/06	0.382, EDL=0.297		pg/g	
		Total Tetra CDD	2009/07/06	ND, EDL=0.105		pg/g	
		Total Penta CDD	2009/07/06	ND, EDL=0.247 (1)		pg/g	
		Total Hexa CDD	2009/07/06	ND, EDL=0.102		pg/g	
		Total Hepta CDD	2009/07/06	0.152, EDL=0.101		pg/g	
		2,3,7,8-Tetra CDF	2009/07/06	0.190, EDL=0.109		pg/g	
		1,2,3,7,8-Penta CDF	2009/07/06	ND, EDL=0.110		pg/g	
		2,3,4,7,8-Penta CDF	2009/07/06	0.218, EDL=0.104		pg/g	
		1,2,3,4,7,8-Hexa CDF	2009/07/06	ND, EDL=0.101		pg/g	
		1,2,3,6,7,8-Hexa CDF	2009/07/06	ND, EDL=0.109		pg/g	
		2,3,4,6,7,8-Hexa CDF	2009/07/06	ND, EDL=0.103		pg/g	
		1,2,3,7,8,9-Hexa CDF	2009/07/06	0.132, EDL=0.104		pg/g	
		1,2,3,4,6,7,8-Hepta CDF	2009/07/06	ND, EDL=0.359 (2)		pg/g	
		1,2,3,4,7,8,9-Hepta CDF	2009/07/06	ND, EDL=0.710		pg/g	
		Octa CDF	2009/07/06	ND, EDL=0.202 (1)		pg/g	
		Total Tetra CDF	2009/07/06	0.608, EDL=0.109		pg/g	
		Total Penta CDF	2009/07/06	0.218, EDL=0.107		pg/g	
		Total Hexa CDF	2009/07/06	0.132, EDL=0.104		pg/g	
		Total Hepta CDF	2009/07/06	ND, EDL=0.111		pg/g	

ND = Not detected
 N/A = Not Applicable
 SPIKE = Fortified sample
 (1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.
 (2) EMPC / DPE - Diphenylether interference present caused dibenzofuran detected to become a "non-detect" with an elevated detection limit.
 EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: A962867
 Report Date: 2009/07/08

Environmental Science Corp
 Client Project #: L404399
 Project name:
 Your P.O. #: S11863
 Sampler Initials:

RESULTS OF ANALYSES OF SOLID

Maxxam ID		CP5524	CP5524	CP5525			
Sampling Date		39953.44792	39953.44792	39953			
COC Number		NA	NA	NA			
	Units	L404399-01	L404399-01 Lab-Dup	L404399-02	DL	QC Batch	MDL
Moisture	%	14	14	19	0.2	1832936	0.2

RDL = Reportable Detection Limit
 Lab-Dup = Laboratory Initiated Duplicate
 QC Batch = Quality Control Batch

1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1852547-LILB	SO	MAXX	EPA 1613E 6/26/2009	0:56 initial	1852547-LI 1852547-LIDRY	EPA 1613E 6/19/2009	0:00
1861839-LILB	SO	MAXX	EPA 1613E 7/6/2009	15:55 initial	1861839-LI 1861839-LIDRY	EPA 1613E 6/28/2009	0:00

Cas_Rn	Chemical_I	Result_Val	Result_Uni	Detect_Fla	Detection_I	Lab_Qualif	Test_batch	Validator_C	Reportable	Fraction	Dilution_Fa	Method_De	Composite	Field_sdg	percent_moisture
35822-46-€	1,2,3,4,6,7,	1.83	PG/G	Y		10 J	1852547	Yes	N		1	0.14	N	A962867	14
67562-39-41	2,3,4,6,7,	0.654	PG/G	N		10 U	1852547	Yes	N		1	0.654	N	A962867	14
55673-89-71	2,3,4,7,8,	0.257	PG/G	N		10 U	1852547	Yes	N		1	0.257	N	A962867	14
39227-28-€	1,2,3,4,7,8-	0.15	PG/G	N		10 U	1852547	Yes	N		1	0.15	N	A962867	14
70648-26-€	1,2,3,4,7,8-	0.343	PG/G	Y		10 J	1852547	Yes	N		1	0.149	N	A962867	14
57653-85-71	2,3,6,7,8-	0.16	PG/G	N		10 U	1852547	Yes	N		1	0.16	N	A962867	14
57117-44-€	1,2,3,6,7,8-	0.184	PG/G	Y		10 J	1852547	Yes	N		1	0.161	N	A962867	14
19408-74-€	1,2,3,7,8,9-	0.155	PG/G	N		10 U	1852547	Yes	N		1	0.155	N	A962867	14
72918-21-€	1,2,3,7,8,9-	0.153	PG/G	N		10 U	1852547	Yes	N		1	0.153	N	A962867	14
40321-76-41	2,3,7,8-P	0.147	PG/G	N		10 U	1852547	Yes	N		1	0.147	N	A962867	14
57117-41-€	1,2,3,7,8-P	0.198	PG/G	Y		10 J	1852547	Yes	N		1	0.158	N	A962867	14
60851-34-€	2,3,4,6,7,8-	0.152	PG/G	N		10 U	1852547	Yes	N		1	0.152	N	A962867	14
57117-31-42	3,4,7,8-P	0.406	PG/G	Y		10 JB	1852547	Yes	N		1	0.151	N	A962867	14
TCDD-TEC	2,3,7,8-Tet	0.163	PG/G	N		2 U	1852547	Yes	N		1	0.163	N	A962867	14
51207-31-€	2,3,7,8-Tet	1.08	PG/G	Y		2 JB	1852547	Yes	N		1	0.175	N	A962867	14
85508-50-€	37CL4 237	60	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-83-	C13-12346	91	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-84-	C13-12346	87	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-80-	C13-12347	84	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
114423-98-	C13-12347	88	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-94-	C13-12347	84	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-81-	C13-12367	94	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
116843-03-	C13-12367	87	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-79-	C13-12378	104	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
109719-77-	C13-12378	80	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
116843-04-	C13-12378	83	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
116843-05-	C13-23467	84	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
116843-02-	C13-23478	86	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
76523-40-€	C13-2378	63	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
89059-46-1C	13-2378	69	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
114423-97-	C13-OCDC	96	PERCENT	Y			1852547	Yes	N		1		N	A962867	14
3268-87-9	Octa CDD	15.8	PG/G	Y		20 J	1852547	Yes	N		1	0.316	N	A962867	14
39001-02-C	Octa CDF	1.26	PG/G	Y		20 J	1852547	Yes	N		1	0.381	N	A962867	14
37871-00-4	Total Hepta	2.97	PG/G	Y		0.14	1852547	Yes	N		1	0.14	N	A962867	14
38998-75-€	Total Hepta	0.881	PG/G	Y		0.242	1852547	Yes	N		1	0.242	N	A962867	14
34465-46-€	Total Hexa	0.191	PG/G	Y		0.157	1852547	Yes	N		1	0.157	N	A962867	14
55684-94-1	Total Hexa	0.952	PG/G	Y		0.154	1852547	Yes	N		1	0.154	N	A962867	14
36088-22-€	Total Penta	0.147	PG/G	N		0.147 U	1852547	Yes	N		1	0.147	N	A962867	14
30402-15-4	Total Penta	1.59	PG/G	Y		0.154	1852547	Yes	N		1	0.154	N	A962867	14
41903-57-€	Total Tetra	0.163	PG/G	N		0.163 U	1852547	Yes	N		1	0.163	N	A962867	14
55722-27-€	Total Tetra	3.44	PG/G	Y		0.175	1852547	Yes	N		1	0.175	N	A962867	14
TEQEO	2378-TCDF	0.708	PG/G	Y				Yes	N		1		N	A962867	14
35822-46-€	1,2,3,4,6,7,	599	PG/G	Y		10	1861839	Yes	N		1	0.125	N	A962867	19
67562-39-41	2,3,4,6,7,	17	PG/G	Y		10	1861839	Yes	N		1	0.12	N	A962867	19
55673-89-71	2,3,4,7,8,	0.677	PG/G	Y		10 J	1861839	Yes	N		1	0.135	N	A962867	19
39227-28-€	1,2,3,4,7,8-	1.4	PG/G	Y		10 J	1861839	Yes	N		1	0.121	N	A962867	19
70648-26-€	1,2,3,4,7,8-	0.8	PG/G	Y		10 J	1861839	Yes	N		1	0.102	N	A962867	19
57653-85-71	2,3,6,7,8-	13.4	PG/G	Y		10	1861839	Yes	N		1	0.128	N	A962867	19
57117-44-€	1,2,3,6,7,8-	0.649	PG/G	Y		10 J	1861839	Yes	N		1	0.11	N	A962867	19

19408-74-ε 1,2,3,7,8,9-	7.45 PG/G	Y	10 J	1861839	Yes	N	1	0.125 N	A962867	19
72918-21-ε 1,2,3,7,8,9-	0.121 PG/G	Y	10 JB	1861839	Yes	N	1	0.105 N	A962867	19
40321-76-41,2,3,7,8-P	0.335 PG/G	Y	10 J	1861839	Yes	N	1	0.115 N	A962867	19
57117-41-ε 1,2,3,7,8-P	0.205 PG/G	Y	10 J	1861839	Yes	N	1	0.131 N	A962867	19
60851-34-ε 2,3,4,6,7,8-	0.502 PG/G	Y	10 J	1861839	Yes	N	1	0.104 N	A962867	19
57117-31-42,3,4,7,8-P	0.258 PG/G	Y	10 JB	1861839	Yes	N	1	0.124 N	A962867	19
TCDD-TEC 2,3,7,8-Tet	0.127 PG/G	N	2 U	1861839	Yes	N	1	0.127 N	A962867	19
51207-31-ε 2,3,7,8-Tet	0.275 PG/G	Y	2 JB	1861839	Yes	N	1	0.109 N	A962867	19
85508-50-ε 37CL4 237	83 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-83-C13-12346	100 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-84-C13-12346	102 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-80-C13-12347	96 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
114423-98-C13-12347	101 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-94-C13-12347	98 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-81-C13-12367	103 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
116843-03-C13-12367	100 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-79-C13-12378	113 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
109719-77-C13-12378	85 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
116843-04-C13-12378	94 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
116843-05-C13-23467	95 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
116843-02-C13-23478	91 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
76523-40-ε C13-2378	90 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
89059-46-1C13-2378	79 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
114423-97-C13-OCDC	107 PERCENT	Y		1861839	Yes	N	1	N	A962867	19
3268-87-9 Octa CDD	3000 PG/G	Y	20	1861839	Yes	N	1	0.2 N	A962867	19
39001-02-C Octa CDF	15.5 PG/G	Y	20 J	1861839	Yes	N	1	0.208 N	A962867	19
37871-00-4 Total Hepta	1170 PG/G	Y	0.125	1861839	Yes	N	1	0.125 N	A962867	19
38998-75-ε Total Hepta	47.3 PG/G	Y	0.127	1861839	Yes	N	1	0.127 N	A962867	19
34465-46-ε Total Hexa	142 PG/G	Y	0.126	1861839	Yes	N	1	0.126 N	A962867	19
55684-94-1 Total Hexa	25 PG/G	Y	0.105	1861839	Yes	N	1	0.105 N	A962867	19
36088-22-ε Total Penta	6.06 PG/G	Y	0.115	1861839	Yes	N	1	0.115 N	A962867	19
30402-15-4 Total Penta	5.19 PG/G	Y	0.127	1861839	Yes	N	1	0.127 N	A962867	19
41903-57-ε Total Tetra	1.55 PG/G	Y	0.127	1861839	Yes	N	1	0.127 N	A962867	19
55722-27-ε Total Tetra	1.11 PG/G	Y	0.109	1861839	Yes	N	1	0.109 N	A962867	19
TEQEO 2378-TCDF	10.1 PG/G	Y			Yes	N	1	N	A962867	19
35822-46-ε 1,2,3,4,6,7,	94 PG/G	Y	10	1852547	Yes	N	1	0.162 N	A962867	
67562-39-41,2,3,4,6,7,	93 PG/G	Y	10	1852547	Yes	N	1	0.162 N	A962867	
55673-89-71,2,3,4,7,8,	95 PG/G	Y	10	1852547	Yes	N	1	0.182 N	A962867	
39227-28-ε 1,2,3,4,7,8-	109 PG/G	Y	10	1852547	Yes	N	1	0.132 N	A962867	
70648-26-ε 1,2,3,4,7,8-	103 PG/G	Y	10	1852547	Yes	N	1	0.136 N	A962867	
57653-85-71,2,3,6,7,8-	97 PG/G	Y	10	1852547	Yes	N	1	0.14 N	A962867	
57117-44-ε 1,2,3,6,7,8-	97 PG/G	Y	10	1852547	Yes	N	1	0.147 N	A962867	
19408-74-ε 1,2,3,7,8,9-	107 PG/G	Y	10	1852547	Yes	N	1	0.137 N	A962867	
72918-21-ε 1,2,3,7,8,9-	97 PG/G	Y	10	1852547	Yes	N	1	0.139 N	A962867	
40321-76-41,2,3,7,8-P	101 PG/G	Y	10	1852547	Yes	N	1	0.157 N	A962867	
57117-41-ε 1,2,3,7,8-P	103 PG/G	Y	10	1852547	Yes	N	1	0.212 N	A962867	
60851-34-ε 2,3,4,6,7,8-	97 PG/G	Y	10	1852547	Yes	N	1	0.139 N	A962867	
57117-31-42,3,4,7,8-P	100 PG/G	Y	10	1852547	Yes	N	1	0.201 N	A962867	
TCDD-TEC 2,3,7,8-Tet	90 PG/G	Y	2	1852547	Yes	N	1	0.264 N	A962867	
51207-31-ε 2,3,7,8-Tet	81 PG/G	Y	2	1852547	Yes	N	1	0.194 N	A962867	

85508-50-ε37CL4 237	29 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-83-C13-12346	99 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-84-C13-12346	93 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	86 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-98-C13-12347	84 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	98 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-81-C13-12367	94 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	84 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-79-C13-12378	93 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-77-C13-12378	64 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-04-C13-12378	83 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	82 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-02-C13-23478	86 PERCENT Y		1852547	Yes	N	1	N	A962867
76523-40-εC13-2378	30 PERCENT Y		1852547	Yes	N	1	N	A962867
89059-46-1C13-2378	39 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	112 PERCENT Y		1852547	Yes	N	1	N	A962867
3268-87-9 Octa CDD	97 PG/G Y	20	1852547	Yes	N	1	0.244 N	A962867
39001-02-C Octa CDF	95 PG/G Y	20	1852547	Yes	N	1	0.201 N	A962867
37871-00-4 Total Hepta	184 PG/G Y	0.162	1852547	Yes	N	1	0.162 N	A962867
38998-75-ε Total Hepta	361 PG/G Y	0.172	1852547	Yes	N	1	0.172 N	A962867
34465-46-ε Total Hexa	600 PG/G Y	0.138	1852547	Yes	N	1	0.138 N	A962867
55684-94-1 Total Hexa	754 PG/G Y	0.14	1852547	Yes	N	1	0.14 N	A962867
36088-22-ε Total Penta	194 PG/G Y	0.157	1852547	Yes	N	1	0.157 N	A962867
30402-15-4 Total Penta	392 PG/G Y	0.206	1852547	Yes	N	1	0.206 N	A962867
41903-57-ε Total Tetra	34 PG/G Y	0.264	1852547	Yes	N	1	0.264 N	A962867
55722-27-ε Total Tetra	33 PG/G Y	0.194	1852547	Yes	N	1	0.194 N	A962867
35822-46-ε 1,2,3,4,6,7,	94 PG/G Y	10	1852547	Yes	N	1	0.217 N	A962867
67562-39-4 1,2,3,4,6,7,	95 PG/G Y	10	1852547	Yes	N	1	0.112 N	A962867
55673-89-7 1,2,3,4,7,8,	95 PG/G Y	10	1852547	Yes	N	1	0.126 N	A962867
39227-28-ε 1,2,3,4,7,8-	110 PG/G Y	10	1852547	Yes	N	1	0.113 N	A962867
70648-26-ε 1,2,3,4,7,8-	102 PG/G Y	10	1852547	Yes	N	1	0.168 N	A962867
57653-85-7 1,2,3,6,7,8-	92 PG/G Y	10	1852547	Yes	N	1	0.12 N	A962867
57117-44-ε 1,2,3,6,7,8-	97 PG/G Y	10	1852547	Yes	N	1	0.181 N	A962867
19408-74-ε 1,2,3,7,8,9-	105 PG/G Y	10	1852547	Yes	N	1	0.117 N	A962867
72918-21-ε 1,2,3,7,8,9-	103 PG/G Y	10	1852547	Yes	N	1	0.171 N	A962867
40321-76-4 1,2,3,7,8-P	102 PG/G Y	10	1852547	Yes	N	1	0.166 N	A962867
57117-41-ε 1,2,3,7,8-P	104 PG/G Y	10	1852547	Yes	N	1	0.15 N	A962867
60851-34-ε 2,3,4,6,7,8-	97 PG/G Y	10	1852547	Yes	N	1	0.171 N	A962867
57117-31-4 2,3,4,7,8-P	103 PG/G Y	10	1852547	Yes	N	1	0.142 N	A962867
TCDD-TEC 2,3,7,8-Tet	91 PG/G Y	2	1852547	Yes	N	1	0.166 N	A962867
51207-31-ε 2,3,7,8-Tet	86 PG/G Y	2	1852547	Yes	N	1	0.126 N	A962867
85508-50-ε37CL4 237	65 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-83-C13-12346	97 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-84-C13-12346	92 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	91 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-98-C13-12347	93 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	95 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-81-C13-12367	98 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	91 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-79-C13-12378	113 PERCENT Y		1852547	Yes	N	1	N	A962867

109719-77-C13-12378	86 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-04-C13-12378	88 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	87 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-02-C13-23478	97 PERCENT Y		1852547	Yes	N	1	N	A962867
76523-40-€C13-2378	69 PERCENT Y		1852547	Yes	N	1	N	A962867
89059-46-1C13-2378	75 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	106 PERCENT Y		1852547	Yes	N	1	N	A962867
3268-87-9 Octa CDD	96 PG/G	Y	1852547	Yes	N	1	0.218 N	A962867
39001-02-C Octa CDF	94 PG/G	Y	1852547	Yes	N	1	0.259 N	A962867
37871-00-4 Total Hepta	182 PG/G	Y	1852547	Yes	N	1	0.217 N	A962867
38998-75-€ Total Hepta	364 PG/G	Y	1852547	Yes	N	1	0.118 N	A962867
34465-46-€ Total Hexa	588 PG/G	Y	1852547	Yes	N	1	0.118 N	A962867
55684-94-1 Total Hexa	763 PG/G	Y	1852547	Yes	N	1	0.173 N	A962867
36088-22-€ Total Penta	196 PG/G	Y	1852547	Yes	N	1	0.166 N	A962867
30402-15-4 Total Penta	401 PG/G	Y	1852547	Yes	N	1	0.146 N	A962867
41903-57-€ Total Tetra	35 PG/G	Y	1852547	Yes	N	1	0.166 N	A962867
55722-27-€ Total Tetra	37 PG/G	Y	1852547	Yes	N	1	0.126 N	A962867
35822-46-€ 1,2,3,4,6,7,	99 PG/G	Y	1852547	Yes	N	1	0.159 N	A962867
35822-46-€ 1,2,3,4,6,7,	95 PG/G	Y	1861839	Yes	N	1	0.116 N	A962867
67562-39-4 1,2,3,4,6,7,	106 PG/G	Y	1861839	Yes	N	1	0.116 N	A962867
67562-39-4 1,2,3,4,6,7,	111 PG/G	Y	1852547	Yes	N	1	0.158 N	A962867
55673-89-7 1,2,3,4,7,8,	100 PG/G	Y	1852547	Yes	N	1	0.177 N	A962867
55673-89-7 1,2,3,4,7,8,	98 PG/G	Y	1861839	Yes	N	1	0.13 N	A962867
39227-28-€ 1,2,3,4,7,8-	113 PG/G	Y	1861839	Yes	N	1	0.111 N	A962867
39227-28-€ 1,2,3,4,7,8-	110 PG/G	Y	1852547	Yes	N	1	0.224 N	A962867
70648-26-€ 1,2,3,4,7,8-	104 PG/G	Y	1852547	Yes	N	1	0.206 N	A962867
70648-26-€ 1,2,3,4,7,8-	104 PG/G	Y	1861839	Yes	N	1	0.138 N	A962867
57653-85-7 1,2,3,6,7,8-	99 PG/G	Y	1861839	Yes	N	1	0.118 N	A962867
57653-85-7 1,2,3,6,7,8-	91 PG/G	Y	1852547	Yes	N	1	0.238 N	A962867
57117-44-€ 1,2,3,6,7,8-	101 PG/G	Y	1852547	Yes	N	1	0.222 N	A962867
57117-44-€ 1,2,3,6,7,8-	100 PG/G	Y	1861839	Yes	N	1	0.148 N	A962867
19408-74-€ 1,2,3,7,8,9-	104 PG/G	Y	1861839	Yes	N	1	0.115 N	A962867
19408-74-€ 1,2,3,7,8,9-	104 PG/G	Y	1852547	Yes	N	1	0.232 N	A962867
72918-21-€ 1,2,3,7,8,9-	98 PG/G	Y	1852547	Yes	N	1	0.21 N	A962867
72918-21-€ 1,2,3,7,8,9-	98 PG/G	Y	1861839	Yes	N	1	0.141 N	A962867
40321-76-4 1,2,3,7,8-P	102 PG/G	Y	1861839	Yes	N	1	0.126 N	A962867
40321-76-4 1,2,3,7,8-P	103 PG/G	Y	1852547	Yes	N	1	0.223 N	A962867
57117-41-€ 1,2,3,7,8-P	103 PG/G	Y	1852547	Yes	N	1	0.192 N	A962867
57117-41-€ 1,2,3,7,8-P	105 PG/G	Y	1861839	Yes	N	1	0.132 N	A962867
60851-34-€ 2,3,4,6,7,8-	99 PG/G	Y	1861839	Yes	N	1	0.14 N	A962867
60851-34-€ 2,3,4,6,7,8-	97 PG/G	Y	1852547	Yes	N	1	0.21 N	A962867
57117-31-4 2,3,4,7,8-P	102 PG/G	Y	1852547	Yes	N	1	0.183 N	A962867
57117-31-4 2,3,4,7,8-P	110 PG/G	Y	1861839	Yes	N	1	0.125 N	A962867
TCDD-TEC 2,3,7,8-Tet	89 PG/G	Y	1861839	Yes	N	1	0.119 N	A962867
TCDD-TEC 2,3,7,8-Tet	91 PG/G	Y	1852547	Yes	N	1	0.171 N	A962867
51207-31-€ 2,3,7,8-Tet	87 PG/G	Y	1852547	Yes	N	1	0.184 N	A962867
51207-31-€ 2,3,7,8-Tet	85 PG/G	Y	1861839	Yes	N	1	0.132 N	A962867
85508-50-€ 37CL4 237	35 PERCENT Y		1861839	Yes	N	1	N	A962867
85508-50-€ 37CL4 237	73 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-83-C13-12346	101 PERCENT Y		1852547	Yes	N	1	N	A962867

109719-83-C13-12346	98 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-84-C13-12346	107 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-84-C13-12346	98 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	93 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	92 PERCENT Y		1861839	Yes	N	1	N	A962867
114423-98-C13-12347	100 PERCENT Y		1861839	Yes	N	1	N	A962867
114423-98-C13-12347	96 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	98 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	104 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-81-C13-12367	102 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-81-C13-12367	100 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	93 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	96 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-79-C13-12378	103 PERCENT Y		1861839	Yes	N	1	N	A962867
109719-79-C13-12378	98 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-77-C13-12378	89 PERCENT Y		1852547	Yes	N	1	N	A962867
109719-77-C13-12378	86 PERCENT Y		1861839	Yes	N	1	N	A962867
116843-04-C13-12378	93 PERCENT Y		1861839	Yes	N	1	N	A962867
116843-04-C13-12378	91 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	91 PERCENT Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	93 PERCENT Y		1861839	Yes	N	1	N	A962867
116843-02-C13-23478	103 PERCENT Y		1861839	Yes	N	1	N	A962867
116843-02-C13-23478	92 PERCENT Y		1852547	Yes	N	1	N	A962867
76523-40-ε C13-2378	79 PERCENT Y		1852547	Yes	N	1	N	A962867
76523-40-ε C13-2378	36 PERCENT Y		1861839	Yes	N	1	N	A962867
89059-46-1C13-2378	55 PERCENT Y		1861839	Yes	N	1	N	A962867
89059-46-1C13-2378	82 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	116 PERCENT Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	101 PERCENT Y		1861839	Yes	N	1	N	A962867
3268-87-9 Octa CDD	97 PG/G Y	20	1852547	Yes	N	1	0.258 N	A962867
3268-87-9 Octa CDD	102 PG/G Y	20	1861839	Yes	N	1	0.301 N	A962867
39001-02-C Octa CDF	108 PG/G Y	20	1861839	Yes	N	1	0.261 N	A962867
39001-02-C Octa CDF	97 PG/G Y	20	1852547	Yes	N	1	0.211 N	A962867
35822-46-ε 1,2,3,4,6,7,	0.153 PG/G N	10 U	1852547	Yes	N	1	0.153 N	A962867
35822-46-ε 1,2,3,4,6,7,	0.152 PG/G Y	10 J	1861839	Yes	N	1	0.101 N	A962867
67562-39-4 1,2,3,4,6,7,	0.359 PG/G N	10 U	1861839	Yes	N	1	0.359 N	A962867
67562-39-4 1,2,3,4,6,7,	0.234 PG/G N	10 U	1852547	Yes	N	1	0.234 N	A962867
55673-89-7 1,2,3,4,7,8,	0.166 PG/G N	10 U	1852547	Yes	N	1	0.166 N	A962867
55673-89-7 1,2,3,4,7,8,	0.71 PG/G N	10 U	1861839	Yes	N	1	0.71 N	A962867
39227-28-ε 1,2,3,4,7,8,	0.0976 PG/G N	10 U	1861839	Yes	N	1	0.0976 N	A962867
39227-28-ε 1,2,3,4,7,8,	0.13 PG/G N	10 U	1852547	Yes	N	1	0.13 N	A962867
70648-26-ε 1,2,3,4,7,8,	0.119 PG/G N	10 U	1852547	Yes	N	1	0.119 N	A962867
70648-26-ε 1,2,3,4,7,8,	0.101 PG/G N	10 U	1861839	Yes	N	1	0.101 N	A962867
57653-85-7 1,2,3,6,7,8,	0.104 PG/G N	10 U	1861839	Yes	N	1	0.104 N	A962867
57653-85-7 1,2,3,6,7,8,	0.139 PG/G N	10 U	1852547	Yes	N	1	0.139 N	A962867
57117-44-ε 1,2,3,6,7,8,	0.128 PG/G N	10 U	1852547	Yes	N	1	0.128 N	A962867
57117-44-ε 1,2,3,6,7,8,	0.109 PG/G N	10 U	1861839	Yes	N	1	0.109 N	A962867
19408-74-ε 1,2,3,7,8,9,	0.101 PG/G N	10 U	1861839	Yes	N	1	0.101 N	A962867
19408-74-ε 1,2,3,7,8,9,	0.135 PG/G N	10 U	1852547	Yes	N	1	0.135 N	A962867
72918-21-ε 1,2,3,7,8,9,	0.122 PG/G N	10 U	1852547	Yes	N	1	0.122 N	A962867

72918-21-ε 1,2,3,7,8,9-	0.132 PG/G	Y	10 J	1861839	Yes	N	1	0.104 N	A962867
40321-76-41,2,3,7,8-P	0.117 PG/G	N	10 U	1861839	Yes	N	1	0.117 N	A962867
40321-76-41,2,3,7,8-P	0.16 PG/G	N	10 U	1852547	Yes	N	1	0.16 N	A962867
57117-41-ε 1,2,3,7,8-P	0.142 PG/G	N	10 U	1852547	Yes	N	1	0.142 N	A962867
57117-41-ε 1,2,3,7,8-P	0.11 PG/G	N	10 U	1861839	Yes	N	1	0.11 N	A962867
60851-34-ε 2,3,4,6,7,8-	0.103 PG/G	N	10 U	1861839	Yes	N	1	0.103 N	A962867
60851-34-ε 2,3,4,6,7,8-	0.121 PG/G	N	10 U	1852547	Yes	N	1	0.121 N	A962867
57117-31-4,2,3,4,7,8-P	0.24 PG/G	Y	10 J	1852547	Yes	N	1	0.135 N	A962867
57117-31-4,2,3,4,7,8-P	0.218 PG/G	Y	10 J	1861839	Yes	N	1	0.104 N	A962867
TCDD-TEC 2,3,7,8-Tet	0.105 PG/G	N	2 U	1861839	Yes	N	1	0.105 N	A962867
TCDD-TEC 2,3,7,8-Tet	0.16 PG/G	N	2 U	1852547	Yes	N	1	0.16 N	A962867
51207-31-ε 2,3,7,8-Tet	0.268 PG/G	Y	2 J	1852547	Yes	N	1	0.134 N	A962867
51207-31-ε 2,3,7,8-Tet	0.19 PG/G	Y	2 J	1861839	Yes	N	1	0.109 N	A962867
85508-50-ε 37CL4 237	94 PERCENT	Y		1861839	Yes	N	1	N	A962867
85508-50-ε 37CL4 237	82 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-83-C13-12346	102 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-83-C13-12346	85 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-84-C13-12346	90 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-84-C13-12346	91 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	94 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-80-C13-12347	91 PERCENT	Y		1861839	Yes	N	1	N	A962867
114423-98-C13-12347	99 PERCENT	Y		1861839	Yes	N	1	N	A962867
114423-98-C13-12347	96 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	90 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-94-C13-12347	84 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-81-C13-12367	98 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-81-C13-12367	102 PERCENT	Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	96 PERCENT	Y		1852547	Yes	N	1	N	A962867
116843-03-C13-12367	99 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-79-C13-12378	87 PERCENT	Y		1861839	Yes	N	1	N	A962867
109719-79-C13-12378	106 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-77-C13-12378	92 PERCENT	Y		1852547	Yes	N	1	N	A962867
109719-77-C13-12378	79 PERCENT	Y		1861839	Yes	N	1	N	A962867
116843-04-C13-12378	88 PERCENT	Y		1861839	Yes	N	1	N	A962867
116843-04-C13-12378	90 PERCENT	Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	91 PERCENT	Y		1852547	Yes	N	1	N	A962867
116843-05-C13-23467	91 PERCENT	Y		1861839	Yes	N	1	N	A962867
116843-02-C13-23478	83 PERCENT	Y		1861839	Yes	N	1	N	A962867
116843-02-C13-23478	94 PERCENT	Y		1852547	Yes	N	1	N	A962867
76523-40-ε C13-2378	89 PERCENT	Y		1852547	Yes	N	1	N	A962867
76523-40-ε C13-2378	89 PERCENT	Y		1861839	Yes	N	1	N	A962867
89059-46-1C13-2378	85 PERCENT	Y		1861839	Yes	N	1	N	A962867
89059-46-1C13-2378	90 PERCENT	Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	102 PERCENT	Y		1852547	Yes	N	1	N	A962867
114423-97-C13-OCDC	79 PERCENT	Y		1861839	Yes	N	1	N	A962867
3268-87-9 Octa CDD	0.382 PG/G	Y	20 J	1861839	Yes	N	1	0.297 N	A962867
3268-87-9 Octa CDD	0.474 PG/G	Y	20 J	1852547	Yes	N	1	0.206 N	A962867
39001-02-C Octa CDF	0.213 PG/G	N	20 U	1852547	Yes	N	1	0.213 N	A962867
39001-02-C Octa CDF	0.202 PG/G	N	20 U	1861839	Yes	N	1	0.202 N	A962867
37871-00-4 Total Heptc	0.152 PG/G	Y	0.101	1861839	Yes	N	1	0.101 N	A962867

37871-00-4 Total Hepta	0.153 PG/G	N	0.153 U	1852547	Yes	N	1	0.153 N	A962867
38998-75-3 Total Hepta	0.234 PG/G	N	0.234 U	1852547	Yes	N	1	0.234 N	A962867
38998-75-3 Total Hepta	0.111 PG/G	N	0.111 U	1861839	Yes	N	1	0.111 N	A962867
34465-46-8 Total Hexa	0.102 PG/G	N	0.102 U	1861839	Yes	N	1	0.102 N	A962867
34465-46-8 Total Hexa	0.136 PG/G	N	0.136 U	1852547	Yes	N	1	0.136 N	A962867
55684-94-1 Total Hexa	0.123 PG/G	N	0.123 U	1852547	Yes	N	1	0.123 N	A962867
55684-94-1 Total Hexa	0.132 PG/G	Y	0.104	1861839	Yes	N	1	0.104 N	A962867
36088-22-9 Total Penta	0.247 PG/G	N	0.247 U	1861839	Yes	N	1	0.247 N	A962867
36088-22-9 Total Penta	0.16 PG/G	N	0.16 U	1852547	Yes	N	1	0.16 N	A962867
30402-15-4 Total Penta	0.24 PG/G	Y	0.139	1852547	Yes	N	1	0.139 N	A962867
30402-15-4 Total Penta	0.218 PG/G	Y	0.107	1861839	Yes	N	1	0.107 N	A962867
41903-57-8 Total Tetra	0.105 PG/G	N	0.105 U	1861839	Yes	N	1	0.105 N	A962867
41903-57-8 Total Tetra	0.16 PG/G	N	0.16 U	1852547	Yes	N	1	0.16 N	A962867
55722-27-8 Total Tetra	0.473 PG/G	Y	0.134	1852547	Yes	N	1	0.134 N	A962867
55722-27-8 Total Tetra	0.608 PG/G	Y	0.109	1861839	Yes	N	1	0.109 N	A962867

L406037

SLR International Corp. -
West Linn, OR

SLRWLOR-BAYWOOD

Billing Information:
SLR International Corp.
Accounts Payable
1800 Blankenship Rd, Ste 440
West Linn, OR 97068
Report to: Chris Kramer
Email to: ckramer@slrcorp.com, smiller@slrcorp.com

Analysis/Container/Preservative

Chain of Custody
Page ___ of ___
ESC
L.A.B. S.C.I.E.N.C.E.S.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Project Description: Bay Wood Project - Everett, WA
City/State Collected: Everett, WA
Phone: 503-723-4423
FAX: 503-723-4436
Client Project #: 008.0339.00001
ESC Key: SLRWLOR-BAYWOOD
Collected by: C. Kramer
Site/Facility ID#: _____
P.O.#: _____

Collected by (signature): *C. Kramer*
Rush? (Lab MUST Be Notified)
Same Day200%
Next Day100%
Two Day50%
Three Day25%
Date Results Needed:
Email? ___ No ___ Yes
FAX? ___ No ___ Yes
Immediately Packed on Ice N Y

Priority Pollutant Metals = M6010PP
PAHs = SV8270PAHSIM
VOCs Full List = GW-V8260, SS-V8260LL
PCBs = SV8082
SVOCs Full List = SV8270PCP
Dioxins/Furans - HOLD

F042
CoCode SLRWLOR (lab use only)
Template/Prelogin
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	HCID	Priority Pollutant Metals = M6010PP	PAHs = SV8270PAHSIM	VOCs Full List = GW-V8260, SS-V8260LL	PCBs = SV8082	SVOCs Full List = SV8270PCP	Dioxins/Furans - HOLD
PB-6A-6		SS	6	5/24/09	815	6	X	X	X	X			
PB-6A-GW		GW	-		840	6	X	X	X	X			
PB-3C-7		SS	7		840	6	X	X	X	X			
PB-3C-GW		GW	-		925	4	X	X	X	X			
PB-3D-5.5		SS	5.5		915	6	X	X	X	X			
PB-3D-GW		GW	-		1000	11	X	X	X	X			
PB-5A-9		SS	9		945	6	X	X	X	X			
PB-5A-GW		GW	-		1050	12	X	X	X	X			

Remarks/Contaminant
Sample # (lab only)
HOLD
For Possible Follow-up
-01
HOLD

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

Remarks: 4632 6262 8528 4632 6262 8506 4632 6262 8506 4632 6262 8506
pH _____ Temp _____
Flow _____ Other _____

Relinquished by: (Signature) <i>C. Kramer</i>	Date: 5/24/09	Time:	Received by: (Signature)	Samples returned via: <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/> UPS	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.6	Bottles Received: 70
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 5/22/09	Time: 0900
				pH Checked: <2	NCF:

Jonah Huckabay

L406037

From: Mark Beasley
Sent: Friday, June 05, 2009 10:06 AM
To: Login; Sample Storage
Cc: Jarred Willis; Subouts
Subject: L403980 *SLRWLOR* relog

Relog L403980-10 for MISC-SUB. This is getting subbed out for Dioxins and Furans method 1613B. Refer to L404399 w/ questions.

Thanks
Mark Beasley
ESC Lab Sciences
Direct Phone: (615) 773-9672
Toll-free: 1-800-767-5859 ext 9672
Email: mbeasley@esclabsciences.com

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Your P.O. #: S11917-S11919



Your Project #: L406037
Your C.O.C. #: na

Attention: Janice Cozby
Environmental Science Corp
TN
12065 Lebanon Rd
Mt Juliet, TN
USA TN 37122

Report Date: 2009/07/15

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: A968831
Received: 2009/06/09, 13:02

Sample Matrix: Soil
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Method Reference
Dioxins/Furans in Soil (1613B) (1)	1	2009/06/28	2009/07/07	BRL SOP-00410	EPA 1613B mod.
MOISTURE	1	N/A	2009/06/15	CAM SOP-00445	McKeague 2nd ed 1978

(1) Soils are reported on a dry weight basis unless otherwise specified.

Confirmatory runs for 2,3,7,8-TCDF are performed only if the primary result is greater than the RDL.

MAXXAM ANALYTICS

ANCY SEBASTIAN, C.Tech.
Senior Project Manager, Air Toxics

AMS/ams
encl.

Validated by : 
EDMOND MCNEIL, B.Sc.(Hons), C.Chem.
Senior Scientific Specialist, HRMS Services

Maxxam Analytics Inc. is a NELAC accredited laboratory. Certificate # CANA001. Use of the NELAC logo however does not insure that

Your P.O. #: S11917-S11919



Your Project #: L406037

Your C.O.C. #: na

Attention: Janice Cozby

Environmental Science Corp

TN

12065 Lebanon Rd

Mt Juliet, TN

USA TN 37122

Report Date: 2009/07/15

CERTIFICATE OF ANALYSIS

-2-

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Total cover pages: 2

Page 2 of 12

Maxxam Job #: A968831
 Report Date: 2009/07/15

Environmental Science Corp
 Client Project #: L406037

Your P.O. #: S11917-S11919

RESULTS OF ANALYSES OF SOIL

Maxxam ID		CS4551			
Sampling Date		2009/05/21 09:45			
COC Number		na			
	Units	L406037-01	DL	QC Batch	MDL

Moisture	%	18	0.2	1846951	0.2
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RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch

Maxxam Job #: A968831
 Report Date: 2009/07/15

 Environmental Science Corp
 Client Project #: L406037

Your P.O. #: S11917-S11919

DIOXINS AND FURANS BY HRMS (SOIL)

Maxxam ID		CS4551						
Sampling Date		2009/05/21 09:45						
COC Number		na		TOXIC EQUIVALENCY		# of		
	Units	L406037-01	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL

2,3,7,8-Tetra CDD *	pg/g	<0.142	0.142	1.00	0.142	N/A	1861839	2.00
1,2,3,7,8-Penta CDD	pg/g	<0.166	0.166	1.00	0.166	N/A	1861839	10.0
1,2,3,4,7,8-Hexa CDD	pg/g	<0.170	0.170	0.100	0.0170	N/A	1861839	10.0
1,2,3,6,7,8-Hexa CDD	pg/g	2.13	0.181	0.100	0.213	N/A	1861839	10.0
1,2,3,7,8,9-Hexa CDD	pg/g	0.761	0.176	0.100	0.0761	N/A	1861839	10.0
1,2,3,4,6,7,8-Hepta CDD	pg/g	59.3	0.141	0.0100	0.593	N/A	1861839	10.0
Octa CDD	pg/g	587	0.225	0.000300	0.176	N/A	1861839	20.0
Total Tetra CDD	pg/g	0.375	0.142	N/A	N/A	N/A	1861839	N/A
Total Penta CDD	pg/g	<0.166	0.166	N/A	N/A	N/A	1861839	N/A
Total Hexa CDD	pg/g	11.6	0.178	N/A	N/A	N/A	1861839	N/A
Total Hepta CDD	pg/g	106	0.141	N/A	N/A	N/A	1861839	N/A
2,3,7,8-Tetra CDF **	pg/g	0.478	0.181	0.100	0.0478	N/A	1861839	2.00
1,2,3,7,8-Penta CDF	pg/g	<0.157	0.157	0.0300	0.00471	N/A	1861839	10.0
2,3,4,7,8-Penta CDF	pg/g	0.284	0.149	0.300	0.0852	N/A	1861839	10.0
1,2,3,4,7,8-Hexa CDF	pg/g	0.554	0.161	0.100	0.0554	N/A	1861839	10.0
1,2,3,6,7,8-Hexa CDF	pg/g	0.360	0.173	0.100	0.0360	N/A	1861839	10.0
2,3,4,6,7,8-Hexa CDF	pg/g	<0.224 (1)	0.224	0.100	0.0224	N/A	1861839	10.0
1,2,3,7,8,9-Hexa CDF	pg/g	<0.164	0.164	0.100	0.0164	N/A	1861839	10.0
1,2,3,4,6,7,8-Hepta CDF	pg/g	<10.7 (1)	10.7	0.0100	0.107	N/A	1861839	10.0
1,2,3,4,7,8,9-Hepta CDF	pg/g	0.549	0.149	0.0100	0.00549	N/A	1861839	10.0
Octa CDF	pg/g	32.9	0.301	0.000300	0.00987	N/A	1861839	20.0
Total Tetra CDF	pg/g	0.944	0.181	N/A	N/A	N/A	1861839	N/A
Total Penta CDF	pg/g	3.46	0.153	N/A	N/A	N/A	1861839	N/A
Total Hexa CDF	pg/g	15.6	0.166	N/A	N/A	N/A	1861839	N/A
Total Hepta CDF	pg/g	24.5	0.141	N/A	N/A	N/A	1861839	N/A
TOTAL TOXIC EQUIVALENCY	pg/g	N/A	N/A	N/A	1.77	N/A	N/A	N/A

N/A = Not Applicable

RDL = Reportable Detection Limit

EDL = Estimated Detection Limit

QC Batch = Quality Control Batch

* CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan

TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,

The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.

EDL = Estimated Detection Limit

WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and

Dioxin-like Compounds

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: A968831
 Report Date: 2009/07/15

Environmental Science Corp
 Client Project #: L406037

Your P.O. #: S11917-S11919

DIOXINS AND FURANS BY HRMS (SOIL)

Maxxam ID		CS4551						
Sampling Date		2009/05/21 09:45						
COC Number		na		TOXIC EQUIVALENCY		# of		
	Units	L406037-01	EDL	TEF (2005 WHO)	TEQ(DL)	Isomers	QC Batch	RDL

Surrogate Recovery (%)								
37CL4 2378 Tetra CDD *	%	69	N/A	N/A	N/A	N/A	1861839	N/A
C13-1234678 HeptaCDD	%	103	N/A	N/A	N/A	N/A	1861839	N/A
C13-1234678 HeptaCDF **	%	102	N/A	N/A	N/A	N/A	1861839	N/A
C13-123478 HexaCDD	%	95	N/A	N/A	N/A	N/A	1861839	N/A
C13-123478 HexaCDF	%	98	N/A	N/A	N/A	N/A	1861839	N/A
C13-1234789 HeptaCDF	%	98	N/A	N/A	N/A	N/A	1861839	N/A
C13-123678 HexaCDD	%	97	N/A	N/A	N/A	N/A	1861839	N/A
C13-123678 HexaCDF	%	95	N/A	N/A	N/A	N/A	1861839	N/A
C13-12378 PentaCDD	%	96	N/A	N/A	N/A	N/A	1861839	N/A
C13-12378 PentaCDF	%	73	N/A	N/A	N/A	N/A	1861839	N/A
C13-123789 HexaCDF	%	90	N/A	N/A	N/A	N/A	1861839	N/A
C13-234678 HexaCDF	%	92	N/A	N/A	N/A	N/A	1861839	N/A
C13-23478 PentaCDF	%	80	N/A	N/A	N/A	N/A	1861839	N/A
C13-2378 TetraCDD	%	75	N/A	N/A	N/A	N/A	1861839	N/A
C13-2378 TetraCDF	%	67	N/A	N/A	N/A	N/A	1861839	N/A
C13-OCDD	%	106	N/A	N/A	N/A	N/A	1861839	N/A

N/A = Not Applicable
 RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 * CDD = Chloro Dibenzo-p-Dioxin, ** CDF = Chloro Dibenzo-p-Furan
 TEF = Toxic Equivalency Factor, TEQ = Toxic Equivalency Quotient,
 The Total Toxic Equivalency (TEQ) value reported is the sum of Toxic Equivalent Quotients for the congeners tested.
 EDL = Estimated Detection Limit
 WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

Maxxam Job #: A968831
Report Date: 2009/07/15

Environmental Science Corp
Client Project #: L406037

Your P.O. #: S11917-S11919

Test Summary

Maxxam ID CS4551
Sample ID L406037-01
Matrix Soil

Collected 2009/05/21
Shipped
Received 2009/06/09

Test Description	Instrumentation	Batch	Extracted	Analyzed	Analyst
Dioxins/Furans in Soil (1613B)	HRMS/MS	1861839	2009/06/28	2009/07/07	KKS
MOISTURE	BAL	1846951	N/A	2009/06/15	AC

Maxxam Job #: A968831
Report Date: 2009/07/15

Environmental Science Corp
Client Project #: L406037

Your P.O. #: S11917-S11919

GENERAL COMMENTS

Results relate only to the items tested.

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L406037
 P.O. #: S11917-S11919
 Project name:

Quality Assurance Report
 Maxxam Job Number: GA968831

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1846951 MYG	RPD - Sample/Sample Dup	Moisture	2009/06/15	1.7		%	50
1861839 KKS	MATRIX SPIKE	37CL4 2378 Tetra CDD	2009/07/06		73	%	35 - 197
	MATRIX SPIKE						
	DUP	37CL4 2378 Tetra CDD	2009/07/06		62	%	35 - 197
	MATRIX SPIKE	C13-1234678 HeptaCDD	2009/07/06		96	%	23 - 140
	MATRIX SPIKE						
	DUP	C13-1234678 HeptaCDD	2009/07/06		99	%	23 - 140
	MATRIX SPIKE	C13-1234678 HeptaCDF	2009/07/06		106	%	28 - 143
	MATRIX SPIKE						
	DUP	C13-1234678 HeptaCDF	2009/07/06		105	%	28 - 143
	MATRIX SPIKE	C13-123478 HexaCDD	2009/07/06		92	%	32 - 141
	MATRIX SPIKE						
	DUP	C13-123478 HexaCDD	2009/07/06		96	%	32 - 141
	MATRIX SPIKE	C13-123478 HexaCDF	2009/07/06		99	%	26 - 152
	MATRIX SPIKE						
	DUP	C13-123478 HexaCDF	2009/07/06		104	%	26 - 152
	MATRIX SPIKE	C13-1234789 HeptaCDF	2009/07/06		98	%	26 - 138
	MATRIX SPIKE						
	DUP	C13-1234789 HeptaCDF	2009/07/06		99	%	26 - 138
	MATRIX SPIKE	C13-123678 HexaCDD	2009/07/06		99	%	28 - 130
	MATRIX SPIKE						
	DUP	C13-123678 HexaCDD	2009/07/06		106	%	28 - 130
	MATRIX SPIKE	C13-123678 HexaCDF	2009/07/06		96	%	26 - 123
	MATRIX SPIKE						
	DUP	C13-123678 HexaCDF	2009/07/06		101	%	26 - 123
	MATRIX SPIKE	C13-12378 PentaCDD	2009/07/06		108	%	25 - 181
	MATRIX SPIKE						
	DUP	C13-12378 PentaCDD	2009/07/06		136	%	25 - 181
	MATRIX SPIKE	C13-12378 PentaCDF	2009/07/06		62	%	24 - 185
	MATRIX SPIKE						
	DUP	C13-12378 PentaCDF	2009/07/06		86	%	24 - 185
	MATRIX SPIKE	C13-123789 HexaCDF	2009/07/06		91	%	29 - 147
	MATRIX SPIKE						
	DUP	C13-123789 HexaCDF	2009/07/06		92	%	29 - 147
	MATRIX SPIKE	C13-234678 HexaCDF	2009/07/06		88	%	28 - 136
	MATRIX SPIKE						
	DUP	C13-234678 HexaCDF	2009/07/06		94	%	28 - 136
	MATRIX SPIKE	C13-23478 PentaCDF	2009/07/06		65	%	21 - 178
	MATRIX SPIKE						
	DUP	C13-23478 PentaCDF	2009/07/06		98	%	21 - 178
	MATRIX SPIKE	C13-2378 TetraCDD	2009/07/06		79	%	25 - 164
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDD	2009/07/06		68	%	25 - 164
	MATRIX SPIKE	C13-2378 TetraCDF	2009/07/06		50	%	24 - 169
	MATRIX SPIKE						
	DUP	C13-2378 TetraCDF	2009/07/06		63	%	24 - 169
	MATRIX SPIKE	C13-OCDD	2009/07/06		104	%	17 - 157
	MATRIX SPIKE						
	DUP	C13-OCDD	2009/07/06		100	%	17 - 157
	MATRIX SPIKE	2,3,7,8-Tetra CDD	2009/07/06		92	%	67 - 158
	MATRIX SPIKE						
	DUP	2,3,7,8-Tetra CDD	2009/07/06		89	%	67 - 158
	MS/MSD RPD	2,3,7,8-Tetra CDD	2009/07/06	3.3		%	25

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L406037
 P.O. #: S11917-S11919
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA968831

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	MATRIX SPIKE	1,2,3,7,8-Penta CDD	2009/07/06		107	%	70 - 142
	MATRIX SPIKE						
	DUP	1,2,3,7,8-Penta CDD	2009/07/06		106	%	70 - 142
	MS/MSD RPD	1,2,3,7,8-Penta CDD	2009/07/06	0.9		%	25
	MATRIX SPIKE	1,2,3,4,7,8-Hexa CDD	2009/07/06		112	%	70 - 164
	MATRIX SPIKE						
	DUP	1,2,3,4,7,8-Hexa CDD	2009/07/06		114	%	70 - 164
	MS/MSD RPD	1,2,3,4,7,8-Hexa CDD	2009/07/06	1.8		%	25
	MATRIX SPIKE	1,2,3,6,7,8-Hexa CDD	2009/07/06		93	%	76 - 134
	MATRIX SPIKE						
	DUP	1,2,3,6,7,8-Hexa CDD	2009/07/06		94	%	76 - 134
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDD	2009/07/06	1.1		%	25
	MATRIX SPIKE	1,2,3,7,8,9-Hexa CDD	2009/07/06		106	%	64 - 162
	MATRIX SPIKE						
	DUP	1,2,3,7,8,9-Hexa CDD	2009/07/06		102	%	64 - 162
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDD	2009/07/06	3.8		%	25
	MATRIX SPIKE	1,2,3,4,6,7,8-Hepta CDD	2009/07/06		98	%	70 - 140
	MATRIX SPIKE						
	DUP	1,2,3,4,6,7,8-Hepta CDD	2009/07/06		94	%	70 - 140
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDD	2009/07/06	4.2		%	25
	MATRIX SPIKE	Octa CDD	2009/07/06		91	%	78 - 144
	MATRIX SPIKE						
	DUP	Octa CDD	2009/07/06		90	%	78 - 144
	MS/MSD RPD	Octa CDD	2009/07/06	1.1		%	25
	MATRIX SPIKE	Total Tetra CDD	2009/07/06		36	%	N/A
	MATRIX SPIKE						
	DUP	Total Tetra CDD	2009/07/06		35	%	N/A
	MS/MSD RPD	Total Tetra CDD	2009/07/06	2.2		%	25
	MATRIX SPIKE	Total Penta CDD	2009/07/06		211	%	N/A
	MATRIX SPIKE						
	DUP	Total Penta CDD	2009/07/06		209	%	N/A
	MS/MSD RPD	Total Penta CDD	2009/07/06	1		%	25
	MATRIX SPIKE	Total Hexa CDD	2009/07/06		615	%	N/A
	MATRIX SPIKE						
	DUP	Total Hexa CDD	2009/07/06		612	%	N/A
	MS/MSD RPD	Total Hexa CDD	2009/07/06	0.6		%	25
	MATRIX SPIKE	Total Hepta CDD	2009/07/06		199	%	N/A
	MATRIX SPIKE						
	DUP	Total Hepta CDD	2009/07/06		190	%	N/A
	MS/MSD RPD	Total Hepta CDD	2009/07/06	4.7		%	25
	MATRIX SPIKE	2,3,7,8-Tetra CDF	2009/07/06		88	%	75 - 158
	MATRIX SPIKE						
	DUP	2,3,7,8-Tetra CDF	2009/07/06		85	%	75 - 158
	MS/MSD RPD	2,3,7,8-Tetra CDF	2009/07/06	3.5		%	25
	MATRIX SPIKE	1,2,3,7,8-Penta CDF	2009/07/06		106	%	80 - 134
	MATRIX SPIKE						
	DUP	1,2,3,7,8-Penta CDF	2009/07/06		105	%	80 - 134
	MS/MSD RPD	1,2,3,7,8-Penta CDF	2009/07/06	0.9		%	25
	MATRIX SPIKE	2,3,4,7,8-Penta CDF	2009/07/06		107	%	68 - 160
	MATRIX SPIKE						
	DUP	2,3,4,7,8-Penta CDF	2009/07/06		109	%	68 - 160
	MS/MSD RPD	2,3,4,7,8-Penta CDF	2009/07/06	1.9		%	25
	MATRIX SPIKE	1,2,3,4,7,8-Hexa CDF	2009/07/06		107	%	72 - 134
	MATRIX SPIKE						
	DUP	1,2,3,4,7,8-Hexa CDF	2009/07/06		105	%	72 - 134

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L406037
 P.O. #: S11917-S11919
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA968831

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	MS/MSD RPD	1,2,3,4,7,8-Hexa CDF	2009/07/06	1.9		%	25
	MATRIX SPIKE	1,2,3,6,7,8-Hexa CDF	2009/07/06		102	%	84 - 130
	MATRIX SPIKE						
	DUP	1,2,3,6,7,8-Hexa CDF	2009/07/06		100	%	84 - 130
	MS/MSD RPD	1,2,3,6,7,8-Hexa CDF	2009/07/06	2.0		%	25
	MATRIX SPIKE	2,3,4,6,7,8-Hexa CDF	2009/07/06		101	%	70 - 156
	MATRIX SPIKE						
	DUP	2,3,4,6,7,8-Hexa CDF	2009/07/06		104	%	70 - 156
	MS/MSD RPD	2,3,4,6,7,8-Hexa CDF	2009/07/06	2.9		%	25
	MATRIX SPIKE	1,2,3,7,8,9-Hexa CDF	2009/07/06		100	%	78 - 130
	MATRIX SPIKE						
	DUP	1,2,3,7,8,9-Hexa CDF	2009/07/06		100	%	78 - 130
	MS/MSD RPD	1,2,3,7,8,9-Hexa CDF	2009/07/06	0		%	25
	MATRIX SPIKE	1,2,3,4,6,7,8-Hepta CDF	2009/07/06		97	%	82 - 122
	MATRIX SPIKE						
	DUP	1,2,3,4,6,7,8-Hepta CDF	2009/07/06		98	%	82 - 122
	MS/MSD RPD	1,2,3,4,6,7,8-Hepta CDF	2009/07/06	1.0		%	25
	MATRIX SPIKE	1,2,3,4,7,8,9-Hepta CDF	2009/07/06		98	%	78 - 138
	MATRIX SPIKE						
	DUP	1,2,3,4,7,8,9-Hepta CDF	2009/07/06		101	%	78 - 138
	MS/MSD RPD	1,2,3,4,7,8,9-Hepta CDF	2009/07/06	3.0		%	25
	MATRIX SPIKE	Octa CDF	2009/07/06		101	%	63 - 170
	MATRIX SPIKE						
	DUP	Octa CDF	2009/07/06		99	%	63 - 170
	MS/MSD RPD	Octa CDF	2009/07/06	2.0		%	25
	MATRIX SPIKE	Total Tetra CDF	2009/07/06		36	%	N/A
	MATRIX SPIKE						
	DUP	Total Tetra CDF	2009/07/06		35	%	N/A
	MS/MSD RPD	Total Tetra CDF	2009/07/06	2.7		%	25
	MATRIX SPIKE	Total Penta CDF	2009/07/06		425	%	N/A
	MATRIX SPIKE						
	DUP	Total Penta CDF	2009/07/06		426	%	N/A
	MS/MSD RPD	Total Penta CDF	2009/07/06	0.09		%	25
	MATRIX SPIKE	Total Hexa CDF	2009/07/06		811	%	N/A
	MATRIX SPIKE						
	DUP	Total Hexa CDF	2009/07/06		809	%	N/A
	MS/MSD RPD	Total Hexa CDF	2009/07/06	0.3		%	25
	MATRIX SPIKE	Total Hepta CDF	2009/07/06		385	%	N/A
	MATRIX SPIKE						
	DUP	Total Hepta CDF	2009/07/06		393	%	N/A
MS/MSD RPD	Total Hepta CDF	2009/07/06	2.1		%	25	
Spiked Blank	37CL4 2378 Tetra CDD	2009/07/06		35	%	35 - 197	
	C13-1234678 HeptaCDD	2009/07/06		98	%	23 - 140	
	C13-1234678 HeptaCDF	2009/07/06		107	%	28 - 143	
	C13-123478 HexaCDD	2009/07/06		92	%	32 - 141	
	C13-123478 HexaCDF	2009/07/06		100	%	26 - 152	
	C13-1234789 HeptaCDF	2009/07/06		104	%	26 - 138	
	C13-123678 HexaCDD	2009/07/06		102	%	28 - 130	
	C13-123678 HexaCDF	2009/07/06		96	%	26 - 123	
	C13-12378 PentaCDD	2009/07/06		103	%	25 - 181	
	C13-12378 PentaCDF	2009/07/06		86	%	24 - 185	
	C13-123789 HexaCDF	2009/07/06		93	%	29 - 147	
	C13-234678 HexaCDF	2009/07/06		93	%	28 - 136	
	C13-23478 PentaCDF	2009/07/06		103	%	21 - 178	
	C13-2378 TetraCDD	2009/07/06		36	%	25 - 164	

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L406037
 P.O. #: S11917-S11919
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA968831

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits	
1861839 KKS	Spiked Blank	C13-2378 TetraCDF	2009/07/06		55	%	24 - 169	
		C13-OCDD	2009/07/06		101	%	17 - 157	
		2,3,7,8-Tetra CDD	2009/07/06		89	%	67 - 158	
		1,2,3,7,8-Penta CDD	2009/07/06		102	%	70 - 142	
		1,2,3,4,7,8-Hexa CDD	2009/07/06		113	%	70 - 164	
		1,2,3,6,7,8-Hexa CDD	2009/07/06		99	%	76 - 134	
		1,2,3,7,8,9-Hexa CDD	2009/07/06		104	%	64 - 162	
		1,2,3,4,6,7,8-Hepta CDD	2009/07/06		95	%	70 - 140	
		Octa CDD	2009/07/06		102	%	78 - 144	
		2,3,7,8-Tetra CDF	2009/07/06		85	%	75 - 158	
		1,2,3,7,8-Penta CDF	2009/07/06		105	%	80 - 134	
		2,3,4,7,8-Penta CDF	2009/07/06		110	%	68 - 160	
		1,2,3,4,7,8-Hexa CDF	2009/07/06		104	%	72 - 134	
		1,2,3,6,7,8-Hexa CDF	2009/07/06		100	%	84 - 130	
		2,3,4,6,7,8-Hexa CDF	2009/07/06		99	%	70 - 156	
		1,2,3,7,8,9-Hexa CDF	2009/07/06		98	%	78 - 130	
		1,2,3,4,6,7,8-Hepta CDF	2009/07/06		106	%	82 - 122	
		1,2,3,4,7,8,9-Hepta CDF	2009/07/06		98	%	78 - 138	
		Octa CDF	2009/07/06		108	%	63 - 170	
		Method Blank	37CL4 2378 Tetra CDD	2009/07/06		94	%	35 - 197
			C13-1234678 HeptaCDD	2009/07/06		85	%	23 - 140
			C13-1234678 HeptaCDF	2009/07/06		90	%	28 - 143
			C13-123478 HexaCDD	2009/07/06		91	%	32 - 141
			C13-123478 HexaCDF	2009/07/06		99	%	26 - 152
			C13-1234789 HeptaCDF	2009/07/06		84	%	26 - 138
			C13-123678 HexaCDD	2009/07/06		98	%	28 - 130
			C13-123678 HexaCDF	2009/07/06		99	%	26 - 123
			C13-12378 PentaCDD	2009/07/06		87	%	25 - 181
			C13-12378 PentaCDF	2009/07/06		79	%	24 - 185
			C13-123789 HexaCDF	2009/07/06		88	%	29 - 147
			C13-234678 HexaCDF	2009/07/06		91	%	28 - 136
			C13-23478 PentaCDF	2009/07/06		83	%	21 - 178
			C13-2378 TetraCDD	2009/07/06		89	%	25 - 164
			C13-2378 TetraCDF	2009/07/06		85	%	24 - 169
			C13-OCDD	2009/07/06		79	%	17 - 157
		2,3,7,8-Tetra CDD	2009/07/06		ND, EDL=0.105		pg/g	
		1,2,3,7,8-Penta CDD	2009/07/06		ND, EDL=0.117		pg/g	
		1,2,3,4,7,8-Hexa CDD	2009/07/06		ND, EDL=0.0976		pg/g	
		1,2,3,6,7,8-Hexa CDD	2009/07/06		ND, EDL=0.104		pg/g	
		1,2,3,7,8,9-Hexa CDD	2009/07/06		ND, EDL=0.101		pg/g	
		1,2,3,4,6,7,8-Hepta CDD	2009/07/06		0.152, EDL=0.101		pg/g	
		Octa CDD	2009/07/06		0.382, EDL=0.297		pg/g	
		Total Tetra CDD	2009/07/06		ND, EDL=0.105		pg/g	
		Total Penta CDD	2009/07/06		ND, EDL=0.247 (1)		pg/g	
		Total Hexa CDD	2009/07/06		ND, EDL=0.102		pg/g	
	Total Hepta CDD	2009/07/06		0.152, EDL=0.101		pg/g		
	2,3,7,8-Tetra CDF	2009/07/06		0.190, EDL=0.109		pg/g		
	1,2,3,7,8-Penta CDF	2009/07/06		ND, EDL=0.110		pg/g		
	2,3,4,7,8-Penta CDF	2009/07/06		0.218, EDL=0.104		pg/g		
	1,2,3,4,7,8-Hexa CDF	2009/07/06		ND, EDL=0.101		pg/g		
	1,2,3,6,7,8-Hexa CDF	2009/07/06		ND, EDL=0.109		pg/g		
	2,3,4,6,7,8-Hexa CDF	2009/07/06		ND, EDL=0.103		pg/g		
	1,2,3,7,8,9-Hexa CDF	2009/07/06		0.132, EDL=0.104		pg/g		
	1,2,3,4,6,7,8-Hepta CDF	2009/07/06		ND, EDL=0.359 (2)		pg/g		
	1,2,3,4,7,8,9-Hepta CDF	2009/07/06		ND, EDL=0.710		pg/g		

Environmental Science Corp
 Attention: Janice Cozby
 Client Project #: L406037
 P.O. #: S11917-S11919
 Project name:

Quality Assurance Report (Continued)

Maxxam Job Number: GA968831

QA/QC Batch	QC Type	Parameter	Date Analyzed yyyy/mm/dd	Value	%Recovery	Units	QC Limits
1861839 KKS	Method Blank	Octa CDF	2009/07/06	ND, EDL=0.202 (1)		pg/g	
		Total Tetra CDF	2009/07/06	0.608, EDL=0.109		pg/g	
		Total Penta CDF	2009/07/06	0.218, EDL=0.107		pg/g	
		Total Hexa CDF	2009/07/06	0.132, EDL=0.104		pg/g	
		Total Hepta CDF	2009/07/06	ND, EDL=0.111		pg/g	

ND = Not detected

N/A = Not Applicable

SPIKE = Fortified sample

(1) EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

(2) EMPC / DPE - Diphenylether interference present caused dibenzofuran detected to become a "non-detect" with an elevated detection limit.

EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

Maxxam Job #: A968831
Report Date: 2009/07/15

Environmental Science Corp
Client Project #: L406037
Project name:
Your P.O. #: S11917-S11919
Sampler Initials:

RESULTS OF ANALYSES OF SOIL

Maxxam ID		CS4551			
Sampling Date		39954.40625			
COC Number		na			
	Units	L406037-01	DL	QC Batch	MDL
Moisture	%	18	0.2	1846951	0.2

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Cas_Rn	Chemical_I	Result_Val	Result_Uni	Detect_Fla	Detection_I	Lab_Qualif	Test_batch	Validator_C	Reportable	Fraction	Dilution_Fa	Method_De	Composite	Field_sdg	percent_moisture
35822-46-ε	1,2,3,4,6,7,	59.3	PG/G	Y		10	1861839	Yes	N		1	0.141	N	A968831	18
67562-39-4	1,2,3,4,6,7,	10.7	PG/G	N		10 U	1861839	Yes	N		1	10.7	N	A968831	18
55673-89-7	1,2,3,4,7,8,	0.549	PG/G	Y		10 J	1861839	Yes	N		1	0.149	N	A968831	18
39227-28-ε	1,2,3,4,7,8-	0.17	PG/G	N		10 U	1861839	Yes	N		1	0.17	N	A968831	18
70648-26-ε	1,2,3,4,7,8-	0.554	PG/G	Y		10 J	1861839	Yes	N		1	0.161	N	A968831	18
57653-85-7	1,2,3,6,7,8-	2.13	PG/G	Y		10 J	1861839	Yes	N		1	0.181	N	A968831	18
57117-44-ε	1,2,3,6,7,8-	0.36	PG/G	Y		10 J	1861839	Yes	N		1	0.173	N	A968831	18
19408-74-ε	1,2,3,7,8,9-	0.761	PG/G	Y		10 J	1861839	Yes	N		1	0.176	N	A968831	18
72918-21-ε	1,2,3,7,8,9-	0.164	PG/G	N		10 U	1861839	Yes	N		1	0.164	N	A968831	18
40321-76-4	1,2,3,7,8-P	0.166	PG/G	N		10 U	1861839	Yes	N		1	0.166	N	A968831	18
57117-41-ε	1,2,3,7,8-P	0.157	PG/G	N		10 U	1861839	Yes	N		1	0.157	N	A968831	18
60851-34-ε	2,3,4,6,7,8-	0.224	PG/G	N		10 U	1861839	Yes	N		1	0.224	N	A968831	18
57117-31-4	2,3,4,7,8-P	0.284	PG/G	Y		10 JB	1861839	Yes	N		1	0.149	N	A968831	18
TCDD-TEC	2,3,7,8-Tet	0.142	PG/G	N		2 U	1861839	Yes	N		1	0.142	N	A968831	18
51207-31-ε	2,3,7,8-Tet	0.478	PG/G	Y		2 JB	1861839	Yes	N		1	0.181	N	A968831	18
85508-50-ε	37CL4 237	69	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-83	C13-12346	103	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-84	C13-12346	102	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-80	C13-12347	95	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
114423-98	C13-12347	98	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-94	C13-12347	98	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-81	C13-12367	97	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
116843-03	C13-12367	95	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-79	C13-12378	96	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
109719-77	C13-12378	73	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
116843-04	C13-12378	90	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
116843-05	C13-23467	92	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
116843-02	C13-23478	80	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
76523-40-ε	C13-2378	75	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
89059-46-1	C13-2378	67	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
114423-97	C13-OCDC	106	PERCENT	Y			1861839	Yes	N		1		N	A968831	18
3268-87-9	Octa CDD	587	PG/G	Y		20	1861839	Yes	N		1	0.225	N	A968831	18
39001-02-ε	Octa CDF	32.9	PG/G	Y		20	1861839	Yes	N		1	0.301	N	A968831	18
37871-00-4	Total Hepta	106	PG/G	Y		0.141	1861839	Yes	N		1	0.141	N	A968831	18
38998-75-ε	Total Hepta	24.5	PG/G	Y		0.141	1861839	Yes	N		1	0.141	N	A968831	18
34465-46-ε	Total Hexa	11.6	PG/G	Y		0.178	1861839	Yes	N		1	0.178	N	A968831	18
55684-94-1	Total Hexa	15.6	PG/G	Y		0.166	1861839	Yes	N		1	0.166	N	A968831	18
36088-22-ε	Total Penta	0.166	PG/G	N		0.166 U	1861839	Yes	N		1	0.166	N	A968831	18
30402-15-4	Total Penta	3.46	PG/G	Y		0.153	1861839	Yes	N		1	0.153	N	A968831	18
41903-57-ε	Total Tetra	0.375	PG/G	Y		0.142	1861839	Yes	N		1	0.142	N	A968831	18
55722-27-ε	Total Tetra	0.944	PG/G	Y		0.181	1861839	Yes	N		1	0.181	N	A968831	18
TEQEO	2378-TCDF	1.77	PG/G	Y				Yes	N		1		N	A968831	18
35822-46-ε	1,2,3,4,6,7,	95	PG/G	Y		10	1861839	Yes	N		1	0.116	N	A968831	18
67562-39-4	1,2,3,4,6,7,	106	PG/G	Y		10	1861839	Yes	N		1	0.116	N	A968831	18
55673-89-7	1,2,3,4,7,8,	98	PG/G	Y		10	1861839	Yes	N		1	0.13	N	A968831	18
39227-28-ε	1,2,3,4,7,8-	113	PG/G	Y		10	1861839	Yes	N		1	0.111	N	A968831	18
70648-26-ε	1,2,3,4,7,8-	104	PG/G	Y		10	1861839	Yes	N		1	0.138	N	A968831	18
57653-85-7	1,2,3,6,7,8-	99	PG/G	Y		10	1861839	Yes	N		1	0.118	N	A968831	18
57117-44-ε	1,2,3,6,7,8-	100	PG/G	Y		10	1861839	Yes	N		1	0.148	N	A968831	18

19408-74-ε 1,2,3,7,8,9-	104 PG/G	Y	10	1861839	Yes	N	1	0.115 N	A968831
72918-21-ε 1,2,3,7,8,9-	98 PG/G	Y	10	1861839	Yes	N	1	0.141 N	A968831
40321-76-41,2,3,7,8-P	102 PG/G	Y	10	1861839	Yes	N	1	0.126 N	A968831
57117-41-ε 1,2,3,7,8-P	105 PG/G	Y	10	1861839	Yes	N	1	0.132 N	A968831
60851-34-ε 2,3,4,6,7,8-	99 PG/G	Y	10	1861839	Yes	N	1	0.14 N	A968831
57117-31-42,3,4,7,8-P	110 PG/G	Y	10	1861839	Yes	N	1	0.125 N	A968831
TCDD-TEC 2,3,7,8-Tet	89 PG/G	Y	2	1861839	Yes	N	1	0.119 N	A968831
51207-31-ε 2,3,7,8-Tet	85 PG/G	Y	2	1861839	Yes	N	1	0.132 N	A968831
85508-50-ε 37CL4 237	35 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-83-C13-12346	98 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-84-C13-12346	107 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-80-C13-12347	92 PERCENT	Y		1861839	Yes	N	1	N	A968831
114423-98-C13-12347	100 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-94-C13-12347	104 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-81-C13-12367	102 PERCENT	Y		1861839	Yes	N	1	N	A968831
116843-03-C13-12367	96 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-79-C13-12378	103 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-77-C13-12378	86 PERCENT	Y		1861839	Yes	N	1	N	A968831
116843-04-C13-12378	93 PERCENT	Y		1861839	Yes	N	1	N	A968831
116843-05-C13-23467	93 PERCENT	Y		1861839	Yes	N	1	N	A968831
116843-02-C13-23478	103 PERCENT	Y		1861839	Yes	N	1	N	A968831
76523-40-ε C13-2378	36 PERCENT	Y		1861839	Yes	N	1	N	A968831
89059-46-1C13-2378	55 PERCENT	Y		1861839	Yes	N	1	N	A968831
114423-97-C13-OCDC	101 PERCENT	Y		1861839	Yes	N	1	N	A968831
3268-87-9 Octa CDD	102 PG/G	Y	20	1861839	Yes	N	1	0.301 N	A968831
39001-02-C Octa CDF	108 PG/G	Y	20	1861839	Yes	N	1	0.261 N	A968831
35822-46-ε 1,2,3,4,6,7,	0.152 PG/G	Y	10 J	1861839	Yes	N	1	0.101 N	A968831
67562-39-41,2,3,4,6,7,	0.359 PG/G	N	10 U	1861839	Yes	N	1	0.359 N	A968831
55673-89-71,2,3,4,7,8,	0.71 PG/G	N	10 U	1861839	Yes	N	1	0.71 N	A968831
39227-28-ε 1,2,3,4,7,8-	0.0976 PG/G	N	10 U	1861839	Yes	N	1	0.0976 N	A968831
70648-26-ε 1,2,3,4,7,8-	0.101 PG/G	N	10 U	1861839	Yes	N	1	0.101 N	A968831
57653-85-71,2,3,6,7,8-	0.104 PG/G	N	10 U	1861839	Yes	N	1	0.104 N	A968831
57117-44-ε 1,2,3,6,7,8-	0.109 PG/G	N	10 U	1861839	Yes	N	1	0.109 N	A968831
19408-74-ε 1,2,3,7,8,9-	0.101 PG/G	N	10 U	1861839	Yes	N	1	0.101 N	A968831
72918-21-ε 1,2,3,7,8,9-	0.132 PG/G	Y	10 J	1861839	Yes	N	1	0.104 N	A968831
40321-76-41,2,3,7,8-P	0.117 PG/G	N	10 U	1861839	Yes	N	1	0.117 N	A968831
57117-41-ε 1,2,3,7,8-P	0.11 PG/G	N	10 U	1861839	Yes	N	1	0.11 N	A968831
60851-34-ε 2,3,4,6,7,8-	0.103 PG/G	N	10 U	1861839	Yes	N	1	0.103 N	A968831
57117-31-42,3,4,7,8-P	0.218 PG/G	Y	10 J	1861839	Yes	N	1	0.104 N	A968831
TCDD-TEC 2,3,7,8-Tet	0.105 PG/G	N	2 U	1861839	Yes	N	1	0.105 N	A968831
51207-31-ε 2,3,7,8-Tet	0.19 PG/G	Y	2 J	1861839	Yes	N	1	0.109 N	A968831
85508-50-ε 37CL4 237	94 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-83-C13-12346	85 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-84-C13-12346	90 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-80-C13-12347	91 PERCENT	Y		1861839	Yes	N	1	N	A968831
114423-98-C13-12347	99 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-94-C13-12347	84 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-81-C13-12367	98 PERCENT	Y		1861839	Yes	N	1	N	A968831
116843-03-C13-12367	99 PERCENT	Y		1861839	Yes	N	1	N	A968831
109719-79-C13-12378	87 PERCENT	Y		1861839	Yes	N	1	N	A968831

109719-77-C13-12378	79 PERCENT Y			1861839	Yes	N	1	N	A968831
116843-04-C13-12378	88 PERCENT Y			1861839	Yes	N	1	N	A968831
116843-05-C13-23467	91 PERCENT Y			1861839	Yes	N	1	N	A968831
116843-02-C13-23478	83 PERCENT Y			1861839	Yes	N	1	N	A968831
76523-40-5-C13-2378	89 PERCENT Y			1861839	Yes	N	1	N	A968831
89059-46-1C13-2378	85 PERCENT Y			1861839	Yes	N	1	N	A968831
114423-97-C13-OCDC	79 PERCENT Y			1861839	Yes	N	1	N	A968831
3268-87-9 Octa CDD	0.382 PG/G	Y	20 J	1861839	Yes	N	1	0.297 N	A968831
39001-02-C Octa CDF	0.202 PG/G	N	20 U	1861839	Yes	N	1	0.202 N	A968831
37871-00-4 Total Hepta	0.152 PG/G	Y	0.101	1861839	Yes	N	1	0.101 N	A968831
38998-75-3 Total Hepta	0.111 PG/G	N	0.111 U	1861839	Yes	N	1	0.111 N	A968831
34465-46-8 Total Hexa	0.102 PG/G	N	0.102 U	1861839	Yes	N	1	0.102 N	A968831
55684-94-1 Total Hexa	0.132 PG/G	Y	0.104	1861839	Yes	N	1	0.104 N	A968831
36088-22-9 Total Penta	0.247 PG/G	N	0.247 U	1861839	Yes	N	1	0.247 N	A968831
30402-15-4 Total Penta	0.218 PG/G	Y	0.107	1861839	Yes	N	1	0.107 N	A968831
41903-57-5 Total Tetra	0.105 PG/G	N	0.105 U	1861839	Yes	N	1	0.105 N	A968831
55722-27-5 Total Tetra	0.608 PG/G	Y	0.109	1861839	Yes	N	1	0.109 N	A968831



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Est. 1970

Chris Kramer
SLR International Corp. - West Linn, OR
1800 Blankenship Road, Suite 440

West Linn, OR 97068

Report Summary

Wednesday June 24, 2009

Report Number: L403723

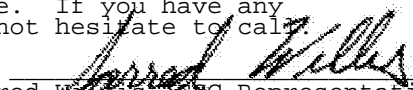
Samples Received: 05/21/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

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Entire Report Reviewed By:


Jarred Willis, ESC Representative

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GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403723-01

Sample ID : PB-3A-9FT

Site ID :

Collected By : C. Kramer
Collection Date : 05/20/09 10:45

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	88.0			%		2540G	05/26/09	1
Mercury	0.0045	0.0025	0.023	mg/kg	J	7471	05/25/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	05/26/09	1
Arsenic	U	1.4	5.7	mg/kg	O	6010B	05/26/09	5
Beryllium	0.66	0.038	0.11	mg/kg		6010B	05/26/09	1
Cadmium	U	0.037	0.28	mg/kg		6010B	05/26/09	1
Chromium	27.	0.098	0.57	mg/kg		6010B	05/26/09	1
Copper	9.0	0.30	1.1	mg/kg		6010B	05/26/09	1
Lead	2.2	0.096	0.28	mg/kg		6010B	05/26/09	1
Nickel	38.	0.49	1.1	mg/kg		6010B	05/26/09	1
Selenium	U	0.33	1.1	mg/kg		6010B	05/26/09	1
Silver	U	0.16	0.57	mg/kg		6010B	05/26/09	1
Thallium	U	1.5	5.7	mg/kg	O	6010B	05/26/09	5
Zinc	33.	0.44	1.7	mg/kg		6010B	05/26/09	1
Volatile Organics								
Acetone	U	0.017	0.057	mg/kg		8260B	05/22/09	1
Benzene	U	0.00032	0.0011	mg/kg		8260B	05/22/09	1
Bromochloromethane	U	0.00045	0.0011	mg/kg		8260B	05/22/09	1
Bromodichloromethane	U	0.00039	0.0011	mg/kg		8260B	05/22/09	1
Bromoform	U	0.00058	0.0011	mg/kg		8260B	05/22/09	1
Bromomethane	U	0.0013	0.0057	mg/kg		8260B	05/22/09	1
2-Butanone (MEK)	0.0033	0.0027	0.011	mg/kg	J	8260B	05/22/09	1
Carbon disulfide	U	0.00033	0.0011	mg/kg		8260B	05/22/09	1
Carbon tetrachloride	U	0.00032	0.0011	mg/kg		8260B	05/22/09	1
Chlorobenzene	U	0.00025	0.0011	mg/kg		8260B	05/22/09	1
Chloroethane	U	0.00059	0.0057	mg/kg		8260B	05/22/09	1
Chloroform	U	0.00041	0.0057	mg/kg		8260B	05/22/09	1
Chloromethane	U	0.00056	0.0011	mg/kg		8260B	05/22/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0057	mg/kg		8260B	05/22/09	1
Chlorodibromomethane	U	0.00023	0.0011	mg/kg		8260B	05/22/09	1
1,2-Dibromoethane	U	0.00032	0.0011	mg/kg		8260B	05/22/09	1
1,2-Dichlorobenzene	U	0.00024	0.0011	mg/kg		8260B	05/22/09	1
1,3-Dichlorobenzene	U	0.00038	0.0011	mg/kg		8260B	05/22/09	1
1,4-Dichlorobenzene	U	0.00022	0.0011	mg/kg		8260B	05/22/09	1
Dichlorodifluoromethane	U	0.00032	0.0057	mg/kg		8260B	05/22/09	1
1,1-Dichloroethane	U	0.00026	0.0011	mg/kg		8260B	05/22/09	1
1,2-Dichloroethane	U	0.00053	0.0011	mg/kg		8260B	05/22/09	1
1,1-Dichloroethene	U	0.00074	0.0011	mg/kg		8260B	05/22/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0011	mg/kg		8260B	05/22/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0011	mg/kg		8260B	05/22/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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The reported analytical results relate only to the sample submitted

Reported: 06/23/09 10:31 Revised: 06/24/09 12:52



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-9FT
Collected By : C. Kramer
Collection Date : 05/20/09 10:45

ESC Sample # : L403723-01

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0011	mg/kg		8260B	05/22/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0011	mg/kg		8260B	05/22/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0011	mg/kg		8260B	05/22/09	1
Ethylbenzene	U	0.00023	0.0011	mg/kg		8260B	05/22/09	1
2-Hexanone	U	0.00036	0.0011	mg/kg		8260B	05/22/09	1
Isopropylbenzene	U	0.00021	0.0011	mg/kg		8260B	05/22/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.011	mg/kg		8260B	05/22/09	1
Methyl tert-butyl ether	U	0.00028	0.0011	mg/kg		8260B	05/22/09	1
Methylene Chloride	U	0.00060	0.0057	mg/kg		8260B	05/22/09	1
Styrene	U	0.00020	0.0011	mg/kg		8260B	05/22/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0011	mg/kg		8260B	05/22/09	1
Tetrachloroethene	U	0.00023	0.0011	mg/kg		8260B	05/22/09	1
Toluene	U	0.0012	0.0057	mg/kg		8260B	05/22/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0011	mg/kg		8260B	05/22/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0011	mg/kg		8260B	05/22/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0011	mg/kg		8260B	05/22/09	1
1,1,1-Trichloroethane	U	0.00052	0.0011	mg/kg		8260B	05/22/09	1
1,1,2-Trichloroethane	U	0.00046	0.0011	mg/kg		8260B	05/22/09	1
Trichloroethene	U	0.00034	0.0011	mg/kg		8260B	05/22/09	1
Trichlorofluoromethane	U	0.00027	0.0057	mg/kg		8260B	05/22/09	1
Vinyl chloride	U	0.00029	0.0011	mg/kg		8260B	05/22/09	1
Xylenes, Total	U	0.00046	0.0034	mg/kg		8260B	05/22/09	1
Cyclohexane	U	0.00033	0.0011	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.11	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.023	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0011	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	99.2			% Rec.		8260B	05/22/09	1
Dibromofluoromethane	107.			% Rec.		8260B	05/22/09	1
4-Bromofluorobenzene	103.			% Rec.		8260B	05/22/09	1
Gasoline Range (C7-C10)	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.5	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	U	3.3	11.	mg/kg		NWTPH-HC	05/28/09	1
Surrogate recovery(%)								
o-Terphenyl	97.1			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0013	0.0068	mg/kg		8270C-SI	05/22/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-9FT
Collected By : C. Kramer
Collection Date : 05/20/09 10:45

ESC Sample # : L403723-01

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthene	U	0.0013	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Acenaphthylene	U	0.0011	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(a)anthracene	U	0.00096	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(a)pyrene	U	0.00083	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(b)fluoranthene	U	0.0014	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(g,h,i)perylene	U	0.00098	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(k)fluoranthene	U	0.0012	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Chrysene	U	0.00087	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Fluoranthene	U	0.00081	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Fluorene	U	0.0010	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Indeno(1,2,3-cd)pyrene	U	0.00088	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Naphthalene	U	0.0014	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Phenanthrene	U	0.00098	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Pyrene	U	0.00096	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
1-Methylnaphthalene	U	0.0015	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
2-Methylnaphthalene	U	0.0020	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
2-Chloronaphthalene	U	0.0010	0.0068	mg/kg	J3	8270C-SI	05/22/09	1
Surrogate Recovery								
Nitrobenzene-d5	59.2			% Rec.		8270C-SI	05/22/09	1
2-Fluorobiphenyl	78.4			% Rec.		8270C-SI	05/22/09	1
p-Terphenyl-d14	77.6			% Rec.		8270C-SI	05/22/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.019	mg/kg		8082	05/27/09	1
PCB 1221	U	0.0049	0.019	mg/kg		8082	05/27/09	1
PCB 1232	U	0.0072	0.019	mg/kg		8082	05/27/09	1
PCB 1242	U	0.0049	0.019	mg/kg		8082	05/27/09	1
PCB 1248	U	0.0027	0.019	mg/kg		8082	05/27/09	1
PCB 1254	U	0.0050	0.019	mg/kg		8082	05/27/09	1
PCB 1260	U	0.0028	0.019	mg/kg		8082	05/27/09	1
PCBs Surrogates								
Decachlorobiphenyl	76.8			% Rec.		8082	05/27/09	1
Tetrachloro-m-xylene	80.7			% Rec.		8082	05/27/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-GW
Collected By : C. Kramer
Collection Date : 05/20/09 11:00

ESC Sample # : L403723-02

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	83.7			% Rec.		NWTPH-H	05/27/09	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL

MDL = Minimum Detection Limit = LOD = SQL(TRRP)

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403723-03

Sample ID : PB-3B-10.5FT

Site ID :

Collected By : C. Kramer
Collection Date : 05/20/09 00:00

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	82.6			%		2540G	05/26/09	1
Mercury	0.23	0.0025	0.024	mg/kg		7471	05/25/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	05/29/09	1
Arsenic	0.66	0.27	1.2	mg/kg	JPl	6010B	05/29/09	1
Beryllium	0.56	0.038	0.12	mg/kg		6010B	05/29/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	05/29/09	1
Chromium	29.	0.098	0.60	mg/kg		6010B	05/29/09	1
Copper	17.	0.30	1.2	mg/kg		6010B	05/29/09	1
Lead	4.4	0.096	0.30	mg/kg		6010B	05/29/09	1
Nickel	25.	0.49	1.2	mg/kg		6010B	05/29/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	05/29/09	1
Silver	U	0.16	0.60	mg/kg		6010B	05/29/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	05/29/09	5
Zinc	46.	0.44	1.8	mg/kg		6010B	05/29/09	1
Volatile Organics								
Acetone	U	0.017	0.060	mg/kg		8260B	05/22/09	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	05/22/09	1
Bromochloromethane	U	0.00045	0.0012	mg/kg		8260B	05/22/09	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	05/22/09	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	05/22/09	1
Bromomethane	U	0.0013	0.0060	mg/kg		8260B	05/22/09	1
2-Butanone (MEK)	U	0.0027	0.012	mg/kg		8260B	05/22/09	1
Carbon disulfide	U	0.00033	0.0012	mg/kg		8260B	05/22/09	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	05/22/09	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/22/09	1
Chloroethane	U	0.00059	0.0060	mg/kg		8260B	05/22/09	1
Chloroform	0.00064	0.00041	0.0060	mg/kg	J	8260B	05/22/09	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	05/22/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0060	mg/kg		8260B	05/22/09	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	05/22/09	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	05/22/09	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	05/22/09	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	05/22/09	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	05/22/09	1
Dichlorodifluoromethane	U	0.00032	0.0060	mg/kg		8260B	05/22/09	1
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	05/22/09	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	05/22/09	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	05/22/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	05/22/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	05/22/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3B-10.5FT
Collected By : C. Kramer
Collection Date : 05/20/09 00:00

ESC Sample # : L403723-03

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	05/22/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	05/22/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	05/22/09	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	05/22/09	1
2-Hexanone	U	0.00036	0.0012	mg/kg		8260B	05/22/09	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	05/22/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	05/22/09	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	05/22/09	1
Methylene Chloride	U	0.00060	0.0060	mg/kg		8260B	05/22/09	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	05/22/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	05/22/09	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	05/22/09	1
Toluene	U	0.0012	0.0060	mg/kg		8260B	05/22/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	05/22/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	05/22/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/22/09	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	05/22/09	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	05/22/09	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	05/22/09	1
Trichlorofluoromethane	U	0.00027	0.0060	mg/kg		8260B	05/22/09	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	05/22/09	1
Xylenes, Total	U	0.00046	0.0036	mg/kg		8260B	05/22/09	1
Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.12	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.024	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	99.9			% Rec.		8260B	05/22/09	1
Dibromofluoromethane	106.			% Rec.		8260B	05/22/09	1
4-Bromofluorobenzene	103.			% Rec.		8260B	05/22/09	1
Gasoline Range (C7-C10)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	4.2	3.3	12.	mg/kg	J	NWTPH-HC	05/28/09	1
Surrogate recovery(%)								
o-Terphenyl	91.2			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0013	0.0073	mg/kg		8270C-SI	05/22/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3B-10.5FT
Collected By : C. Kramer
Collection Date : 05/20/09 00:00

ESC Sample # : L403723-03

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthene	0.0025	0.0013	0.0073	mg/kg	JJ3	8270C-SI	05/22/09	1
Acenaphthylene	U	0.0011	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(a)anthracene	U	0.00096	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(a)pyrene	U	0.00083	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(b)fluoranthene	U	0.0014	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(g,h,i)perylene	U	0.00098	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Benzo(k)fluoranthene	U	0.0012	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Chrysene	U	0.00087	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Fluoranthene	U	0.00081	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Fluorene	U	0.0010	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Indeno(1,2,3-cd)pyrene	U	0.00088	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Naphthalene	0.0054	0.0014	0.0073	mg/kg	JJ3	8270C-SI	05/22/09	1
Phenanthrene	U	0.00098	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Pyrene	U	0.00096	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
1-Methylnaphthalene	U	0.0015	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
2-Methylnaphthalene	U	0.0020	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
2-Chloronaphthalene	U	0.0010	0.0073	mg/kg	J3	8270C-SI	05/22/09	1
Surrogate Recovery								
Nitrobenzene-d5	62.4			% Rec.		8270C-SI	05/22/09	1
2-Fluorobiphenyl	74.9			% Rec.		8270C-SI	05/22/09	1
p-Terphenyl-d14	67.9			% Rec.		8270C-SI	05/22/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.020	mg/kg		8082	05/27/09	1
PCB 1221	U	0.0049	0.020	mg/kg		8082	05/27/09	1
PCB 1232	U	0.0072	0.020	mg/kg		8082	05/27/09	1
PCB 1242	U	0.0049	0.020	mg/kg		8082	05/27/09	1
PCB 1248	U	0.0027	0.020	mg/kg		8082	05/27/09	1
PCB 1254	U	0.0050	0.020	mg/kg		8082	05/27/09	1
PCB 1260	U	0.0028	0.020	mg/kg		8082	05/27/09	1
PCBs Surrogates								
Decachlorobiphenyl	64.2			% Rec.		8082	05/27/09	1
Tetrachloro-m-xylene	76.1			% Rec.		8082	05/27/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3B-GW
Collected By : C. Kramer
Collection Date : 05/20/09 00:00

ESC Sample # : L403723-04

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	105.			% Rec.		NWTPH-H	05/27/09	1

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REPORT OF ANALYSIS

Chris Kramer
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June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-GW
Collected By : C. Kramer
Collection Date : 05/20/09 11:00

ESC Sample # : L403723-05

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	0.36	0.29	1.0	ug/l	J	6020	06/02/09	1
Antimony,Dissolved	0.86	0.29	1.0	ug/l	J	6020	06/04/09	1
Arsenic	7.7	0.22	1.0	ug/l		6020	06/02/09	1
Arsenic,Dissolved	1.2	0.22	1.0	ug/l		6020	06/04/09	1
Thallium	U	0.22	1.0	ug/l		6020	06/02/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/04/09	1
Mercury	U	0.057	0.20	ug/l		7470A	05/27/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	06/02/09	1
Beryllium	0.76	0.75	2.0	ug/l	J	6010B	05/30/09	1
Beryllium,Dissolved	U	0.75	2.0	ug/l		6010B	06/03/09	1
Cadmium	1.3	0.74	5.0	ug/l	J	6010B	05/30/09	1
Cadmium,Dissolved	1.4	0.74	5.0	ug/l	J	6010B	06/03/09	1
Chromium	24.	2.0	10.	ug/l		6010B	05/30/09	1
Chromium,Dissolved	U	2.0	10.	ug/l		6010B	06/03/09	1
Copper	23.	6.0	20.	ug/l		6010B	05/30/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	06/03/09	1
Lead	11.	1.9	5.0	ug/l		6010B	05/30/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	06/03/09	1
Nickel	18.	9.8	20.	ug/l	J	6010B	05/30/09	1
Nickel,Dissolved	U	9.8	20.	ug/l		6010B	06/03/09	1
Selenium	U	6.5	20.	ug/l	B3	6010B	05/30/09	1
Selenium,Dissolved	U	6.5	20.	ug/l		6010B	06/03/09	1
Silver	7.4	3.2	10.	ug/l	J	6010B	05/30/09	1
Silver,Dissolved	U	3.2	10.	ug/l		6010B	06/03/09	1
Zinc	76.	8.8	30.	ug/l		6010B	05/30/09	1
Zinc,Dissolved	U	8.8	30.	ug/l		6010B	06/03/09	1
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	0.52	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-GW
Collected By : C. Kramer
Collection Date : 05/20/09 11:00

ESC Sample # : L403723-05

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8	97.2			% Rec.		8260B	05/29/09	1
Dibromofluoromethane	101.			% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene	100.			% Rec.		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3A-GW
Collected By : C. Kramer
Collection Date : 05/20/09 11:00

ESC Sample # : L403723-05

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.012	0.050	ug/l	J3	8270C-S	05/26/09	1
Acenaphthene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Acenaphthylene	U	0.017	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/26/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Chrysene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Fluorene	U	0.012	0.050	ug/l	J3	8270C-S	05/26/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l	J3	8270C-S	05/26/09	1
Naphthalene	U	0.023	0.25	ug/l		8270C-S	05/26/09	1
Phenanthrene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Pyrene	U	0.022	0.050	ug/l		8270C-S	05/26/09	1
1-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
Surrogate Recovery								
Nitrobenzene-d5	65.4			% Rec.		8270C-S	05/26/09	1
2-Fluorobiphenyl	64.9			% Rec.		8270C-S	05/26/09	1
p-Terphenyl-d14	69.5			% Rec.		8270C-S	05/26/09	1

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June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3B-GW
Collected By : C. Kramer
Collection Date : 05/20/09 00:00

ESC Sample # : L403723-06

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	0.35	0.29	1.0	ug/l	J	6020	06/02/09	1
Antimony,Dissolved	0.62	0.29	1.0	ug/l	J	6020	06/04/09	1
Arsenic	10.	0.22	1.0	ug/l		6020	06/02/09	1
Arsenic,Dissolved	0.89	0.22	1.0	ug/l	J	6020	06/04/09	1
Thallium	U	0.22	1.0	ug/l		6020	06/02/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/04/09	1
Mercury	U	0.057	0.20	ug/l		7470A	05/27/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	06/02/09	1
Beryllium	1.5	0.75	2.0	ug/l	J	6010B	05/30/09	1
Beryllium,Dissolved	U	0.75	2.0	ug/l		6010B	06/03/09	1
Cadmium	3.2	0.74	5.0	ug/l	J	6010B	05/30/09	1
Cadmium,Dissolved	0.89	0.74	5.0	ug/l	J	6010B	06/03/09	1
Chromium	64.	2.0	10.	ug/l		6010B	05/30/09	1
Chromium,Dissolved	U	2.0	10.	ug/l		6010B	06/03/09	1
Copper	38.	6.0	20.	ug/l		6010B	05/30/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	06/03/09	1
Lead	20.	1.9	5.0	ug/l		6010B	05/30/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	06/03/09	1
Nickel	46.	9.8	20.	ug/l		6010B	05/30/09	1
Nickel,Dissolved	12.	9.8	20.	ug/l	J	6010B	06/03/09	1
Selenium	9.1	6.5	20.	ug/l	JB	6010B	05/30/09	1
Selenium,Dissolved	U	6.5	20.	ug/l		6010B	06/03/09	1
Silver	U	3.2	10.	ug/l		6010B	05/30/09	1
Silver,Dissolved	U	3.2	10.	ug/l		6010B	06/03/09	1
Zinc	86.	8.8	30.	ug/l		6010B	05/30/09	1
Zinc,Dissolved	U	8.8	30.	ug/l		6010B	06/03/09	1
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3B-GW
Collected By : C. Kramer
Collection Date : 05/20/09 00:00

ESC Sample # : L403723-06

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8	97.1			% Rec.		8260B	05/29/09	1
Dibromofluoromethane	101.			% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene	100.			% Rec.		8260B	05/29/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/23/09 10:31 Revised: 06/24/09 12:52



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : May 21, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403723-06

Sample ID : PB-3B-GW

Site ID :

Collected By : C. Kramer
Collection Date : 05/20/09 00:00

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.012	0.050	ug/l	J3	8270C-S	05/26/09	1
Acenaphthene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Acenaphthylene	U	0.017	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/26/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l	J3	8270C-S	05/26/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Chrysene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l	J3	8270C-S	05/26/09	1
Fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Fluorene	U	0.012	0.050	ug/l	J3	8270C-S	05/26/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l	J3	8270C-S	05/26/09	1
Naphthalene	U	0.023	0.25	ug/l		8270C-S	05/26/09	1
Phenanthrene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Pyrene	U	0.022	0.050	ug/l		8270C-S	05/26/09	1
1-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
Surrogate Recovery								
Nitrobenzene-d5		65.0			% Rec.	8270C-S	05/26/09	1
2-Fluorobiphenyl		68.5			% Rec.	8270C-S	05/26/09	1
p-Terphenyl-d14		77.6			% Rec.	8270C-S	05/26/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

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Reported: 06/23/09 10:31 Revised: 06/24/09 12:52

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L403723-01	WG422986	SAMP	2-Butanone (MEK)	R752526	J	
	WG427442	SAMP	Cyclohexane	R788346	Q	
	WG427442	SAMP	1,4-Dioxane	R788346	Q	
	WG427442	SAMP	Methyl Acetate	R788346	Q	
	WG427442	SAMP	Methyl Cyclohexane	R788346	Q	
	WG423321	SAMP	Arsenic	R753947	O	
	WG423321	SAMP	Thallium	R753947	O	
	WG422918	SAMP	Mercury	R752948	J	
	WG422912	SAMP	Acenaphthene	R751646	J3	
	WG422912	SAMP	Acenaphthylene	R751646	J3	
	WG422912	SAMP	Benzo(a)anthracene	R751646	J3	
	WG422912	SAMP	Benzo(a)pyrene	R751646	J3	
	WG422912	SAMP	Benzo(g,h,i)perylene	R751646	J3	
	WG422912	SAMP	Benzo(k)fluoranthene	R751646	J3	
	WG422912	SAMP	Dibenz(a,h)anthracene	R751646	J3	
	WG422912	SAMP	Fluoranthene	R751646	J3	
	WG422912	SAMP	Fluorene	R751646	J3	
	WG422912	SAMP	Indeno(1,2,3-cd)pyrene	R751646	J3	
	WG422912	SAMP	Naphthalene	R751646	J3	
	WG422912	SAMP	Phenanthrene	R751646	J3	
	WG422912	SAMP	Pyrene	R751646	J3	
	WG422912	SAMP	2-Methylnaphthalene	R751646	J3	
	L403723-03	WG422912	SAMP	2-Chloronaphthalene	R751646	J3
		WG422986	SAMP	Chloroform	R752526	J
		WG427442	SAMP	Cyclohexane	R788346	Q
WG427442		SAMP	1,4-Dioxane	R788346	Q	
WG427442		SAMP	Methyl Acetate	R788346	Q	
WG427442		SAMP	Methyl Cyclohexane	R788346	Q	
WG423361		SAMP	Arsenic	R763006	JP1	
WG423361		SAMP	Thallium	R763006	O	
WG423285		SAMP	Motor Oil (C16-C40)	R754330	J	
WG422912		SAMP	Acenaphthene	R751646	JJ3	
WG422912		SAMP	Acenaphthylene	R751646	J3	
WG422912		SAMP	Benzo(a)anthracene	R751646	J3	
WG422912		SAMP	Benzo(a)pyrene	R751646	J3	
WG422912		SAMP	Benzo(g,h,i)perylene	R751646	J3	
WG422912		SAMP	Benzo(k)fluoranthene	R751646	J3	
WG422912		SAMP	Dibenz(a,h)anthracene	R751646	J3	
WG422912		SAMP	Fluoranthene	R751646	J3	
WG422912		SAMP	Fluorene	R751646	J3	
WG422912		SAMP	Indeno(1,2,3-cd)pyrene	R751646	J3	
WG422912		SAMP	Naphthalene	R751646	JJ3	
WG422912		SAMP	Phenanthrene	R751646	J3	
WG422912		SAMP	Pyrene	R751646	J3	
WG422912		SAMP	2-Methylnaphthalene	R751646	J3	
WG422912		SAMP	2-Chloronaphthalene	R751646	J3	
L403723-05		WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
	WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3	
	WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3	
	WG427744	SAMP	Cyclohexane	R789452	Q	
	WG427744	SAMP	1,4-Dioxane	R789452	Q	
	WG427744	SAMP	Methyl Acetate	R789452	Q	
	WG427744	SAMP	Methyl Cyclohexane	R789452	Q	
	WG423508	SAMP	Beryllium	R766126	J	
	WG423508	SAMP	Cadmium	R766126	J	
	WG424397	SAMP	Cadmium, Dissolved	R770647	J	
	WG423508	SAMP	Nickel	R766126	J	
	WG423508	SAMP	Selenium	R766126	B3	
	WG423508	SAMP	Silver	R766126	J	
	WG423479	SAMP	Antimony	R769466	J	
	WG424462	SAMP	Antimony, Dissolved	R775786	J	
	WG423185	SAMP	Anthracene	R755686	J3	
	WG423185	SAMP	Acenaphthene	R755686	J3	
	WG423185	SAMP	Acenaphthylene	R755686	J3	
	WG423185	SAMP	Benzo(a)pyrene	R755686	J3	
	WG423185	SAMP	Benzo(g,h,i)perylene	R755686	J3	
	WG423185	SAMP	Dibenz(a,h)anthracene	R755686	J3	
	WG423185	SAMP	Fluorene	R755686	J3	
	WG423185	SAMP	Indeno(1,2,3-cd)pyrene	R755686	J3	

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L403723-06	WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
	WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3
	WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3
	WG427744	SAMP	Cyclohexane	R789452	Q
	WG427744	SAMP	1,4-Dioxane	R789452	Q
	WG427744	SAMP	Methyl Acetate	R789452	Q
	WG427744	SAMP	Methyl Cyclohexane	R789452	Q
	WG423508	SAMP	Beryllium	R766126	J
	WG423508	SAMP	Cadmium	R766126	J
	WG424397	SAMP	Cadmium, Dissolved	R770647	J
	WG424397	SAMP	Nickel, Dissolved	R770647	J
	WG423508	SAMP	Selenium	R766126	JB
	WG423479	SAMP	Antimony	R769466	J
	WG424462	SAMP	Antimony, Dissolved	R775786	J
	WG424462	SAMP	Arsenic, Dissolved	R775786	J
	WG423185	SAMP	Anthracene	R755686	J3
	WG423185	SAMP	Acenaphthene	R755686	J3
	WG423185	SAMP	Acenaphthylene	R755686	J3
	WG423185	SAMP	Benzo(a)pyrene	R755686	J3
	WG423185	SAMP	Benzo(g,h,i)perylene	R755686	J3
	WG423185	SAMP	Dibenz(a,h)anthracene	R755686	J3
	WG423185	SAMP	Fluorene	R755686	J3
	WG423185	SAMP	Indeno(1,2,3-cd)pyrene	R755686	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
B3	(ESC) - The indicated compound was found in the associated method blank, but all reported samples were non-detect.
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/09 at 12:52:46

TSR Signing Reports: 358
R5 - Desired TAT

Log all arsenic gw samples as ASG.

Sample: L403723-01 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31
Added SV8082 per JW. AV 5/26 - WA EIM EDD needed. UNI 480204 dor 6/16/09.

Sample: L403723-02 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31

Sample: L403723-03 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31
Added SV8082 per JW. AV 5/26

Sample: L403723-04 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31

Sample: L403723-05 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31
Added M6010PP per JW. AV 5/26 added M6010PP-D per JW-5/29-jd

Sample: L403723-06 Account: SLRWLOR Received: 05/21/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 10:31
Added M6010PP per JW. AV 5/26 added M6010PP-D per JW-5/29-jd



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Quality Assurance Report
Level II

June 24, 2009

L403723

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1-Methylnaphthalene	< .33	ppm			WG422912	05/22/09 10:36
2-Chloronaphthalene	< .33	ppm			WG422912	05/22/09 10:36
2-Methylnaphthalene	< .33	ppm			WG422912	05/22/09 10:36
Acenaphthene	< .33	ppm			WG422912	05/22/09 10:36
Acenaphthylene	< .33	ppm			WG422912	05/22/09 10:36
Anthracene	< .33	ppm			WG422912	05/22/09 10:36
Benzo(a)anthracene	< .33	ppm			WG422912	05/22/09 10:36
Benzo(a)pyrene	< .33	ppm			WG422912	05/22/09 10:36
Benzo(b)fluoranthene	< .33	ppm			WG422912	05/22/09 10:36
Benzo(g,h,i)perylene	< .33	ppm			WG422912	05/22/09 10:36
Benzo(k)fluoranthene	< .33	ppm			WG422912	05/22/09 10:36
Chrysene	< .33	ppm			WG422912	05/22/09 10:36
Dibenz(a,h)anthracene	< .33	ppm			WG422912	05/22/09 10:36
Fluoranthene	< .33	ppm			WG422912	05/22/09 10:36
Fluorene	< .33	ppm			WG422912	05/22/09 10:36
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG422912	05/22/09 10:36
Naphthalene	< .33	ppm			WG422912	05/22/09 10:36
Phenanthrene	< .33	ppm			WG422912	05/22/09 10:36
Pyrene	< .33	ppm			WG422912	05/22/09 10:36
2-Fluorobiphenyl		% Rec.	88.77	30-120	WG422912	05/22/09 10:36
Nitrobenzene-d5		% Rec.	71.22	18-119	WG422912	05/22/09 10:36
p-Terphenyl-d14		% Rec.	95.01	23-143	WG422912	05/22/09 10:36
1,1,1-Trichloroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,1,2-Trichloroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,1-Dichloroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,1-Dichloroethene	< .001	mg/kg			WG422986	05/22/09 13:15
1,2,3-Trichlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
1,2,4-Trichlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG422986	05/22/09 13:15
1,2-Dibromoethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,2-Dichlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
1,2-Dichloroethane	< .001	mg/kg			WG422986	05/22/09 13:15
1,2-Dichloropropane	< .001	mg/kg			WG422986	05/22/09 13:15
1,3-Dichlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
1,4-Dichlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
2-Butanone (MEK)	< .01	mg/kg			WG422986	05/22/09 13:15
2-Hexanone	< .01	mg/kg			WG422986	05/22/09 13:15
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG422986	05/22/09 13:15
Acetone	< .05	mg/kg			WG422986	05/22/09 13:15
Benzene	< .001	mg/kg			WG422986	05/22/09 13:15
Bromochloromethane	< .001	mg/kg			WG422986	05/22/09 13:15
Bromodichloromethane	< .001	mg/kg			WG422986	05/22/09 13:15
Bromoform	< .001	mg/kg			WG422986	05/22/09 13:15
Bromomethane	< .005	mg/kg			WG422986	05/22/09 13:15
Carbon disulfide	< .001	mg/kg			WG422986	05/22/09 13:15
Carbon tetrachloride	< .001	mg/kg			WG422986	05/22/09 13:15
Chlorobenzene	< .001	mg/kg			WG422986	05/22/09 13:15
Chlorodibromomethane	< .001	mg/kg			WG422986	05/22/09 13:15
Chloroethane	< .005	mg/kg			WG422986	05/22/09 13:15
Chloroform	< .005	mg/kg			WG422986	05/22/09 13:15
Chloromethane	< .001	mg/kg			WG422986	05/22/09 13:15
cis-1,2-Dichloroethene	< .001	mg/kg			WG422986	05/22/09 13:15
cis-1,3-Dichloropropene	< .001	mg/kg			WG422986	05/22/09 13:15
Dichlorodifluoromethane	< .005	mg/kg			WG422986	05/22/09 13:15
Ethylbenzene	< .001	mg/kg			WG422986	05/22/09 13:15

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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West Linn, OR 97068

Quality Assurance Report
Level II

L403723

June 24, 2009

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Isopropylbenzene	< .001	mg/kg			WG422986	05/22/09 13:15
Methyl tert-butyl ether	< .001	mg/kg			WG422986	05/22/09 13:15
Methylene Chloride	< .005	mg/kg			WG422986	05/22/09 13:15
Styrene	< .001	mg/kg			WG422986	05/22/09 13:15
Tetrachloroethene	< .001	mg/kg			WG422986	05/22/09 13:15
Toluene	< .005	mg/kg			WG422986	05/22/09 13:15
trans-1,2-Dichloroethene	< .001	mg/kg			WG422986	05/22/09 13:15
trans-1,3-Dichloropropene	< .001	mg/kg			WG422986	05/22/09 13:15
Trichloroethene	< .001	mg/kg			WG422986	05/22/09 13:15
Trichlorofluoromethane	< .005	mg/kg			WG422986	05/22/09 13:15
Vinyl chloride	< .001	mg/kg			WG422986	05/22/09 13:15
4-Bromofluorobenzene		% Rec.	103.5	59-140	WG422986	05/22/09 13:15
Dibromofluoromethane		% Rec.	102.5	63-139	WG422986	05/22/09 13:15
Toluene-d8		% Rec.	98.14	84-116	WG422986	05/22/09 13:15
Mercury	< .02	mg/kg			WG422918	05/25/09 11:23
Antimony	< 1	mg/kg			WG423321	05/26/09 12:31
Arsenic	< 1	mg/kg			WG423321	05/26/09 12:31
Beryllium	< .1	mg/kg			WG423321	05/26/09 12:31
Cadmium	< .25	mg/kg			WG423321	05/26/09 12:31
Chromium	< .5	mg/kg			WG423321	05/26/09 12:31
Copper	< 1	mg/kg			WG423321	05/26/09 12:31
Nickel	< 1	mg/kg			WG423321	05/26/09 12:31
Selenium	< 1	mg/kg			WG423321	05/26/09 12:31
Silver	< .5	mg/kg			WG423321	05/26/09 12:31
Thallium	< 1	mg/kg			WG423321	05/26/09 12:31
Zinc	< 1.5	mg/kg			WG423321	05/26/09 12:31
#6 Fuel Oil (C10-C32)	< .1	mg/l			WG422935	05/26/09 10:27
Diesel (C7-C26)	< .1	mg/l			WG422935	05/26/09 10:27
Hydraulic Fluid (C12-C33)	< .1	mg/l			WG422935	05/26/09 10:27
Kerosene (C9-C16)	< .1	mg/l			WG422935	05/26/09 10:27
Mineral Spirits	< .1	mg/l			WG422935	05/26/09 10:27
Motor Oil (C16-C40)	< .25	mg/l			WG422935	05/26/09 10:27
o-Terphenyl		% Rec.	106.9	50-150	WG422935	05/26/09 10:27
#6 Fuel Oil (C10-C32)	< 4	mg/kg			WG423285	05/26/09 12:02
Diesel (C7-C26)	< 4	mg/kg			WG423285	05/26/09 12:02
Hydraulic Fluid (C12-C33)	< 4	mg/kg			WG423285	05/26/09 12:02
Kerosene (C9-C16)	< 4	mg/kg			WG423285	05/26/09 12:02
Mineral Spirits	< 4	mg/kg			WG423285	05/26/09 12:02
Motor Oil (C16-C40)	< 10	mg/kg			WG423285	05/26/09 12:02
o-Terphenyl		% Rec.	105.9	50-150	WG423285	05/26/09 12:02
Lead	< .25	mg/kg			WG423321	05/26/09 15:54
Total Solids	< .1	%			WG423158	05/26/09 10:28
1-Methylnaphthalene	< .01	ppm			WG423185	05/26/09 11:39
2-Chloronaphthalene	< .01	ppm			WG423185	05/26/09 11:39
2-Methylnaphthalene	< .01	ppm			WG423185	05/26/09 11:39

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Level II

June 24, 2009

L403723

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Acenaphthene	< .01	ppm			WG423185	05/26/09 11:39
Acenaphthylene	< .01	ppm			WG423185	05/26/09 11:39
Anthracene	< .01	ppm			WG423185	05/26/09 11:39
Benzo(a)anthracene	< .01	ppm			WG423185	05/26/09 11:39
Benzo(a)pyrene	< .01	ppm			WG423185	05/26/09 11:39
Benzo(b)fluoranthene	< .01	ppm			WG423185	05/26/09 11:39
Benzo(g,h,i)perylene	< .01	ppm			WG423185	05/26/09 11:39
Benzo(k)fluoranthene	< .01	ppm			WG423185	05/26/09 11:39
Chrysene	< .01	ppm			WG423185	05/26/09 11:39
Dibenz(a,h)anthracene	< .01	ppm			WG423185	05/26/09 11:39
Fluoranthene	< .01	ppm			WG423185	05/26/09 11:39
Fluorene	< .01	ppm			WG423185	05/26/09 11:39
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG423185	05/26/09 11:39
Naphthalene	< .01	ppm			WG423185	05/26/09 11:39
Phenanthrene	< .01	ppm			WG423185	05/26/09 11:39
Pyrene	< .01	ppm			WG423185	05/26/09 11:39
2-Fluorobiphenyl		% Rec.	76.01	26-122	WG423185	05/26/09 11:39
Nitrobenzene-d5		% Rec.	72.28	12-120	WG423185	05/26/09 11:39
p-Terphenyl-d14		% Rec.	89.35	34-149	WG423185	05/26/09 11:39
Mercury	< .0002	mg/l			WG423435	05/27/09 11:16
PCB 1016	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1221	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1232	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1242	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1248	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1254	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1260	< .017	mg/kg			WG423525	05/27/09 17:26
Decachlorobiphenyl		% Rec.	133.2*	18.9-115.8	WG423525	05/27/09 17:26
Tetrachloro-m-xylene		% Rec.	110.4	31.8-115.7	WG423525	05/27/09 17:26
1,1,1-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2,2-Tetrachloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2-Trichloro-1,2,2-trifluoroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,3-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,4-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dibromo-3-Chloropropane	< .001	mg/l			WG423629	05/29/09 01:20
1,2-Dibromoethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloropropane	< .0005	mg/l			WG423629	05/29/09 01:20
1,3-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,4-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
2-Butanone (MEK)	< .0025	mg/l			WG423629	05/29/09 01:20
2-Hexanone	< .0025	mg/l			WG423629	05/29/09 01:20
4-Methyl-2-pentanone (MIBK)	< .0025	mg/l			WG423629	05/29/09 01:20
Acetone	< .025	mg/l			WG423629	05/29/09 01:20
Benzene	< .0005	mg/l			WG423629	05/29/09 01:20
Bromochloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromodichloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromoform	< .0005	mg/l			WG423629	05/29/09 01:20
Bromomethane	< .0005	mg/l			WG423629	05/29/09 01:20

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L403723

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Carbon disulfide	< .0005	mg/l			WG423629	05/29/09 01:20
Carbon tetrachloride	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorodibromomethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroform	< .0005	mg/l			WG423629	05/29/09 01:20
Chloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Dichlorodifluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Ethylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Isopropylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Methyl tert-butyl ether	< .0005	mg/l			WG423629	05/29/09 01:20
Methylene Chloride	< .0025	mg/l			WG423629	05/29/09 01:20
Styrene	< .0005	mg/l			WG423629	05/29/09 01:20
Tetrachloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Toluene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichlorofluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Vinyl chloride	< .0005	mg/l			WG423629	05/29/09 01:20
4-Bromofluorobenzene		% Rec.	99.83	75-128	WG423629	05/29/09 01:20
Dibromofluoromethane		% Rec.	99.79	79-125	WG423629	05/29/09 01:20
Toluene-d8		% Rec.	97.36	87-114	WG423629	05/29/09 01:20
Antimony	< 1	mg/kg			WG423361	05/29/09 03:34
Arsenic	< 1	mg/kg			WG423361	05/29/09 03:34
Beryllium	< .1	mg/kg			WG423361	05/29/09 03:34
Cadmium	< .25	mg/kg			WG423361	05/29/09 03:34
Chromium	< .5	mg/kg			WG423361	05/29/09 03:34
Copper	< 1	mg/kg			WG423361	05/29/09 03:34
Lead	< .25	mg/kg			WG423361	05/29/09 03:34
Nickel	< 1	mg/kg			WG423361	05/29/09 03:34
Selenium	< 1	mg/kg			WG423361	05/29/09 03:34
Silver	< .5	mg/kg			WG423361	05/29/09 03:34
Thallium	< 1	mg/kg			WG423361	05/29/09 03:34
Zinc	< 1.5	mg/kg			WG423361	05/29/09 03:34
Beryllium	< .002	mg/l			WG423508	05/30/09 15:55
Cadmium	< .005	mg/l			WG423508	05/30/09 15:55
Chromium	< .01	mg/l			WG423508	05/30/09 15:55
Copper	< .02	mg/l			WG423508	05/30/09 15:55
Lead	< .005	mg/l			WG423508	05/30/09 15:55
Nickel	< .02	mg/l			WG423508	05/30/09 15:55
Selenium	< .02	mg/l			WG423508	05/30/09 15:55
Silver	< .01	mg/l			WG423508	05/30/09 15:55
Zinc	< .03	mg/l			WG423508	05/30/09 15:55
Mercury, Dissolved	< .0002	mg/l			WG423970	06/02/09 20:53
Antimony	< .001	mg/l			WG423479	06/02/09 18:16
Arsenic	< .001	mg/l			WG423479	06/02/09 18:16
Thallium	< .001	mg/l			WG423479	06/02/09 18:16

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L403723

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Beryllium,Dissolved	< .002	mg/l			WG424397	06/03/09 18:27
Cadmium,Dissolved	< .005	mg/l			WG424397	06/03/09 18:27
Chromium,Dissolved	< .01	mg/l			WG424397	06/03/09 18:27
Copper,Dissolved	< .02	mg/l			WG424397	06/03/09 18:27
Lead,Dissolved	< .005	mg/l			WG424397	06/03/09 18:27
Selenium,Dissolved	< .02	mg/l			WG424397	06/03/09 18:27
Silver,Dissolved	< .01	mg/l			WG424397	06/03/09 18:27
Zinc,Dissolved	< .03	mg/l			WG424397	06/03/09 18:27
Nickel,Dissolved	< .02	mg/l			WG424397	06/03/09 15:56
Antimony,Dissolved	< .001	mg/l			WG424462	06/04/09 18:21
Arsenic,Dissolved	< .001	mg/l			WG424462	06/04/09 18:21
Thallium,Dissolved	< .001	mg/l			WG424462	06/04/09 18:21
1,4-Dioxane	< .004	mg/l			WG427744	06/22/09 21:21
4-Bromofluorobenzene		% Rec.	91.74	75-128	WG427744	06/22/09 21:21
Dibromofluoromethane		% Rec.	101.1	79-125	WG427744	06/22/09 21:21
Toluene-d8		% Rec.	95.38	87-114	WG427744	06/22/09 21:21

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.00	0.00	0.00	20	L403700-34	WG422918
Antimony	mg/kg	0.00	0.00	0.00	20	L403700-34	WG423321
Arsenic	mg/kg	5.41	5.70	5.22	20	L403700-34	WG423321
Beryllium	mg/kg	0.680	0.00	NA	20	L403700-34	WG423321
Cadmium	mg/kg	0.00	0.00	0.00	20	L403700-34	WG423321
Chromium	mg/kg	17.2	17.0	1.17	20	L403700-34	WG423321
Copper	mg/kg	20.9	16.0	26.6*	20	L403700-34	WG423321
Lead	mg/kg	5.90	5.80	1.71	20	L403700-34	WG423321
Nickel	mg/kg	9.94	7.90	22.9*	20	L403700-34	WG423321
Selenium	mg/kg	0.00	0.00	0.00	20	L403700-34	WG423321
Silver	mg/kg	0.00	0.00	0.00	20	L403700-34	WG423321
Zinc	mg/kg	16.1	17.1	6.02	20	L403700-34	WG423321
Thallium	mg/kg	0.00	0.00	0.00	20	L403700-34	WG423321
Total Solids	%	67.8	67.4	0.565	5	L403738-08	WG423158
Mercury	mg/l	0.00	0.00	0.00	20	L404249-33	WG423435
Antimony	mg/kg	0.00	0.00	0.00	20	L403723-03	WG423361
Arsenic	mg/kg	0.00	0.550	NA	20	L403723-03	WG423361
Beryllium	mg/kg	0.501	0.460	8.53	20	L403723-03	WG423361
Cadmium	mg/kg	0.00	0.00	0.00	20	L403723-03	WG423361
Chromium	mg/kg	23.4	24.0	2.53	20	L403723-03	WG423361
Copper	mg/kg	15.2	14.0	8.22	20	L403723-03	WG423361
Lead	mg/kg	3.94	3.60	9.02	20	L403723-03	WG423361
Nickel	mg/kg	19.3	21.0	8.44	20	L403723-03	WG423361
Selenium	mg/kg	0.00	0.00	0.00	20	L403723-03	WG423361
Silver	mg/kg	0.00	0.00	0.00	20	L403723-03	WG423361
Zinc	mg/kg	39.5	38.0	3.87	20	L403723-03	WG423361

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Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Thallium	mg/kg	0.00	0.00	0.00	20	L403723-03	WG423361
Beryllium	mg/l	0.00	0.00	0.00	20	L403830-04	WG423508
Cadmium	mg/l	0.00	0.000680	NA	20	L403830-04	WG423508
Chromium	mg/l	0.00	0.00370	NA	20	L403830-04	WG423508
Copper	mg/l	0.00	0.0165	NA	20	L403830-04	WG423508
Nickel	mg/l	0.00	0.00	0.00	20	L403830-04	WG423508
Selenium	mg/l	0.00	0.00850	NA	20	L403830-04	WG423508
Silver	mg/l	0.00	0.00	0.00	20	L403830-04	WG423508
Zinc	mg/l	0.00	0.0252	NA	20	L403830-04	WG423508
Mercury, Dissolved	mg/l	0.00	0.00	0.00	20	L404736-23	WG423970
Antimony	mg/l	0.00	0.00	0.00	20	L403687-07	WG423479
Arsenic	mg/l	0.00452	0.00380	17.3	20	L403687-07	WG423479
Thallium	mg/l	0.00	0.00	0.00	20	L403687-07	WG423479
Lead	mg/l	0.00578	0.0110	62.2*	20	L403830-04	WG423508
Beryllium, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Cadmium, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Chromium, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Copper, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Lead, Dissolved	mg/l	0.0120	0.0130	8.00	20	L405024-06	WG424397
Nickel, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Selenium, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Silver, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Zinc, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-06	WG424397
Antimony, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-12	WG424462
Arsenic, Dissolved	mg/l	0.314	0.320	1.89	20	L405024-12	WG424462
Thallium, Dissolved	mg/l	0.00	0.00	0.00	20	L405024-12	WG424462

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	ppm	.033	0.0224	68.0	41-110	WG422912
2-Chloronaphthalene	ppm	.033	0.0221	66.9	43-109	WG422912
2-Methylnaphthalene	ppm	.033	0.0208	62.9	38-104	WG422912
Acenaphthene	ppm	.033	0.0224	67.9	48-103	WG422912
Acenaphthylene	ppm	.033	0.0224	67.9	43-106	WG422912
Anthracene	ppm	.033	0.0242	73.2	51-110	WG422912
Benzo(a)anthracene	ppm	.033	0.0220	66.8	38-126	WG422912
Benzo(a)pyrene	ppm	.033	0.0241	73.1	47-118	WG422912
Benzo(b)fluoranthene	ppm	.033	0.0251	76.0	47-118	WG422912
Benzo(g,h,i)perylene	ppm	.033	0.0263	79.7	40-125	WG422912
Benzo(k)fluoranthene	ppm	.033	0.0221	67.1	45-121	WG422912
Chrysene	ppm	.033	0.0222	67.2	35-135	WG422912
Dibenz(a,h)anthracene	ppm	.033	0.0261	79.1	41-124	WG422912
Fluoranthene	ppm	.033	0.0234	71.0	50-114	WG422912
Fluorene	ppm	.033	0.0234	70.8	49-109	WG422912
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0257	78.0	40-126	WG422912
Naphthalene	ppm	.033	0.0206	62.4	36-100	WG422912

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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
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West Linn, OR 97068

Quality Assurance Report Level II

L403723

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Phenanthrene	ppm	.033	0.0199	60.2	46-108	WG422912
Pyrene	ppm	.033	0.0200	60.7	30-136	WG422912
2-Fluorobiphenyl				68.97	30-120	WG422912
Nitrobenzene-d5				51.05	18-119	WG422912
p-Terphenyl-d14				75.56	23-143	WG422912
1,1,1-Trichloroethane	mg/kg	.05	0.0540	108.	62-135	WG422986
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0506	101.	74-129	WG422986
1,1,2-Trichloroethane	mg/kg	.05	0.0480	96.1	77-124	WG422986
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0502	100.	49-155	WG422986
1,1-Dichloroethane	mg/kg	.05	0.0513	103.	61-134	WG422986
1,1-Dichloroethene	mg/kg	.05	0.0563	113.	53-136	WG422986
1,2,3-Trichlorobenzene	mg/kg	.05	0.0527	105.	62-146	WG422986
1,2,4-Trichlorobenzene	mg/kg	.05	0.0537	107.	61-148	WG422986
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0498	99.6	61-134	WG422986
1,2-Dibromoethane	mg/kg	.05	0.0499	99.8	76-127	WG422986
1,2-Dichlorobenzene	mg/kg	.05	0.0470	94.0	77-123	WG422986
1,2-Dichloroethane	mg/kg	.05	0.0515	103.	58-141	WG422986
1,2-Dichloropropane	mg/kg	.05	0.0494	98.9	71-128	WG422986
1,3-Dichlorobenzene	mg/kg	.05	0.0485	97.1	71-132	WG422986
1,4-Dichlorobenzene	mg/kg	.05	0.0514	103.	72-123	WG422986
2-Butanone (MEK)	mg/kg	.25	0.252	101.	51-131	WG422986
2-Hexanone	mg/kg	.25	0.263	105.	62-145	WG422986
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.278	111.	61-143	WG422986
Acetone	mg/kg	.25	0.263	105.	44-140	WG422986
Benzene	mg/kg	.05	0.0522	104.	65-128	WG422986
Bromochloromethane	mg/kg	.05	0.0501	100.	73-130	WG422986
Bromodichloromethane	mg/kg	.05	0.0569	114.	66-126	WG422986
Bromoform	mg/kg	.05	0.0465	92.9	64-139	WG422986
Bromomethane	mg/kg	.05	0.0512	102.	41-175	WG422986
Carbon disulfide	mg/kg	.05	0.0467	93.5	36-161	WG422986
Carbon tetrachloride	mg/kg	.05	0.0547	109.	60-140	WG422986
Chlorobenzene	mg/kg	.05	0.0498	99.6	75-125	WG422986
Chlorodibromomethane	mg/kg	.05	0.0533	107.	72-137	WG422986
Chloroethane	mg/kg	.05	0.0496	99.2	44-159	WG422986
Chloroform	mg/kg	.05	0.0504	101.	63-123	WG422986
Chloromethane	mg/kg	.05	0.0472	94.4	42-149	WG422986
cis-1,2-Dichloroethene	mg/kg	.05	0.0535	107.	71-129	WG422986
cis-1,3-Dichloropropene	mg/kg	.05	0.0552	110.	73-132	WG422986
Dichlorodifluoromethane	mg/kg	.05	0.0468	93.5	26-186	WG422986
Ethylbenzene	mg/kg	.05	0.0498	99.6	74-128	WG422986
Isopropylbenzene	mg/kg	.05	0.0528	106.	73-130	WG422986
Methyl tert-butyl ether	mg/kg	.05	0.0523	105.	44-148	WG422986
Methylene Chloride	mg/kg	.05	0.0477	95.4	57-129	WG422986
Styrene	mg/kg	.05	0.0546	109.	76-133	WG422986
Tetrachloroethene	mg/kg	.05	0.0466	93.3	65-135	WG422986
Toluene	mg/kg	.05	0.0507	101.	70-120	WG422986
trans-1,2-Dichloroethene	mg/kg	.05	0.0492	98.4	61-133	WG422986
trans-1,3-Dichloropropene	mg/kg	.05	0.0561	112.	70-135	WG422986
Trichloroethene	mg/kg	.05	0.0500	100.	71-126	WG422986
Trichlorofluoromethane	mg/kg	.05	0.0555	111.	52-147	WG422986
Vinyl chloride	mg/kg	.05	0.0480	96.0	50-151	WG422986
4-Bromofluorobenzene				103.0	59-140	WG422986
Dibromofluoromethane				103.5	63-139	WG422986
Toluene-d8				100.2	84-116	WG422986
Mercury	mg/kg	8.77	10.2	116.	71.6-127.7	WG422918

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Quality Assurance Report
Level II

L403723

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Antimony	mg/kg	85.1	42.5	49.9	1.2-242.1	WG423321
Arsenic	mg/kg	192	185.	96.4	78.6-120.8	WG423321
Beryllium	mg/kg	69.3	69.4	100.	79.8-120.1	WG423321
Cadmium	mg/kg	70.1	65.3	93.2	78.5-121.5	WG423321
Chromium	mg/kg	168	171.	102.	80.4-120.2	WG423321
Copper	mg/kg	122	128.	105.	81.6-119.7	WG423321
Lead	mg/kg	113	111.	98.2	77.3-122.1	WG423321
Nickel	mg/kg	74.1	76.3	103.	78.8-121.2	WG423321
Selenium	mg/kg	176	167.	94.9	75.6-125.0	WG423321
Silver	mg/kg	115	112.	97.4	66-133.9	WG423321
Thallium	mg/kg	111	87.7	79.0	77.6-122.5	WG423321
Zinc	mg/kg	437	419.	95.9	78.5-121.7	WG423321
Diesel (C7-C26)	mg/l	.75	0.624	83.2	50-150	WG422935
Motor Oil (C16-C40)	mg/l	.75	0.556	74.2	50-150	WG422935
o-Terphenyl				94.64	50-150	WG422935
Diesel (C7-C26)	mg/kg	30	23.6	78.6	50-150	WG423285
Motor Oil (C16-C40)	mg/kg	30	22.8	75.9	50-150	WG423285
o-Terphenyl				87.53	50-150	WG423285
Total Solids	%	50	50.0	100.	85-115	WG423158
1-Methylnaphthalene	ppm	.001	0.000778	77.8	30-123	WG423185
2-Chloronaphthalene	ppm	.001	0.000766	76.6	34-120	WG423185
2-Methylnaphthalene	ppm	.001	0.000744	74.4	29-116	WG423185
Acenaphthene	ppm	.001	0.000827	82.7	40-113	WG423185
Acenaphthylene	ppm	.001	0.000839	83.9	36-115	WG423185
Anthracene	ppm	.001	0.000864	86.4	45-118	WG423185
Benzo(a)anthracene	ppm	.001	0.000763	76.3	36-129	WG423185
Benzo(a)pyrene	ppm	.001	0.000827	82.7	44-124	WG423185
Benzo(b)fluoranthene	ppm	.001	0.000760	76.0	43-126	WG423185
Benzo(g,h,i)perylene	ppm	.001	0.000818	81.8	39-128	WG423185
Benzo(k)fluoranthene	ppm	.001	0.000903	90.3	44-127	WG423185
Chrysene	ppm	.001	0.000760	76.0	36-137	WG423185
Dibenz(a,h)anthracene	ppm	.001	0.000818	81.8	39-129	WG423185
Fluoranthene	ppm	.001	0.000839	83.9	45-123	WG423185
Fluorene	ppm	.001	0.000843	84.3	41-118	WG423185
Indeno(1,2,3-cd)pyrene	ppm	.001	0.000828	82.8	39-129	WG423185
Naphthalene	ppm	.001	0.000739	73.9	26-111	WG423185
Phenanthrene	ppm	.001	0.000821	82.1	41-116	WG423185
Pyrene	ppm	.001	0.000738	73.8	32-136	WG423185
2-Fluorobiphenyl				75.37	26-122	WG423185
Nitrobenzene-d5				70.60	12-120	WG423185
p-Terphenyl-d14				81.41	34-149	WG423185
Mercury	mg/l	.003	0.00300	100.	85-115	WG423435
PCB 1260	mg/kg	.167	0.180	108.	62-131	WG423525
Decachlorobiphenyl				119.9*	18.9-115.8	WG423525
Tetrachloro-m-xylene				108.8	31.8-115.7	WG423525

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Quality Assurance Report
Level II

L403723

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	mg/l	.025	0.0236	94.2	67-137	WG423629
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0184	73.7	72-128	WG423629
1,1,2-Trichloroethane	mg/l	.025	0.0199	79.7	79-123	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0206	82.3	51-149	WG423629
1,1-Dichloroethane	mg/l	.025	0.0238	95.4	67-133	WG423629
1,1-Dichloroethene	mg/l	.025	0.0241	96.4	60-130	WG423629
1,2,3-Trichlorobenzene	mg/l	.025	0.0207	82.8	63-138	WG423629
1,2,4-Trichlorobenzene	mg/l	.025	0.0218	87.3	65-137	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0189	75.7	55-134	WG423629
1,2-Dibromoethane	mg/l	.025	0.0187	74.7*	75-126	WG423629
1,2-Dichlorobenzene	mg/l	.025	0.0231	92.2	75-122	WG423629
1,2-Dichloroethane	mg/l	.025	0.0204	81.7	63-137	WG423629
1,2-Dichloropropane	mg/l	.025	0.0220	87.9	74-122	WG423629
1,3-Dichlorobenzene	mg/l	.025	0.0228	91.2	73-131	WG423629
1,4-Dichlorobenzene	mg/l	.025	0.0234	93.7	70-121	WG423629
2-Butanone (MEK)	mg/l	.125	0.0913	73.0	53-132	WG423629
2-Hexanone	mg/l	.125	0.0916	73.3	56-147	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.0967	77.4	60-142	WG423629
Acetone	mg/l	.125	0.106	84.9	48-134	WG423629
Benzene	mg/l	.025	0.0235	93.9	67-126	WG423629
Bromochloromethane	mg/l	.025	0.0216	86.5	75-128	WG423629
Bromodichloromethane	mg/l	.025	0.0224	89.5	68-133	WG423629
Bromoform	mg/l	.025	0.0207	82.9	60-139	WG423629
Bromomethane	mg/l	.025	0.0246	98.5	45-175	WG423629
Carbon disulfide	mg/l	.025	0.0242	96.9	41-148	WG423629
Carbon tetrachloride	mg/l	.025	0.0234	93.5	64-141	WG423629
Chlorobenzene	mg/l	.025	0.0230	91.9	77-125	WG423629
Chlorodibromomethane	mg/l	.025	0.0218	87.2	73-138	WG423629
Chloroethane	mg/l	.025	0.0247	98.7	49-155	WG423629
Chloroform	mg/l	.025	0.0216	86.4	66-126	WG423629
Chloromethane	mg/l	.025	0.0243	97.4	45-152	WG423629
cis-1,2-Dichloroethene	mg/l	.025	0.0237	94.7	72-128	WG423629
cis-1,3-Dichloropropene	mg/l	.025	0.0215	86.0	73-131	WG423629
Dichlorodifluoromethane	mg/l	.025	0.0246	98.3	39-189	WG423629
Ethylbenzene	mg/l	.025	0.0240	96.1	76-129	WG423629
Isopropylbenzene	mg/l	.025	0.0243	97.4	73-132	WG423629
Methyl tert-butyl ether	mg/l	.025	0.0211	84.3	51-142	WG423629
Methylene Chloride	mg/l	.025	0.0228	91.2	64-125	WG423629
Styrene	mg/l	.025	0.0229	91.4	78-130	WG423629
Tetrachloroethene	mg/l	.025	0.0243	97.4	67-135	WG423629
Toluene	mg/l	.025	0.0228	91.1	72-122	WG423629
trans-1,2-Dichloroethene	mg/l	.025	0.0241	96.5	67-129	WG423629
trans-1,3-Dichloropropene	mg/l	.025	0.0196	78.3	66-137	WG423629
Trichloroethene	mg/l	.025	0.0237	94.9	74-126	WG423629
Trichlorofluoromethane	mg/l	.025	0.0244	97.5	54-156	WG423629
Vinyl chloride	mg/l	.025	0.0239	95.5	55-153	WG423629
4-Bromofluorobenzene				92.07	75-128	WG423629
Dibromofluoromethane				100.3	79-125	WG423629
Toluene-d8				99.01	87-114	WG423629
Antimony	mg/kg	85.1	41.6	48.9	1.2-242.1	WG423361
Arsenic	mg/kg	192	178.	92.7	78.6-120.8	WG423361
Beryllium	mg/kg	69.3	66.1	95.4	79.8-120.1	WG423361
Cadmium	mg/kg	70.1	66.2	94.4	78.5-121.5	WG423361
Chromium	mg/kg	168	168.	100.	80.4-120.2	WG423361
Copper	mg/kg	122	123.	101.	81.6-119.7	WG423361
Lead	mg/kg	113	108.	95.6	77.3-122.1	WG423361
Nickel	mg/kg	74.1	75.5	102.	78.8-121.2	WG423361

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Quality Assurance Report
Level II

L403723

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Selenium	mg/kg	176	164.	93.2	75.6-125.0	WG423361
Silver	mg/kg	115	122.	106.	66-133.9	WG423361
Thallium	mg/kg	111	98.3	88.6	77.6-122.5	WG423361
Zinc	mg/kg	437	410.	93.8	78.5-121.7	WG423361
Beryllium	mg/l	1.13	1.11	98.2	85-115	WG423508
Cadmium	mg/l	1.13	1.10	97.3	85-115	WG423508
Chromium	mg/l	1.13	1.08	95.6	85-115	WG423508
Copper	mg/l	1.13	1.10	97.3	85-115	WG423508
Lead	mg/l	1.13	1.14	101.	85-115	WG423508
Nickel	mg/l	1.13	1.10	97.3	85-115	WG423508
Selenium	mg/l	1.13	1.08	95.6	85-115	WG423508
Silver	mg/l	1.13	1.11	98.2	85-115	WG423508
Zinc	mg/l	1.13	1.09	96.5	85-115	WG423508
Mercury, Dissolved	mg/l	.003	0.00343	114.	85-115	WG423970
Antimony	mg/l	.0567	0.0603	106.	85-115	WG423479
Arsenic	mg/l	.0567	0.0587	104.	85-115	WG423479
Thallium	mg/l	.0567	0.0580	102.	85-115	WG423479
Beryllium, Dissolved	mg/l	1.13	1.11	98.2	85-115	WG424397
Cadmium, Dissolved	mg/l	1.13	1.13	100.	85-115	WG424397
Chromium, Dissolved	mg/l	1.13	1.11	98.2	85-115	WG424397
Copper, Dissolved	mg/l	1.13	1.10	97.3	85-115	WG424397
Lead, Dissolved	mg/l	1.13	1.13	100.	85-115	WG424397
Nickel, Dissolved	mg/l	1.13	1.11	98.2	85-115	WG424397
Selenium, Dissolved	mg/l	1.13	1.03	91.2	85-115	WG424397
Silver, Dissolved	mg/l	1.13	1.08	95.6	85-115	WG424397
Zinc, Dissolved	mg/l	1.13	1.09	96.5	85-115	WG424397
Antimony, Dissolved	mg/l	.0567	0.0551	97.2	85-115	WG424462
Arsenic, Dissolved	mg/l	.0567	0.0540	95.2	85-115	WG424462
Thallium, Dissolved	mg/l	.0567	0.0561	98.9	85-115	WG424462
1,4-Dioxane	mg/l	.05	0.00	0.00*	70-130	WG427744
4-Bromofluorobenzene				93.54	75-128	WG427744
Dibromofluoromethane				94.81	79-125	WG427744
Toluene-d8				97.93	87-114	WG427744

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1-Methylnaphthalene	ppm	0.0276	0.0224	84.0	41-110	20.8	24	WG422912
2-Chloronaphthalene	ppm	0.0292	0.0221	88.0	43-109	27.6*	21	WG422912
2-Methylnaphthalene	ppm	0.0266	0.0208	81.0	38-104	24.9*	24	WG422912
Acenaphthene	ppm	0.0281	0.0224	85.0	48-103	22.6*	20	WG422912
Acenaphthylene	ppm	0.0275	0.0224	83.0	43-106	20.5*	20	WG422912
Anthracene	ppm	0.0289	0.0242	88.0	51-110	17.9	22	WG422912
Benzo(a)anthracene	ppm	0.0277	0.0220	84.0	38-126	22.7*	20	WG422912
Benzo(a)pyrene	ppm	0.0303	0.0241	92.0	47-118	22.6*	20	WG422912
Benzo(b)fluoranthene	ppm	0.0270	0.0251	82.0	47-118	7.23	29	WG422912
Benzo(g,h,i)perylene	ppm	0.0324	0.0263	98.0	40-125	20.7*	20	WG422912

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Level II

June 24, 2009

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Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(k)fluoranthene	ppm	0.0333	0.0221	101.	45-121	40.4*	31	WG422912
Chrysene	ppm	0.0258	0.0222	78.0	35-135	15.0	20	WG422912
Dibenz(a,h)anthracene	ppm	0.0327	0.0261	99.0	41-124	22.5*	20	WG422912
Fluoranthene	ppm	0.0309	0.0234	94.0	50-114	27.6*	20	WG422912
Fluorene	ppm	0.0290	0.0234	88.0	49-109	21.6*	19	WG422912
Indeno(1,2,3-cd)pyrene	ppm	0.0334	0.0257	101.	40-126	26.0*	20	WG422912
Naphthalene	ppm	0.0265	0.0206	80.0	36-100	25.1*	24	WG422912
Phenanthrene	ppm	0.0266	0.0199	81.0	46-108	29.2*	21	WG422912
Pyrene	ppm	0.0251	0.0200	76.0	30-136	22.3*	20	WG422912
2-Fluorobiphenyl				87.55	30-120			WG422912
Nitrobenzene-d5				64.06	18-119			WG422912
p-Terphenyl-d14				90.09	23-143			WG422912
1,1,1-Trichloroethane	mg/kg	0.0545	0.0540	109.	62-135	0.932	20	WG422986
1,1,2,2-Tetrachloroethane	mg/kg	0.0520	0.0506	104.	74-129	2.77	20	WG422986
1,1,2-Trichloroethane	mg/kg	0.0491	0.0480	98.0	77-124	2.22	20	WG422986
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0487	0.0502	97.0	49-155	3.21	20	WG422986
1,1-Dichloroethane	mg/kg	0.0528	0.0513	106.	61-134	2.95	20	WG422986
1,1-Dichloroethene	mg/kg	0.0555	0.0563	111.	53-136	1.43	20	WG422986
1,2,3-Trichlorobenzene	mg/kg	0.0567	0.0527	113.	62-146	7.28	20	WG422986
1,2,4-Trichlorobenzene	mg/kg	0.0549	0.0537	110.	61-148	2.20	20	WG422986
1,2-Dibromo-3-Chloropropane	mg/kg	0.0528	0.0498	106.	61-134	5.84	21	WG422986
1,2-Dibromoethane	mg/kg	0.0521	0.0499	104.	76-127	4.32	20	WG422986
1,2-Dichlorobenzene	mg/kg	0.0495	0.0470	99.0	77-123	5.25	20	WG422986
1,2-Dichloroethane	mg/kg	0.0515	0.0515	103.	58-141	0.127	20	WG422986
1,2-Dichloropropane	mg/kg	0.0513	0.0494	103.	71-128	3.79	20	WG422986
1,3-Dichlorobenzene	mg/kg	0.0517	0.0485	103.	71-132	6.32	20	WG422986
1,4-Dichlorobenzene	mg/kg	0.0504	0.0514	101.	72-123	1.99	20	WG422986
2-Butanone (MEK)	mg/kg	0.244	0.252	97.0	51-131	3.43	25	WG422986
2-Hexanone	mg/kg	0.277	0.263	111.	62-145	4.90	23	WG422986
4-Methyl-2-pentanone (MIBK)	mg/kg	0.278	0.278	111.	61-143	0.0393	23	WG422986
Acetone	mg/kg	0.262	0.263	105.	44-140	0.485	25	WG422986
Benzene	mg/kg	0.0530	0.0522	106.	65-128	1.61	20	WG422986
Bromochloromethane	mg/kg	0.0512	0.0501	102.	73-130	2.20	20	WG422986
Bromodichloromethane	mg/kg	0.0586	0.0569	117.	66-126	2.86	20	WG422986
Bromoform	mg/kg	0.0497	0.0465	99.0	64-139	6.76	20	WG422986
Bromomethane	mg/kg	0.0538	0.0512	108.	41-175	4.96	20	WG422986
Carbon disulfide	mg/kg	0.0455	0.0467	91.0	36-161	2.69	20	WG422986
Carbon tetrachloride	mg/kg	0.0546	0.0547	109.	60-140	0.116	20	WG422986
Chlorobenzene	mg/kg	0.0532	0.0498	106.	75-125	6.67	20	WG422986
Chlorodibromomethane	mg/kg	0.0548	0.0533	110.	72-137	2.83	20	WG422986
Chloroethane	mg/kg	0.0504	0.0496	101.	44-159	1.61	20	WG422986
Chloroform	mg/kg	0.0509	0.0504	102.	63-123	0.951	20	WG422986
Chloromethane	mg/kg	0.0470	0.0472	94.0	42-149	0.472	20	WG422986
cis-1,2-Dichloroethene	mg/kg	0.0544	0.0535	109.	71-129	1.58	20	WG422986
cis-1,3-Dichloropropene	mg/kg	0.0582	0.0552	116.	73-132	5.35	20	WG422986
Dichlorodifluoromethane	mg/kg	0.0473	0.0468	95.0	26-186	1.17	22	WG422986
Ethylbenzene	mg/kg	0.0525	0.0498	105.	74-128	5.20	20	WG422986
Isopropylbenzene	mg/kg	0.0545	0.0528	109.	73-130	3.10	20	WG422986
Methyl tert-butyl ether	mg/kg	0.0528	0.0523	106.	44-148	0.921	20	WG422986
Methylene Chloride	mg/kg	0.0492	0.0477	98.0	57-129	2.96	20	WG422986
Styrene	mg/kg	0.0569	0.0546	114.	76-133	4.17	20	WG422986
Tetrachloroethene	mg/kg	0.0500	0.0466	100.	65-135	6.96	20	WG422986
Toluene	mg/kg	0.0522	0.0507	104.	70-120	2.87	20	WG422986
trans-1,2-Dichloroethene	mg/kg	0.0497	0.0492	99.0	61-133	1.02	20	WG422986
trans-1,3-Dichloropropene	mg/kg	0.0571	0.0561	114.	70-135	1.63	20	WG422986
Trichloroethene	mg/kg	0.0529	0.0500	106.	71-126	5.63	20	WG422986
Trichlorofluoromethane	mg/kg	0.0551	0.0555	110.	52-147	0.769	20	WG422986

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Quality Assurance Report
Level II

June 24, 2009

L403723

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Vinyl chloride	mg/kg	0.0484	0.0480	97.0	50-151	0.918	20	WG422986
4-Bromofluorobenzene				104.7	59-140			WG422986
Dibromofluoromethane				100.2	63-139			WG422986
Toluene-d8				97.92	84-116			WG422986
Diesel (C7-C26)	mg/l	0.559	0.624	75.0	50-150	10.9	20	WG422935
Motor Oil (C16-C40)	mg/l	0.481	0.556	64.0	50-150	14.6	25	WG422935
o-Terphenyl				85.65	50-150			WG422935
Diesel (C7-C26)	mg/kg	24.8	23.6	83.0	50-150	5.02	20	WG423285
Motor Oil (C16-C40)	mg/kg	23.1	22.8	77.0	50-150	1.24	25	WG423285
o-Terphenyl				90.89	50-150			WG423285
1-Methylnaphthalene	ppm	0.000612	0.000778	61.0	30-123	23.9	32	WG423185
2-Chloronaphthalene	ppm	0.000615	0.000766	62.0	34-120	21.8	30	WG423185
2-Methylnaphthalene	ppm	0.000583	0.000744	58.0	29-116	24.3	31	WG423185
Acenaphthene	ppm	0.000626	0.000827	63.0	40-113	27.7*	25	WG423185
Acenaphthylene	ppm	0.000630	0.000839	63.0	36-115	28.5*	25	WG423185
Anthracene	ppm	0.000644	0.000864	64.0	45-118	29.2*	26	WG423185
Benzo(a)anthracene	ppm	0.000623	0.000763	62.0	36-129	20.3	26	WG423185
Benzo(a)pyrene	ppm	0.000663	0.000827	66.0	44-124	22.1*	21	WG423185
Benzo(b)fluoranthene	ppm	0.000645	0.000760	65.0	43-126	16.4	38	WG423185
Benzo(g,h,i)perylene	ppm	0.000642	0.000818	64.0	39-128	24.1*	20	WG423185
Benzo(k)fluoranthene	ppm	0.000693	0.000903	69.0	44-127	26.4	39	WG423185
Chrysene	ppm	0.000617	0.000760	62.0	36-137	20.7	22	WG423185
Dibenz(a,h)anthracene	ppm	0.000646	0.000818	65.0	39-129	23.5*	20	WG423185
Fluoranthene	ppm	0.000674	0.000839	67.0	45-123	21.8	25	WG423185
Fluorene	ppm	0.000632	0.000843	63.0	41-118	28.6*	26	WG423185
Indeno(1,2,3-cd)pyrene	ppm	0.000648	0.000828	65.0	39-129	24.4*	20	WG423185
Naphthalene	ppm	0.000592	0.000739	59.0	26-111	22.2	32	WG423185
Phenanthrene	ppm	0.000679	0.000821	68.0	41-116	18.9	25	WG423185
Pyrene	ppm	0.000621	0.000738	62.0	32-136	17.2	22	WG423185
2-Fluorobiphenyl				57.94	26-122			WG423185
Nitrobenzene-d5				56.94	12-120			WG423185
p-Terphenyl-d14				64.72	34-149			WG423185
PCB 1260	mg/kg	0.174	0.180	104.	62-131	3.00	22	WG423525
Decachlorobiphenyl				112.4	18.9-115.8			WG423525
Tetrachloro-m-xylene				106.2	31.8-115.7			WG423525
1,1,1-Trichloroethane	mg/l	0.0241	0.0236	97.0	67-137	2.43	20	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.0223	0.0184	89.0	72-128	19.2	20	WG423629
1,1,2-Trichloroethane	mg/l	0.0233	0.0199	93.0	79-123	15.8	20	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0213	0.0206	85.0	51-149	3.26	20	WG423629
1,1-Dichloroethane	mg/l	0.0244	0.0238	98.0	67-133	2.28	20	WG423629
1,1-Dichloroethene	mg/l	0.0235	0.0241	94.0	60-130	2.69	20	WG423629
1,2,3-Trichlorobenzene	mg/l	0.0256	0.0207	102.	63-138	21.1*	20	WG423629
1,2,4-Trichlorobenzene	mg/l	0.0255	0.0218	102.	65-137	15.6	20	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.0204	0.0189	81.0	55-134	7.37	20	WG423629
1,2-Dibromoethane	mg/l	0.0230	0.0187	92.0	75-126	20.6*	20	WG423629
1,2-Dichlorobenzene	mg/l	0.0242	0.0231	97.0	75-122	4.83	20	WG423629
1,2-Dichloroethane	mg/l	0.0242	0.0204	97.0	63-137	16.8	20	WG423629
1,2-Dichloropropane	mg/l	0.0239	0.0220	96.0	74-122	8.53	20	WG423629
1,3-Dichlorobenzene	mg/l	0.0244	0.0228	98.0	73-131	6.71	20	WG423629

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**Quality Assurance Report
Level II**

June 24, 2009

L403723

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,4-Dichlorobenzene	mg/l	0.0239	0.0234	96.0	70-121	2.12	20	WG423629
2-Butanone (MEK)	mg/l	0.104	0.0913	83.0	53-132	13.1	20	WG423629
2-Hexanone	mg/l	0.111	0.0916	89.0	56-147	19.4	20	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	0.118	0.0967	94.0	60-142	19.5	20	WG423629
Acetone	mg/l	0.0996	0.106	80.0	48-134	6.28	20	WG423629
Benzene	mg/l	0.0244	0.0235	97.0	67-126	3.70	20	WG423629
Bromochloromethane	mg/l	0.0240	0.0216	96.0	75-128	10.4	20	WG423629
Bromodichloromethane	mg/l	0.0249	0.0224	100.	68-133	10.6	20	WG423629
Bromoform	mg/l	0.0246	0.0207	98.0	60-139	17.1	20	WG423629
Bromomethane	mg/l	0.0253	0.0246	101.	45-175	2.61	20	WG423629
Carbon disulfide	mg/l	0.0225	0.0242	90.0	41-148	7.43	20	WG423629
Carbon tetrachloride	mg/l	0.0228	0.0234	91.0	64-141	2.44	20	WG423629
Chlorobenzene	mg/l	0.0239	0.0230	96.0	77-125	4.05	20	WG423629
Chlorodibromomethane	mg/l	0.0249	0.0218	99.0	73-138	13.2	20	WG423629
Chloroethane	mg/l	0.0252	0.0247	101.	49-155	1.98	20	WG423629
Chloroform	mg/l	0.0226	0.0216	91.0	66-126	4.69	20	WG423629
Chloromethane	mg/l	0.0249	0.0243	100.	45-152	2.23	20	WG423629
cis-1,2-Dichloroethene	mg/l	0.0241	0.0237	97.0	72-128	1.95	20	WG423629
cis-1,3-Dichloropropene	mg/l	0.0253	0.0215	101.	73-131	16.0	20	WG423629
Dichlorodifluoromethane	mg/l	0.0245	0.0246	98.0	39-189	0.338	24	WG423629
Ethylbenzene	mg/l	0.0241	0.0240	96.0	76-129	0.179	20	WG423629
Isopropylbenzene	mg/l	0.0250	0.0243	100.	73-132	2.82	20	WG423629
Methyl tert-butyl ether	mg/l	0.0241	0.0211	96.0	51-142	13.4	20	WG423629
Methylene Chloride	mg/l	0.0241	0.0228	96.0	64-125	5.49	20	WG423629
Styrene	mg/l	0.0246	0.0229	98.0	78-130	7.14	20	WG423629
Tetrachloroethene	mg/l	0.0242	0.0243	97.0	67-135	0.713	20	WG423629
Toluene	mg/l	0.0240	0.0228	96.0	72-122	5.50	20	WG423629
trans-1,2-Dichloroethene	mg/l	0.0237	0.0241	95.0	67-129	1.63	20	WG423629
trans-1,3-Dichloropropene	mg/l	0.0247	0.0196	99.0	66-137	23.1*	20	WG423629
Trichloroethene	mg/l	0.0241	0.0237	97.0	74-126	1.69	20	WG423629
Trichlorofluoromethane	mg/l	0.0251	0.0244	101.	54-156	3.08	20	WG423629
Vinyl chloride	mg/l	0.0239	0.0239	96.0	55-153	0.189	20	WG423629
4-Bromofluorobenzene				98.20	75-128			WG423629
Dibromofluoromethane				103.1	79-125			WG423629
Toluene-d8				100.4	87-114			WG423629
1,4-Dioxane	mg/l	0.00	0.00	0*	70-130	0.00	25	WG427744
4-Bromofluorobenzene				96.65	75-128			WG427744
Dibromofluoromethane				93.35	79-125			WG427744
Toluene-d8				96.73	87-114			WG427744

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
1-Methylnaphthalene	ppm	0.0551	0.00	.033	167.*	19-131	L403683-05	WG422912
2-Chloronaphthalene	ppm	0.0209	0.00	.033	63.3	38-117	L403683-05	WG422912
2-Methylnaphthalene	ppm	0.0529	0.00	.033	160.*	18-125	L403683-05	WG422912
Acenaphthene	ppm	0.484	0.100	.033	1160*	31-120	L403683-05	WG422912
Acenaphthylene	ppm	0.0409	0.00	.033	124.*	34-116	L403683-05	WG422912
Anthracene	ppm	0.866	0.220	.033	1960*	32-131	L403683-05	WG422912
Benzo(a)anthracene	ppm	2.18	0.750	.033	4340*	32-131	L403683-05	WG422912
Benzo(a)pyrene	ppm	2.06	0.760	.033	3940*	28-130	L403683-05	WG422912
Benzo(b)fluoranthene	ppm	3.26	1.00	.033	6840*	37-130	L403683-05	WG422912
Benzo(g,h,i)perylene	ppm	1.06	0.400	.033	2010*	10-134	L403683-05	WG422912
Benzo(k)fluoranthene	ppm	0.983	0.550	.033	1310*	31-129	L403683-05	WG422912
Chrysene	ppm	1.86	0.810	.033	3180*	25-137	L403683-05	WG422912
Dibenz(a,h)anthracene	ppm	0.404	0.140	.033	799.*	20-134	L403683-05	WG422912
Fluoranthene	ppm	8.81	3.20	.033	17000*	27-138	L403683-05	WG422912

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Quality Assurance Report
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June 24, 2009

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Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Fluorene	ppm	0.692	0.160	.033	1610*	26-136	L403683-05	WG422912
Indeno(1,2,3-cd)pyrene	ppm	1.04	0.400	.033	1930*	16-135	L403683-05	WG422912
Naphthalene	ppm	0.0636	0.00	.033	193.*	22-121	L403683-05	WG422912
Phenanthrene	ppm	7.87	2.10	.033	17500*	27-133	L403683-05	WG422912
Pyrene	ppm	5.74	2.00	.033	11300*	22-133	L403683-05	WG422912
2-Fluorobiphenyl					57.40	30-120		WG422912
Nitrobenzene-d5					47.70	18-119		WG422912
p-Terphenyl-d14					81.00	23-143		WG422912
1,1,1-Trichloroethane	mg/kg	0.263	0.00	.05	105.	23-147	L403603-05	WG422986
1,1,2,2-Tetrachloroethane	mg/kg	0.255	0.00	.05	102.	18-150	L403603-05	WG422986
1,1,2-Trichloroethane	mg/kg	0.240	0.00	.05	95.9	35-140	L403603-05	WG422986
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.246	0.00	.05	98.3	10-145	L403603-05	WG422986
1,1-Dichloroethane	mg/kg	0.251	0.00	.05	101.	24-148	L403603-05	WG422986
1,1-Dichloroethene	mg/kg	0.289	0.00	.05	115.	10-149	L403603-05	WG422986
1,2,3-Trichlorobenzene	mg/kg	0.223	0.00	.05	89.3	10-129	L403603-05	WG422986
1,2,4-Trichlorobenzene	mg/kg	0.234	0.00	.05	93.5	10-119	L403603-05	WG422986
1,2-Dibromo-3-Chloropropane	mg/kg	0.288	0.00	.05	115.	19-145	L403603-05	WG422986
1,2-Dibromoethane	mg/kg	0.259	0.00	.05	104.	24-145	L403603-05	WG422986
1,2-Dichlorobenzene	mg/kg	0.231	0.00	.05	92.6	12-130	L403603-05	WG422986
1,2-Dichloroethane	mg/kg	0.270	0.00	.05	108.	21-155	L403603-05	WG422986
1,2-Dichloropropane	mg/kg	0.250	0.00	.05	100.	28-144	L403603-05	WG422986
1,3-Dichlorobenzene	mg/kg	0.232	0.00	.05	93.0	10-129	L403603-05	WG422986
1,4-Dichlorobenzene	mg/kg	0.225	0.00	.05	90.0	10-121	L403603-05	WG422986
2-Butanone (MEK)	mg/kg	1.46	0.00	.25	117.	21-143	L403603-05	WG422986
2-Hexanone	mg/kg	1.56	0.00114	.25	124.	22-151	L403603-05	WG422986
4-Methyl-2-pentanone (MIBK)	mg/kg	1.67	0.00	.25	133.	31-151	L403603-05	WG422986
Acetone	mg/kg	1.62	0.00	.25	130.	13-158	L403603-05	WG422986
Benzene	mg/kg	0.260	0.00	.05	104.	16-143	L403603-05	WG422986
Bromochloromethane	mg/kg	0.257	0.00105	.05	102.	25-152	L403603-05	WG422986
Bromodichloromethane	mg/kg	0.286	0.00	.05	114.	27-139	L403603-05	WG422986
Bromoform	mg/kg	0.239	0.00	.05	95.4	21-144	L403603-05	WG422986
Bromomethane	mg/kg	0.266	0.00	.05	106.	0-180	L403603-05	WG422986
Carbon disulfide	mg/kg	0.265	0.00	.05	106.	10-156	L403603-05	WG422986
Carbon tetrachloride	mg/kg	0.267	0.00	.05	107.	12-149	L403603-05	WG422986
Chlorobenzene	mg/kg	0.233	0.00	.05	93.0	17-134	L403603-05	WG422986
Chlorodibromomethane	mg/kg	0.259	0.00	.05	104.	28-147	L403603-05	WG422986
Chloroethane	mg/kg	0.256	0.00	.05	103.	0-172	L403603-05	WG422986
Chloroform	mg/kg	0.248	0.00	.05	99.2	28-138	L403603-05	WG422986
Chloromethane	mg/kg	0.250	0.00	.05	100.	10-158	L403603-05	WG422986
cis-1,2-Dichloroethene	mg/kg	0.265	0.00	.05	106.	21-147	L403603-05	WG422986
cis-1,3-Dichloropropene	mg/kg	0.283	0.00	.05	113.	17-145	L403603-05	WG422986
Dichlorodifluoromethane	mg/kg	0.261	0.00	.05	104.	0-192	L403603-05	WG422986
Ethylbenzene	mg/kg	0.240	0.00	.05	96.0	12-137	L403603-05	WG422986
Isopropylbenzene	mg/kg	0.241	0.00	.05	96.4	14-134	L403603-05	WG422986
Methyl tert-butyl ether	mg/kg	0.278	0.00	.05	111.	21-157	L403603-05	WG422986
Methylene Chloride	mg/kg	0.247	0.00	.05	98.9	12-149	L403603-05	WG422986
Styrene	mg/kg	0.251	0.00	.05	100.	10-140	L403603-05	WG422986
Tetrachloroethene	mg/kg	0.231	0.00	.05	92.3	10-131	L403603-05	WG422986
Toluene	mg/kg	0.259	0.00	.05	104.	12-136	L403603-05	WG422986
trans-1,2-Dichloroethene	mg/kg	0.250	0.00	.05	100.	10-143	L403603-05	WG422986
trans-1,3-Dichloropropene	mg/kg	0.291	0.00	.05	116.	16-147	L403603-05	WG422986
Trichloroethene	mg/kg	0.250	0.00	.05	100.	10-155	L403603-05	WG422986
Trichlorofluoromethane	mg/kg	0.284	0.00	.05	114.	10-154	L403603-05	WG422986
Vinyl chloride	mg/kg	0.253	0.00	.05	101.	10-159	L403603-05	WG422986
4-Bromofluorobenzene					101.9	59-140		WG422986
Dibromofluoromethane					103.8	63-139		WG422986
Toluene-d8					101.0	84-116		WG422986

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Quality Assurance Report
Level II

June 24, 2009

L403723

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Mercury	mg/kg	0.253	0.00	.25	101.	70-130	L403700-34	WG422918
Antimony	mg/kg	26.4	0.00	50	52.8*	75-125	L403700-34	WG423321
Arsenic	mg/kg	52.8	5.70	50	94.2	75-125	L403700-34	WG423321
Beryllium	mg/kg	49.8	0.00	50	99.6	75-125	L403700-34	WG423321
Cadmium	mg/kg	47.3	0.00	50	94.6	75-125	L403700-34	WG423321
Chromium	mg/kg	65.6	17.0	50	97.2	75-125	L403700-34	WG423321
Copper	mg/kg	67.5	16.0	50	103.	75-125	L403700-34	WG423321
Lead	mg/kg	52.4	5.80	50	93.2	75-125	L403700-34	WG423321
Nickel	mg/kg	56.9	7.90	50	98.0	75-125	L403700-34	WG423321
Selenium	mg/kg	43.5	0.00	50	87.0	75-125	L403700-34	WG423321
Silver	mg/kg	48.0	0.00	50	96.0	75-125	L403700-34	WG423321
Zinc	mg/kg	60.5	17.1	50	86.8	75-125	L403700-34	WG423321
Thallium	mg/kg	43.5	0.00	10	87.0	75-125	L403700-34	WG423321
Mercury	mg/l	0.00259	0.00	.003	86.3	70-130	L404249-33	WG423435
PCB 1260	mg/kg	0.148	0.00	.167	88.8	10-197	L403960-03	WG423525
Decachlorobiphenyl					82.00	18.9-115.8		WG423525
Tetrachloro-m-xylene					91.99	31.8-115.7		WG423525
Diesel (C7-C26)	mg/kg	23.7	0.00	30	79.0	50-150	L404242-05	WG423285
Motor Oil (C16-C40)	mg/kg	30.2	3.80	30	88.0	50-150	L404242-05	WG423285
o-Terphenyl					76.66	50-150		WG423285
1,1,1-Trichloroethane	mg/l	0.558	0.00	.025	89.3	31-161	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.510	0.00	.025	81.6	49-149	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.511	0.00	.025	81.7	46-145	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.601	0.320	.025	44.9	14-168	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.563	0.00	.025	90.1	30-159	L403957-01	WG423629
1,1-Dichloroethene	mg/l	0.567	0.0210	.025	87.4	10-162	L403957-01	WG423629
1,2,3-Trichlorobenzene	mg/l	0.529	0.00	.025	84.6	32-143	L403957-01	WG423629
1,2,4-Trichlorobenzene	mg/l	0.547	0.00	.025	87.5	27-142	L403957-01	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.489	0.00	.025	78.3	37-148	L403957-01	WG423629
1,2-Dibromoethane	mg/l	0.491	0.00	.025	78.6	41-149	L403957-01	WG423629
1,2-Dichlorobenzene	mg/l	0.580	0.00	.025	92.7	40-139	L403957-01	WG423629
1,2-Dichloroethane	mg/l	0.523	0.00	.025	83.6	29-167	L403957-01	WG423629
1,2-Dichloropropane	mg/l	0.539	0.00	.025	86.3	39-148	L403957-01	WG423629
1,3-Dichlorobenzene	mg/l	0.574	0.00	.025	91.9	32-148	L403957-01	WG423629
1,4-Dichlorobenzene	mg/l	0.568	0.00	.025	90.8	32-136	L403957-01	WG423629
2-Butanone (MEK)	mg/l	2.47	0.00	.125	79.0	32-151	L403957-01	WG423629
2-Hexanone	mg/l	2.53	0.00	.125	80.9	41-155	L403957-01	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	2.62	0.00	.125	84.0	40-160	L403957-01	WG423629
Acetone	mg/l	2.84	0.00	.125	90.9	25-157	L403957-01	WG423629
Benzene	mg/l	0.553	0.00	.025	88.4	16-158	L403957-01	WG423629
Bromochloromethane	mg/l	0.548	0.00	.025	87.6	36-154	L403957-01	WG423629
Bromodichloromethane	mg/l	0.564	0.00	.025	90.2	45-147	L403957-01	WG423629
Bromoform	mg/l	0.548	0.00	.025	87.7	38-152	L403957-01	WG423629
Bromomethane	mg/l	0.613	0.00	.025	98.1	0-191	L403957-01	WG423629
Carbon disulfide	mg/l	0.541	0.00	.025	86.5	10-166	L403957-01	WG423629
Carbon tetrachloride	mg/l	0.508	0.00	.025	81.2	22-168	L403957-01	WG423629
Chlorobenzene	mg/l	0.556	0.00	.025	88.9	33-148	L403957-01	WG423629
Chlorodibromomethane	mg/l	0.563	0.00	.025	90.1	48-151	L403957-01	WG423629
Chloroethane	mg/l	0.577	0.00	.025	92.3	4-176	L403957-01	WG423629

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Level II

June 24, 2009

L403723

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Chloroform	mg/l	0.526	0.00	.025	84.1	37-147	L403957-01	WG423629
Chloromethane	mg/l	0.582	0.00	.025	93.1	10-174	L403957-01	WG423629
cis-1,2-Dichloroethene	mg/l	0.766	0.180	.025	93.7	29-156	L403957-01	WG423629
cis-1,3-Dichloropropene	mg/l	0.535	0.00	.025	85.5	35-148	L403957-01	WG423629
Dichlorodifluoromethane	mg/l	0.562	0.00	.025	89.9	0-200	L403957-01	WG423629
Ethylbenzene	mg/l	0.569	0.00	.025	91.1	29-150	L403957-01	WG423629
Isopropylbenzene	mg/l	0.580	0.00	.025	92.8	35-147	L403957-01	WG423629
Methyl tert-butyl ether	mg/l	0.560	0.00	.025	89.6	24-167	L403957-01	WG423629
Methylene Chloride	mg/l	0.575	0.00	.025	92.0	23-151	L403957-01	WG423629
Styrene	mg/l	0.562	0.00	.025	89.9	38-149	L403957-01	WG423629
Tetrachloroethene	mg/l	3.09	2.40	.025	110.	13-157	L403957-01	WG423629
Toluene	mg/l	0.536	0.0140	.025	83.6	22-152	L403957-01	WG423629
trans-1,2-Dichloroethene	mg/l	0.568	0.00	.025	90.8	11-160	L403957-01	WG423629
trans-1,3-Dichloropropene	mg/l	0.484	0.00	.025	77.5	33-153	L403957-01	WG423629
Trichloroethene	mg/l	0.841	0.270	.025	91.3	18-163	L403957-01	WG423629
Trichlorofluoromethane	mg/l	0.566	0.00	.025	90.6	10-177	L403957-01	WG423629
Vinyl chloride	mg/l	0.558	0.00	.025	89.2	0-179	L403957-01	WG423629
4-Bromofluorobenzene					94.44	75-128		WG423629
Dibromofluoromethane					100.9	79-125		WG423629
Toluene-d8					99.74	87-114		WG423629
Antimony	mg/kg	22.3	0.00	50	44.6*	75-125	L403723-03	WG423361
Arsenic	mg/kg	48.3	0.550	50	95.5	75-125	L403723-03	WG423361
Beryllium	mg/kg	48.9	0.460	50	96.9	75-125	L403723-03	WG423361
Cadmium	mg/kg	50.2	0.00	50	100.	75-125	L403723-03	WG423361
Chromium	mg/kg	69.4	24.0	50	90.8	75-125	L403723-03	WG423361
Copper	mg/kg	70.7	14.0	50	113.	75-125	L403723-03	WG423361
Lead	mg/kg	52.6	3.60	50	98.0	75-125	L403723-03	WG423361
Nickel	mg/kg	68.7	21.0	50	95.4	75-125	L403723-03	WG423361
Selenium	mg/kg	43.4	0.00	50	86.8	75-125	L403723-03	WG423361
Silver	mg/kg	57.3	0.00	50	115.	75-125	L403723-03	WG423361
Zinc	mg/kg	91.4	38.0	50	107.	75-125	L403723-03	WG423361
Thallium	mg/kg	43.9	0.00	10	87.8	75-125	L403723-03	WG423361
Beryllium	mg/l	-0.00092	0.00	1.13	0.00*	75-125	L403830-04	WG423508
Cadmium	mg/l	0.00191	0.00068	1.13	0.109*	75-125	L403830-04	WG423508
Chromium	mg/l	0.00120	0.00370	1.13	0.00*	75-125	L403830-04	WG423508
Copper	mg/l	-0.0328	0.0165	1.13	0.00*	75-125	L403830-04	WG423508
Nickel	mg/l	0.0564	0.00	1.13	4.99*	75-125	L403830-04	WG423508
Selenium	mg/l	-0.0416	0.00850	1.13	0.00*	75-125	L403830-04	WG423508
Silver	mg/l	-0.0207	0.00	1.13	0.00*	75-125	L403830-04	WG423508
Zinc	mg/l	-0.0124	0.0252	1.13	0.00*	75-125	L403830-04	WG423508
Mercury,Dissolved	mg/l	0.00252	0.00	.003	84.0	70-130	L404736-23	WG423970
Antimony	mg/l	0.0593	0.00	.0567	105.	75-125	L403687-07	WG423479
Arsenic	mg/l	0.0668	0.00380	.0567	111.	75-125	L403687-07	WG423479
Thallium	mg/l	0.0555	0.00	.0567	97.9	75-125	L403687-07	WG423479
Lead	mg/l	1.10	0.0110	1.13	96.4	75-125	L403830-04	WG423508
Beryllium,Dissolved	mg/l	1.11	0.00	1.13	98.2	75-125	L405024-06	WG424397
Cadmium,Dissolved	mg/l	1.10	0.00	1.13	97.3	75-125	L405024-06	WG424397

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June 24, 2009

L403723

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Chromium, Dissolved	mg/l	1.11	0.00	1.13	98.2	75-125	L405024-06	WG424397
Copper, Dissolved	mg/l	1.10	0.00	1.13	97.3	75-125	L405024-06	WG424397
Lead, Dissolved	mg/l	1.10	0.0130	1.13	96.2	75-125	L405024-06	WG424397
Nickel, Dissolved	mg/l	1.11	0.00	1.13	98.2	75-125	L405024-06	WG424397
Selenium, Dissolved	mg/l	1.03	0.00	1.13	91.2	75-125	L405024-06	WG424397
Silver, Dissolved	mg/l	0.0534	0.00	1.13	4.73*	75-125	L405024-06	WG424397
Zinc, Dissolved	mg/l	1.08	0.00	1.13	95.6	75-125	L405024-06	WG424397
Antimony, Dissolved	mg/l	0.0595	0.00	.0567	105.	75-125	L405024-12	WG424462
Arsenic, Dissolved	mg/l	0.368	0.320	.0567	84.7	75-125	L405024-12	WG424462
Thallium, Dissolved	mg/l	0.0546	0.00	.0567	96.3	75-125	L405024-12	WG424462

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1-Methylnaphthalene	ppm	0.0349	0.0551	106.	19-131	44.8*	30	L403683-05	WG422912
2-Chloronaphthalene	ppm	0.0313	0.0209	94.7	38-117	39.8*	26	L403683-05	WG422912
2-Methylnaphthalene	ppm	0.0320	0.0529	97.0	18-125	49.2*	29	L403683-05	WG422912
Acenaphthene	ppm	0.0815	0.484	0*	31-120	142.*	30	L403683-05	WG422912
Acenaphthylene	ppm	0.0309	0.0409	93.5	34-116	28.0	29	L403683-05	WG422912
Anthracene	ppm	0.121	0.866	0*	32-131	151.*	26	L403683-05	WG422912
Benzo(a)anthracene	ppm	0.165	2.18	0*	32-131	172.*	31	L403683-05	WG422912
Benzo(a)pyrene	ppm	0.169	2.06	0*	28-130	170.*	28	L403683-05	WG422912
Benzo(b)fluoranthene	ppm	0.216	3.26	0*	37-130	175.*	41	L403683-05	WG422912
Benzo(g,h,i)perylene	ppm	0.104	1.06	0*	10-134	164.*	26	L403683-05	WG422912
Benzo(k)fluoranthene	ppm	0.158	0.983	0*	31-129	145.*	42	L403683-05	WG422912
Chrysene	ppm	0.179	1.86	0*	25-137	165.*	22	L403683-05	WG422912
Dibenz(a,h)anthracene	ppm	0.0609	0.404	0*	20-134	148.*	25	L403683-05	WG422912
Fluoranthene	ppm	0.612	8.81	0*	27-138	174.*	35	L403683-05	WG422912
Fluorene	ppm	0.0960	0.692	0*	26-136	151.*	30	L403683-05	WG422912
Indeno(1,2,3-cd)pyrene	ppm	0.0942	1.04	0*	16-135	167.*	26	L403683-05	WG422912
Naphthalene	ppm	0.0338	0.0636	103.	22-121	61.1*	30	L403683-05	WG422912
Phenanthrene	ppm	0.590	7.87	0*	27-133	172.*	36	L403683-05	WG422912
Pyrene	ppm	0.387	5.74	0*	22-133	175.*	33	L403683-05	WG422912
2-Fluorobiphenyl				80.00	30-120				WG422912
Nitrobenzene-d5				62.00	18-119				WG422912
p-Terphenyl-d14				101.6	23-143				WG422912

1,1,1-Trichloroethane	mg/kg	0.273	0.263	109.	23-147	3.71	32	L403603-05	WG422986
1,1,2,2-Tetrachloroethane	mg/kg	0.236	0.255	94.5	18-150	7.51	33	L403603-05	WG422986
1,1,2-Trichloroethane	mg/kg	0.234	0.240	93.7	35-140	2.36	29	L403603-05	WG422986
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.255	0.246	102.	10-145	3.83	35	L403603-05	WG422986
1,1-Dichloroethane	mg/kg	0.259	0.251	103.	24-148	2.86	31	L403603-05	WG422986
1,1-Dichloroethene	mg/kg	0.291	0.289	116.	10-149	0.743	34	L403603-05	WG422986
1,2,3-Trichlorobenzene	mg/kg	0.225	0.223	90.2	10-129	1.01	43	L403603-05	WG422986
1,2,4-Trichlorobenzene	mg/kg	0.233	0.234	93.1	10-119	0.375	44	L403603-05	WG422986
1,2-Dibromo-3-Chloropropane	mg/kg	0.256	0.288	102.	19-145	11.9	35	L403603-05	WG422986
1,2-Dibromoethane	mg/kg	0.248	0.259	99.1	24-145	4.50	31	L403603-05	WG422986
1,2-Dichlorobenzene	mg/kg	0.235	0.231	94.0	12-130	1.48	35	L403603-05	WG422986
1,2-Dichloroethane	mg/kg	0.266	0.270	106.	21-155	1.61	29	L403603-05	WG422986
1,2-Dichloropropane	mg/kg	0.249	0.250	99.7	28-144	0.339	30	L403603-05	WG422986
1,3-Dichlorobenzene	mg/kg	0.224	0.232	89.5	10-129	3.81	38	L403603-05	WG422986
1,4-Dichlorobenzene	mg/kg	0.235	0.225	94.0	10-121	4.33	36	L403603-05	WG422986
2-Butanone (MEK)	mg/kg	1.28	1.46	102.	21-143	13.0	37	L403603-05	WG422986
2-Hexanone	mg/kg	1.32	1.56	106.	22-151	16.2	38	L403603-05	WG422986
4-Methyl-2-pentanone (MIBK)	mg/kg	1.42	1.67	114.	31-151	15.7	36	L403603-05	WG422986
Acetone	mg/kg	1.40	1.62	112.	13-158	14.9	34	L403603-05	WG422986

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Quality Assurance Report
Level II

June 24, 2009

L403723

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Benzene	mg/kg	0.269	0.260	108.	16-143	3.57	31	L403603-05	WG422986
Bromochloromethane	mg/kg	0.263	0.257	105.	25-152	2.51	29	L403603-05	WG422986
Bromodichloromethane	mg/kg	0.287	0.286	115.	27-139	0.583	30	L403603-05	WG422986
Bromoform	mg/kg	0.224	0.239	89.5	21-144	6.38	34	L403603-05	WG422986
Bromomethane	mg/kg	0.279	0.266	112.	0-180	4.84	41	L403603-05	WG422986
Carbon disulfide	mg/kg	0.260	0.265	104.	10-156	1.96	38	L403603-05	WG422986
Carbon tetrachloride	mg/kg	0.273	0.267	109.	12-149	2.32	34	L403603-05	WG422986
Chlorobenzene	mg/kg	0.238	0.233	95.2	17-134	2.30	34	L403603-05	WG422986
Chlorodibromomethane	mg/kg	0.254	0.259	102.	28-147	1.94	32	L403603-05	WG422986
Chloroethane	mg/kg	0.258	0.256	103.	0-172	0.653	38	L403603-05	WG422986
Chloroform	mg/kg	0.254	0.248	102.	28-138	2.33	30	L403603-05	WG422986
Chloromethane	mg/kg	0.256	0.250	103.	10-158	2.46	35	L403603-05	WG422986
cis-1,2-Dichloroethene	mg/kg	0.275	0.265	110.	21-147	3.68	31	L403603-05	WG422986
cis-1,3-Dichloropropene	mg/kg	0.283	0.283	113.	17-145	0.067	32	L403603-05	WG422986
Dichlorodifluoromethane	mg/kg	0.271	0.261	109.	0-192	3.80	38	L403603-05	WG422986
Ethylbenzene	mg/kg	0.241	0.240	96.4	12-137	0.396	36	L403603-05	WG422986
Isopropylbenzene	mg/kg	0.246	0.241	98.4	14-134	2.09	37	L403603-05	WG422986
Methyl tert-butyl ether	mg/kg	0.271	0.278	109.	21-157	2.33	31	L403603-05	WG422986
Methylene Chloride	mg/kg	0.255	0.247	102.	12-149	3.10	31	L403603-05	WG422986
Styrene	mg/kg	0.252	0.251	101.	10-140	0.389	35	L403603-05	WG422986
Tetrachloroethene	mg/kg	0.233	0.231	93.3	10-131	1.14	35	L403603-05	WG422986
Toluene	mg/kg	0.254	0.259	102.	12-136	1.99	32	L403603-05	WG422986
trans-1,2-Dichloroethene	mg/kg	0.262	0.250	105.	10-143	4.42	33	L403603-05	WG422986
trans-1,3-Dichloropropene	mg/kg	0.284	0.291	114.	16-147	2.21	32	L403603-05	WG422986
Trichloroethene	mg/kg	0.263	0.250	105.	10-155	5.09	33	L403603-05	WG422986
Trichlorofluoromethane	mg/kg	0.293	0.284	117.	10-154	2.82	32	L403603-05	WG422986
Vinyl chloride	mg/kg	0.261	0.253	105.	10-159	3.40	36	L403603-05	WG422986
4-Bromofluorobenzene				98.66	59-140				WG422986
Dibromofluoromethane				103.6	63-139				WG422986
Toluene-d8				99.22	84-116				WG422986
Mercury	mg/kg	0.255	0.253	102.	70-130	0.787	20	L403700-34	WG422918
Antimony	mg/kg	24.2	26.4	48.4*	75-125	8.70	20	L403700-34	WG423321
Arsenic	mg/kg	51.4	52.8	91.4	75-125	2.69	20	L403700-34	WG423321
Beryllium	mg/kg	48.9	49.8	97.8	75-125	1.82	20	L403700-34	WG423321
Cadmium	mg/kg	45.3	47.3	90.6	75-125	4.32	20	L403700-34	WG423321
Chromium	mg/kg	69.6	65.6	105.	75-125	5.92	20	L403700-34	WG423321
Copper	mg/kg	66.0	67.5	100.	75-125	2.25	20	L403700-34	WG423321
Lead	mg/kg	51.3	52.4	91.0	75-125	2.12	20	L403700-34	WG423321
Nickel	mg/kg	57.4	56.9	99.0	75-125	0.875	20	L403700-34	WG423321
Selenium	mg/kg	42.7	43.5	85.4	75-125	1.86	20	L403700-34	WG423321
Silver	mg/kg	46.2	48.0	92.4	75-125	3.82	20	L403700-34	WG423321
Zinc	mg/kg	60.0	60.5	85.8	75-125	0.830	20	L403700-34	WG423321
Thallium	mg/kg	39.2	43.5	78.4	75-125	10.4	20	L403700-34	WG423321
Mercury	mg/l	0.0026	0.0025	87.3	70-130	1.15	20	L404249-33	WG423435
PCB 1260	mg/kg	0.138	0.148	82.7	10-197	7.01	39	L403960-03	WG423525
Decachlorobiphenyl				73.26	18.9-115.8				WG423525
Tetrachloro-m-xylene				86.00	31.8-115.7				WG423525
Diesel (C7-C26)	mg/kg	27.2	23.7	90.6	50-150	13.7	20	L404242-05	WG423285
Motor Oil (C16-C40)	mg/kg	34.7	30.2	103.	50-150	13.9	25	L404242-05	WG423285

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
o-Terphenyl				90.92	50-150				
1,1,1-Trichloroethane	mg/l	0.535	0.558	85.7	31-161	4.19	23	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.583	0.510	93.3	49-149	13.4	22	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.575	0.511	91.9	46-145	11.8	20	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.574	0.601	40.7	14-168	4.46	24	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.546	0.563	87.3	30-159	3.10	21	L403957-01	WG423629
1,1-Dichloroethene	mg/l	0.526	0.567	80.8	10-162	7.63	23	L403957-01	WG423629
1,2,3-Trichlorobenzene	mg/l	0.631	0.529	101.	32-143	17.6	33	L403957-01	WG423629
1,2,4-Trichlorobenzene	mg/l	0.615	0.547	98.4	27-142	11.7	30	L403957-01	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.511	0.489	81.7	37-148	4.23	27	L403957-01	WG423629
1,2-Dibromoethane	mg/l	0.568	0.491	90.8	41-149	14.4	21	L403957-01	WG423629
1,2-Dichlorobenzene	mg/l	0.579	0.580	92.7	40-139	0.024	23	L403957-01	WG423629
1,2-Dichloroethane	mg/l	0.584	0.523	93.4	29-167	11.1	21	L403957-01	WG423629
1,2-Dichloropropane	mg/l	0.551	0.539	88.1	39-148	2.03	20	L403957-01	WG423629
1,3-Dichlorobenzene	mg/l	0.576	0.574	92.1	32-148	0.223	24	L403957-01	WG423629
1,4-Dichlorobenzene	mg/l	0.561	0.568	89.7	32-136	1.23	23	L403957-01	WG423629
2-Butanone (MEK)	mg/l	2.80	2.47	89.4	32-151	12.4	26	L403957-01	WG423629
2-Hexanone	mg/l	3.05	2.53	97.5	41-155	18.6	28	L403957-01	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	3.05	2.62	97.7	40-160	15.0	28	L403957-01	WG423629
Acetone	mg/l	2.49	2.84	79.6	25-157	13.3	26	L403957-01	WG423629
Benzene	mg/l	0.544	0.553	87.1	16-158	1.50	21	L403957-01	WG423629
Bromochloromethane	mg/l	0.580	0.548	92.8	36-154	5.74	21	L403957-01	WG423629
Bromodichloromethane	mg/l	0.578	0.564	92.5	45-147	2.49	20	L403957-01	WG423629
Bromoform	mg/l	0.640	0.548	102.	38-152	15.4	20	L403957-01	WG423629
Bromomethane	mg/l	0.578	0.613	92.5	0-191	5.85	35	L403957-01	WG423629
Carbon disulfide	mg/l	0.475	0.541	75.9	10-166	13.0	25	L403957-01	WG423629
Carbon tetrachloride	mg/l	0.484	0.508	77.4	22-168	4.83	24	L403957-01	WG423629
Chlorobenzene	mg/l	0.544	0.556	87.0	33-148	2.10	22	L403957-01	WG423629
Chlorodibromomethane	mg/l	0.609	0.563	97.4	48-151	7.78	21	L403957-01	WG423629
Chloroethane	mg/l	0.543	0.577	86.9	4-176	5.98	27	L403957-01	WG423629
Chloroform	mg/l	0.514	0.526	82.2	37-147	2.32	21	L403957-01	WG423629
Chloromethane	mg/l	0.542	0.582	86.7	10-174	7.14	28	L403957-01	WG423629
cis-1,2-Dichloroethene	mg/l	0.742	0.766	89.9	29-156	3.13	22	L403957-01	WG423629
cis-1,3-Dichloropropene	mg/l	0.583	0.535	93.3	35-148	8.66	21	L403957-01	WG423629
Dichlorodifluoromethane	mg/l	0.528	0.562	84.5	0-200	6.18	26	L403957-01	WG423629
Ethylbenzene	mg/l	0.535	0.569	85.5	29-150	6.25	24	L403957-01	WG423629
Isopropylbenzene	mg/l	0.552	0.580	88.3	35-147	4.97	25	L403957-01	WG423629
Methyl tert-butyl ether	mg/l	0.604	0.560	96.7	24-167	7.60	22	L403957-01	WG423629
Methylene Chloride	mg/l	0.570	0.575	91.1	23-151	0.930	21	L403957-01	WG423629
Styrene	mg/l	0.572	0.562	91.5	38-149	1.74	23	L403957-01	WG423629
Tetrachloroethene	mg/l	2.85	3.09	72.3	13-157	8.02	24	L403957-01	WG423629
Toluene	mg/l	0.532	0.536	82.8	22-152	0.894	22	L403957-01	WG423629
trans-1,2-Dichloroethene	mg/l	0.514	0.568	82.2	11-160	10.0	23	L403957-01	WG423629
trans-1,3-Dichloropropene	mg/l	0.570	0.484	91.1	33-153	16.2	22	L403957-01	WG423629
Trichloroethene	mg/l	0.799	0.841	84.6	18-163	5.11	21	L403957-01	WG423629
Trichlorofluoromethane	mg/l	0.539	0.566	86.3	10-177	4.83	24	L403957-01	WG423629
Vinyl chloride	mg/l	0.516	0.558	82.6	0-179	7.71	26	L403957-01	WG423629
4-Bromofluorobenzene				99.84	75-128				WG423629
Dibromofluoromethane				103.3	79-125				WG423629
Toluene-d8				101.7	87-114				WG423629
Antimony	mg/kg	22.5	22.3	45*	75-125	0.893	20	L403723-03	WG423361
Arsenic	mg/kg	48.4	48.3	95.7	75-125	0.207	20	L403723-03	WG423361
Beryllium	mg/kg	49.5	48.9	98.1	75-125	1.22	20	L403723-03	WG423361
Cadmium	mg/kg	47.1	50.2	94.2	75-125	6.37	20	L403723-03	WG423361
Chromium	mg/kg	73.8	69.4	99.6	75-125	6.15	20	L403723-03	WG423361
Copper	mg/kg	67.2	70.7	106.	75-125	5.08	20	L403723-03	WG423361
Lead	mg/kg	53.4	52.6	99.6	75-125	1.51	20	L403723-03	WG423361

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Nickel	mg/kg	71.6	68.7	101.	75-125	4.13	20	L403723-03	WG423361	
Selenium	mg/kg	44.5	43.4	89.0	75-125	2.50	20	L403723-03	WG423361	
Silver	mg/kg	54.6	57.3	109.	75-125	4.83	20	L403723-03	WG423361	
Zinc	mg/kg	85.0	91.4	94.0	75-125	7.26	20	L403723-03	WG423361	
Thallium	mg/kg	44.3	43.9	88.6	75-125	0.907	20	L403723-03	WG423361	
Beryllium	mg/l	1.10	-0.0009	97.3	75-125	200.*	20	L403830-04	WG423508	
Cadmium	mg/l	1.10	0.0019	97.3	75-125	199.*	20	L403830-04	WG423508	
Chromium	mg/l	1.06	0.0012	93.5	75-125	200.*	20	L403830-04	WG423508	
Copper	mg/l	1.15	-0.0328	100.	75-125	212.*	20	L403830-04	WG423508	
Nickel	mg/l	1.10	0.0564	97.3	75-125	180.*	20	L403830-04	WG423508	
Selenium	mg/l	1.14	-0.0416	100.	75-125	215.*	20	L403830-04	WG423508	
Silver	mg/l	0.0819	-0.0207	7.248*	75-125	335.*	20	L403830-04	WG423508	
Zinc	mg/l	1.12	-0.0124	96.9	75-125	204.*	20	L403830-04	WG423508	
Mercury, Dissolved	mg/l	0.0025	0.0025	84.3	70-130	0.396	20	L404736-23	WG423970	
Antimony	mg/l	0.0600	0.0593	106.	75-125	1.17	20	L403687-07	WG423479	
Arsenic	mg/l	0.0673	0.0668	112.	75-125	0.746	20	L403687-07	WG423479	
Thallium	mg/l	0.0561	0.0555	98.9	75-125	1.08	20	L403687-07	WG423479	
Lead	mg/l	1.08	1.10	94.6	75-125	1.83	20	L403830-04	WG423508	
Beryllium, Dissolved	mg/l	1.10	1.11	97.3	75-125	0.905	20	L405024-06	WG424397	
Cadmium, Dissolved	mg/l	1.10	1.10	97.3	75-125	0.00	20	L405024-06	WG424397	
Chromium, Dissolved	mg/l	1.12	1.11	99.1	75-125	0.897	20	L405024-06	WG424397	
Copper, Dissolved	mg/l	1.11	1.10	98.2	75-125	0.905	20	L405024-06	WG424397	
Lead, Dissolved	mg/l	1.11	1.10	97.1	75-125	0.905	20	L405024-06	WG424397	
Nickel, Dissolved	mg/l	1.11	1.11	98.2	75-125	0.00	20	L405024-06	WG424397	
Selenium, Dissolved	mg/l	1.04	1.03	92.0	75-125	0.966	20	L405024-06	WG424397	
Silver, Dissolved	mg/l	0.0535	0.0534	4.735*	75-125	0.187	20	L405024-06	WG424397	
Zinc, Dissolved	mg/l	1.08	1.08	95.6	75-125	0.00	20	L405024-06	WG424397	
Antimony, Dissolved	mg/l	0.0602	0.0595	106.	75-125	1.17	20	L405024-12	WG424462	
Arsenic, Dissolved	mg/l	0.366	0.368	81.1	75-125	0.545	20	L405024-12	WG424462	
Thallium, Dissolved	mg/l	0.0544	0.0546	95.9	75-125	0.367	20	L405024-12	WG424462	

Batch number /Run number / Sample number cross reference

WG422912: R751646: L403723-01 03
 WG422986: R752526: L403723-01 03
 WG422918: R752948: L403723-01 03
 WG423321: R753947: L403723-01
 WG422935: R754327: L403723-02 04
 WG423285: R754330: L403723-01 03
 WG423158: R755497: L403723-01 03
 WG423185: R755686: L403723-05 06
 WG423435: R756866: L403723-05 06
 WG423525: R757126: L403723-01 03
 WG423629: R759806: L403723-05 06
 WG423361: R763006: L403723-03
 WG423508: R766126: L403723-05 06

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WG423970: R769186: L403723-05 06
WG423479: R769466: L403723-05 06
WG424397: R770647: L403723-05 06
WG424462: R775786: L403723-05 06
WG427442: R788346: L403723-01 03
WG427744: R789452: L403723-05 06

* * Calculations are performed prior to rounding of reported values .
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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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SLR International Corp. - West Linn, OR
1800 Blankenship Road, Suite 440

West Linn, OR 97068

Report Summary

Monday June 29, 2009

Report Number: L403980

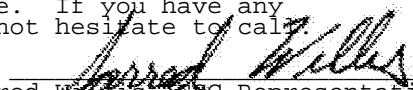
Samples Received: 05/22/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-6FT
Collected By : CK
Collection Date : 05/21/09 08:15

ESC Sample # : L403980-01

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	83.4			%		2540G	05/27/09	1
Mercury	0.036	0.0025	0.024	mg/kg		7471	05/26/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	05/31/09	1
Arsenic	1.4	0.27	1.2	mg/kg		6010B	05/31/09	1
Beryllium	0.78	0.038	0.12	mg/kg		6010B	05/31/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	05/31/09	1
Chromium	36.	0.098	0.60	mg/kg		6010B	05/31/09	1
Copper	25.	0.30	1.2	mg/kg		6010B	05/31/09	1
Lead	13.	0.096	0.30	mg/kg		6010B	05/31/09	1
Nickel	25.	0.49	1.2	mg/kg		6010B	05/31/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	05/31/09	1
Silver	U	0.16	0.60	mg/kg		6010B	05/31/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	05/31/09	5
Zinc	40.	0.44	1.8	mg/kg		6010B	05/31/09	1
Volatiles Organics								
Acetone	0.040	0.017	0.060	mg/kg	J	8260B	05/28/09	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	05/28/09	1
Bromochloromethane	U	0.00045	0.0012	mg/kg		8260B	05/28/09	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	05/28/09	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	05/28/09	1
Bromomethane	U	0.0013	0.0060	mg/kg		8260B	05/28/09	1
2-Butanone (MEK)	0.0050	0.0027	0.012	mg/kg	J	8260B	05/28/09	1
Carbon disulfide	0.0013	0.00033	0.0012	mg/kg		8260B	05/28/09	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	05/28/09	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/28/09	1
Chloroethane	U	0.00059	0.0060	mg/kg		8260B	05/28/09	1
Chloroform	U	0.00041	0.0060	mg/kg		8260B	05/28/09	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	05/28/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0060	mg/kg		8260B	05/28/09	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	05/28/09	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	05/28/09	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	05/28/09	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	05/28/09	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	05/28/09	1
Dichlorodifluoromethane	U	0.00032	0.0060	mg/kg		8260B	05/28/09	1
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	05/28/09	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	05/28/09	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	05/28/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	05/28/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	05/28/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-6FT
Collected By : CK
Collection Date : 05/21/09 08:15

ESC Sample # : L403980-01

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	05/28/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	05/28/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	05/28/09	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	05/28/09	1
2-Hexanone	U	0.00036	0.0012	mg/kg		8260B	05/28/09	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	05/28/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	05/28/09	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	05/28/09	1
Methylene Chloride	U	0.00060	0.0060	mg/kg		8260B	05/28/09	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	05/28/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	05/28/09	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	05/28/09	1
Toluene	U	0.0012	0.0060	mg/kg		8260B	05/28/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	05/28/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	05/28/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/28/09	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	05/28/09	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	05/28/09	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	05/28/09	1
Trichlorofluoromethane	U	0.00027	0.0060	mg/kg		8260B	05/28/09	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	05/28/09	1
Xylenes, Total	U	0.00046	0.0036	mg/kg		8260B	05/28/09	1
Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.12	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.024	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	97.2			% Rec.		8260B	05/28/09	1
Dibromofluoromethane	98.5			% Rec.		8260B	05/28/09	1
4-Bromofluorobenzene	81.4			% Rec.		8260B	05/28/09	1
Diesel Range Organics (DRO)	47.	1.3	4.8	mg/kg		NWTPHDX	06/05/09	1
Residual Range Organics (RRO)	490		10.	mg/kg		NWTPHDX	06/05/09	20
Surrogate Recovery								
o-Terphenyl	0.00			% Rec.	J7	NWTPHDX	06/05/09	20
Gasoline Range (C7-C10)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	18.	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.8	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	530	66.	240	mg/kg		NWTPH-HC	05/28/09	20

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403980-01

Sample ID : PB-6A-6FT

Site ID :

Collected By : CK
Collection Date : 05/21/09 08:15

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Surrogate recovery(%) o-Terphenyl	56.6			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0091	0.0064	0.036	mg/kg	J	8270C-SI	05/28/09	5
Acenaphthene	U	0.0064	0.036	mg/kg		8270C-SI	05/28/09	5
Acenaphthylene	U	0.0057	0.036	mg/kg		8270C-SI	05/28/09	5
Benzo(a)anthracene	0.049	0.019	0.14	mg/kg	J	8270C-SI	05/30/09	20
Benzo(a)pyrene	0.060	0.0042	0.036	mg/kg		8270C-SI	05/28/09	5
Benzo(b)fluoranthene	0.035	0.0072	0.036	mg/kg	J	8270C-SI	05/28/09	5
Benzo(g,h,i)perylene	0.038	0.0049	0.036	mg/kg		8270C-SI	05/28/09	5
Benzo(k)fluoranthene	0.019	0.0058	0.036	mg/kg	J	8270C-SI	05/28/09	5
Chrysene	0.082	0.017	0.14	mg/kg	J	8270C-SI	05/30/09	20
Dibenz(a,h)anthracene	0.013	0.0044	0.036	mg/kg	J	8270C-SI	05/28/09	5
Fluoranthene	0.018	0.0041	0.036	mg/kg	J	8270C-SI	05/28/09	5
Fluorene	0.020	0.0051	0.036	mg/kg	J	8270C-SI	05/28/09	5
Indeno(1,2,3-cd)pyrene	0.010	0.0044	0.036	mg/kg	J	8270C-SI	05/28/09	5
Naphthalene	0.029	0.0070	0.036	mg/kg	J	8270C-SI	05/28/09	5
Phenanthrene	0.047	0.0049	0.036	mg/kg		8270C-SI	05/28/09	5
Pyrene	0.079	0.019	0.14	mg/kg	J	8270C-SI	05/30/09	20
1-Methylnaphthalene	0.061	0.0074	0.036	mg/kg		8270C-SI	05/28/09	5
2-Methylnaphthalene	0.074	0.0099	0.036	mg/kg		8270C-SI	05/28/09	5
2-Chloronaphthalene	U	0.0052	0.036	mg/kg		8270C-SI	05/28/09	5
Surrogate Recovery								
Nitrobenzene-d5	62.5			% Rec.		8270C-SI	05/28/09	5
2-Fluorobiphenyl	51.9			% Rec.		8270C-SI	05/28/09	5
p-Terphenyl-d14	0.00			% Rec.	J7	8270C-SI	05/30/09	20
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.020	mg/kg		8082	05/27/09	1
PCB 1221	U	0.0049	0.020	mg/kg		8082	05/27/09	1
PCB 1232	U	0.0072	0.020	mg/kg		8082	05/27/09	1
PCB 1242	U	0.0049	0.020	mg/kg		8082	05/27/09	1
PCB 1248	U	0.0027	0.020	mg/kg		8082	05/27/09	1
PCB 1254	U	0.0050	0.020	mg/kg		8082	05/27/09	1
PCB 1260	U	0.0028	0.020	mg/kg		8082	05/27/09	1
PCBs Surrogates								
Decachlorobiphenyl	57.5			% Rec.		8082	05/27/09	1
Tetrachloro-m-xylene	72.9			% Rec.		8082	05/27/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-02

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	93.1			% Rec.		NWTPH-H	05/27/09	1

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Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-03

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	1.4	0.29	1.0	ug/l		6020	06/14/09	1
Antimony, Dissolved	0.52	0.29	1.0	ug/l	J	6020	06/16/09	1
Arsenic	12.	0.22	1.0	ug/l		6020	06/14/09	1
Arsenic, Dissolved	2.2	0.22	1.0	ug/l		6020	06/16/09	1
Thallium	0.61	0.22	1.0	ug/l	J	6020	06/14/09	1
Thallium, Dissolved	U	0.22	1.0	ug/l		6020	06/16/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/12/09	1
Mercury, Dissolved	U	0.044	0.20	ug/l		7470A	06/14/09	1
Beryllium	U	0.75	2.0	ug/l		6010B	06/15/09	1
Beryllium, Dissolved	0.90	0.75	2.0	ug/l	J	6010B	06/15/09	1
Cadmium	U	0.74	5.0	ug/l		6010B	06/15/09	1
Cadmium, Dissolved	U	0.74	5.0	ug/l		6010B	06/15/09	1
Chromium	24.	2.0	10.	ug/l		6010B	06/15/09	1
Chromium, Dissolved	U	2.0	10.	ug/l		6010B	06/15/09	1
Copper	31.	6.0	20.	ug/l		6010B	06/15/09	1
Copper, Dissolved	U	6.0	20.	ug/l		6010B	06/15/09	1
Lead	12.	1.9	5.0	ug/l		6010B	06/15/09	1
Lead, Dissolved	U	1.9	5.0	ug/l		6010B	06/15/09	1
Nickel	35.	9.8	20.	ug/l		6010B	06/15/09	1
Nickel, Dissolved	U	9.8	20.	ug/l		6010B	06/15/09	1
Selenium	U	6.5	20.	ug/l		6010B	06/15/09	1
Selenium, Dissolved	U	6.5	20.	ug/l		6010B	06/15/09	1
Silver	U	3.2	10.	ug/l		6010B	06/15/09	1
Silver, Dissolved	5.1	3.2	10.	ug/l	J	6010B	06/15/09	1
Zinc	42.	8.8	30.	ug/l		6010B	06/15/09	1
Zinc, Dissolved	U	8.8	30.	ug/l		6010B	06/15/09	1
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-03

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	0.86	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8		97.8		% Rec.		8260B	05/29/09	1
Dibromofluoromethane		99.0		% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene		100.		% Rec.		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-6A-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-03

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.012	0.050	ug/l		8270C-S	05/26/09	1
Acenaphthene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Acenaphthylene	U	0.017	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/26/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Chrysene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Fluoranthene	0.027	0.020	0.050	ug/l	J	8270C-S	05/26/09	1
Fluorene	0.013	0.012	0.050	ug/l	J	8270C-S	05/26/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l		8270C-S	05/26/09	1
Naphthalene	0.074	0.023	0.25	ug/l	J	8270C-S	05/26/09	1
Phenanthrene	0.038	0.018	0.050	ug/l	J	8270C-S	05/26/09	1
Pyrene	U	0.022	0.050	ug/l		8270C-S	05/26/09	1
1-Methylnaphthalene	0.019	0.014	0.25	ug/l	J	8270C-S	05/26/09	1
2-Methylnaphthalene	0.026	0.014	0.25	ug/l	J	8270C-S	05/26/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
Surrogate Recovery								
Nitrobenzene-d5	48.7			% Rec.		8270C-S	05/26/09	1
2-Fluorobiphenyl	56.7			% Rec.		8270C-S	05/26/09	1
p-Terphenyl-d14	66.4			% Rec.		8270C-S	05/26/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.077	0.50	ug/l		8082	05/29/09	1
PCB 1221	U	0.16	0.50	ug/l		8082	05/29/09	1
PCB 1232	U	0.18	0.50	ug/l		8082	05/29/09	1
PCB 1242	U	0.099	0.50	ug/l		8082	05/29/09	1
PCB 1248	U	0.039	0.50	ug/l		8082	05/29/09	1
PCB 1254	U	0.12	0.50	ug/l		8082	05/29/09	1
PCB 1260	U	0.16	0.50	ug/l		8082	05/29/09	1
PCBs Surrogates								
Decachlorobiphenyl	53.6			% Rec.		8082	05/29/09	1
Tetrachloro-m-xylene	62.5			% Rec.		8082	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403980-04

Sample ID : PB-3C-7FT

Site ID :

Collected By : CK
Collection Date : 05/21/09 08:15

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	94.0			%		2540G	05/27/09	1
Mercury	0.019	0.0025	0.021	mg/kg	J	7471	05/25/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	05/31/09	1
Arsenic	U	0.27	1.1	mg/kg		6010B	05/31/09	1
Beryllium	0.68	0.038	0.11	mg/kg		6010B	05/31/09	1
Cadmium	U	0.037	0.26	mg/kg		6010B	05/31/09	1
Chromium	29.	0.098	0.53	mg/kg		6010B	05/31/09	1
Copper	18.	0.30	1.1	mg/kg		6010B	05/31/09	1
Lead	5.6	0.096	0.26	mg/kg		6010B	05/31/09	1
Nickel	38.	0.49	1.1	mg/kg		6010B	05/31/09	1
Selenium	U	1.6	5.3	mg/kg	O	6010B	05/31/09	5
Silver	U	0.16	0.53	mg/kg		6010B	05/31/09	1
Thallium	U	1.5	5.3	mg/kg	O	6010B	05/31/09	5
Zinc	38.	0.44	1.6	mg/kg		6010B	05/31/09	1
Diesel Range Organics (DRO)	42.	1.3	4.2	mg/kg		NWTPHDX	06/05/09	1
Residual Range Organics (RRO)	550	66.	210	mg/kg		NWTPHDX	06/05/09	20
Surrogate Recovery								
o-Terphenyl	0.00			% Rec.	J7	NWTPHDX	06/05/09	20
Gasoline Range (C7-C10)	U	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	26.	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.2	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	450	66.	210	mg/kg		NWTPH-HC	05/28/09	20
Surrogate recovery(%)								
o-Terphenyl	78.7			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0064	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Acenaphthene	U	0.0064	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Acenaphthylene	U	0.0057	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Benzo(a)anthracene	0.0096	0.0048	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Benzo(a)pyrene	0.0083	0.0042	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Benzo(b)fluoranthene	0.013	0.0072	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Benzo(g,h,i)perylene	0.0065	0.0049	0.032	mg/kg	JJ6J	8270C-SI	05/28/09	5
Benzo(k)fluoranthene	0.0083	0.0058	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Chrysene	0.0063	0.0044	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Dibenz(a,h)anthracene	U	0.0044	0.032	mg/kg	J6	8270C-SI	05/28/09	5

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3C-7FT
Collected By : CK
Collection Date : 05/21/09 08:15

ESC Sample # : L403980-04

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Fluoranthene	0.013	0.0041	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Fluorene	U	0.0051	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Indeno(1,2,3-cd)pyrene	U	0.0044	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Naphthalene	0.013	0.0070	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Phenanthrene	0.012	0.0049	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
Pyrene	0.017	0.0048	0.032	mg/kg	JJ6	8270C-SI	05/28/09	5
1-Methylnaphthalene	0.032	0.0074	0.032	mg/kg		8270C-SI	05/28/09	5
2-Methylnaphthalene	0.021	0.0099	0.032	mg/kg	J	8270C-SI	05/28/09	5
2-Chloronaphthalene	U	0.0052	0.032	mg/kg	J6	8270C-SI	05/28/09	5
Surrogate Recovery								
Nitrobenzene-d5	63.8			% Rec.		8270C-SI	05/28/09	5
2-Fluorobiphenyl	73.7			% Rec.		8270C-SI	05/28/09	5
p-Terphenyl-d14	83.2			% Rec.		8270C-SI	05/28/09	5
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.018	mg/kg		8082	05/26/09	1
PCB 1221	U	0.0049	0.018	mg/kg		8082	05/26/09	1
PCB 1232	U	0.0072	0.018	mg/kg		8082	05/26/09	1
PCB 1242	U	0.0049	0.018	mg/kg		8082	05/26/09	1
PCB 1248	U	0.0027	0.018	mg/kg		8082	05/26/09	1
PCB 1254	U	0.0050	0.018	mg/kg		8082	05/26/09	1
PCB 1260	U	0.0028	0.018	mg/kg		8082	05/26/09	1
PCBs Surrogates								
Decachlorobiphenyl	53.0			% Rec.		8082	05/26/09	1
Tetrachloro-m-xylene	98.1			% Rec.		8082	05/26/09	1

Results listed are dry weight basis.

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3C-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-05

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	113.			% Rec.		NWTPH-H	05/27/09	1

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MDL = Minimum Detection Limit = LOD = SQL(TRRP)

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3C-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-06

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	0.71	0.29	1.0	ug/l	J	6020	06/04/09	1
Antimony,Dissolved	U	0.29	1.0	ug/l		6020	06/03/09	1
Arsenic	1.6	0.22	1.0	ug/l		6020	06/04/09	1
Arsenic,Dissolved	0.69	0.22	1.0	ug/l	J	6020	06/03/09	1
Thallium	U	0.22	1.0	ug/l		6020	06/04/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/03/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/01/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	05/27/09	1
Beryllium	U	0.75	2.0	ug/l		6010B	06/01/09	1
Beryllium,Dissolved	U	0.75	2.0	ug/l		6010B	05/29/09	1
Cadmium	1.4	0.74	5.0	ug/l	J	6010B	06/01/09	1
Cadmium,Dissolved	0.93	0.74	5.0	ug/l	J	6010B	05/29/09	1
Chromium	U	2.0	10.	ug/l		6010B	06/01/09	1
Chromium,Dissolved	U	2.0	10.	ug/l		6010B	05/29/09	1
Copper	U	6.0	20.	ug/l		6010B	06/01/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	05/29/09	1
Lead	7.2	1.9	5.0	ug/l		6010B	06/01/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	05/29/09	1
Nickel	30.	9.8	20.	ug/l		6010B	06/01/09	1
Nickel,Dissolved	13.	9.8	20.	ug/l	J	6010B	05/29/09	1
Selenium	U	6.5	20.	ug/l		6010B	06/01/09	1
Selenium,Dissolved	U	6.5	20.	ug/l		6010B	05/29/09	1
Silver	U	3.2	10.	ug/l		6010B	06/01/09	1
Silver,Dissolved	U	3.2	10.	ug/l		6010B	05/29/09	1
Zinc	U	8.8	30.	ug/l		6010B	06/01/09	1
Zinc,Dissolved	19.	8.8	30.	ug/l	J	6010B	05/29/09	1
Volatile Organics								
Acetone	12.	8.9	25.	ug/l	J	8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3C-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-06

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8	97.8			% Rec.		8260B	05/29/09	1
Dibromofluoromethane	102.			% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene	98.9			% Rec.		8260B	05/29/09	1

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REPORT OF ANALYSIS

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West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3C-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-06

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.012	0.050	ug/l		8270C-S	05/26/09	1
Acenaphthene	0.043	0.013	0.050	ug/l	J	8270C-S	05/26/09	1
Acenaphthylene	U	0.017	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/26/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/26/09	1
Chrysene	U	0.018	0.050	ug/l		8270C-S	05/26/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Fluoranthene	0.021	0.020	0.050	ug/l	J	8270C-S	05/26/09	1
Fluorene	0.017	0.012	0.050	ug/l	J	8270C-S	05/26/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l		8270C-S	05/26/09	1
Naphthalene	U	0.023	0.25	ug/l		8270C-S	05/26/09	1
Phenanthrene	0.021	0.018	0.050	ug/l	J	8270C-S	05/26/09	1
Pyrene	U	0.022	0.050	ug/l		8270C-S	05/26/09	1
1-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
Surrogate Recovery								
Nitrobenzene-d5	75.0			% Rec.		8270C-S	05/26/09	1
2-Fluorobiphenyl	80.5			% Rec.		8270C-S	05/26/09	1
p-Terphenyl-d14	86.2			% Rec.		8270C-S	05/26/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-5.5FT
Collected By : CK
Collection Date : 05/21/09 08:15

ESC Sample # : L403980-07

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	91.7			%		2540G	05/27/09	1
Mercury	0.022	0.0025	0.022	mg/kg		7471	05/25/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	05/31/09	1
Arsenic	U	0.27	1.1	mg/kg		6010B	05/31/09	1
Beryllium	0.87	0.038	0.11	mg/kg		6010B	05/31/09	1
Cadmium	U	0.037	0.27	mg/kg		6010B	05/31/09	1
Chromium	32.	0.098	0.54	mg/kg		6010B	05/31/09	1
Copper	26.	0.30	1.1	mg/kg		6010B	05/31/09	1
Lead	3.8	0.096	0.27	mg/kg		6010B	05/31/09	1
Nickel	42.	0.49	1.1	mg/kg		6010B	05/31/09	1
Selenium	U	0.65	2.2	mg/kg	O	6010B	05/31/09	2
Silver	U	0.16	0.54	mg/kg		6010B	05/31/09	1
Thallium	U	3.0	11.	mg/kg	O	6010B	05/31/09	10
Zinc	41.	0.44	1.6	mg/kg		6010B	05/31/09	1
Diesel Range Organics (DRO)	1.7	1.3	4.4	mg/kg	J	NWTPHDX	06/05/09	1
Residual Range Organics (RRO)	16.	3.3	11.	mg/kg		NWTPHDX	06/05/09	1
Surrogate Recovery								
o-Terphenyl	78.1			% Rec.		NWTPHDX	06/05/09	1
Gasoline Range (C7-C10)	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.4	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	17.	3.3	11.	mg/kg		NWTPH-HC	05/28/09	1
Surrogate recovery(%)								
o-Terphenyl	93.0			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0013	0.0065	mg/kg		8270C-SI	05/28/09	1
Acenaphthene	U	0.0013	0.0065	mg/kg		8270C-SI	05/28/09	1
Acenaphthylene	U	0.0011	0.0065	mg/kg		8270C-SI	05/28/09	1
Benzo(a)anthracene	U	0.00096	0.0065	mg/kg		8270C-SI	05/28/09	1
Benzo(a)pyrene	0.0014	0.00083	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Benzo(b)fluoranthene	0.0018	0.0014	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Benzo(g,h,i)perylene	0.0015	0.00098	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Benzo(k)fluoranthene	U	0.0012	0.0065	mg/kg		8270C-SI	05/28/09	1
Chrysene	0.0013	0.00087	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0065	mg/kg		8270C-SI	05/28/09	1

Results listed are dry weight basis.

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West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-5.5FT
Collected By : CK
Collection Date : 05/21/09 08:15

ESC Sample # : L403980-07

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Fluoranthene	0.0028	0.00081	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Fluorene	U	0.0010	0.0065	mg/kg		8270C-SI	05/28/09	1
Indeno(1,2,3-cd)pyrene	0.0010	0.00088	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Naphthalene	0.0044	0.0014	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Phenanthrene	0.0027	0.00098	0.0065	mg/kg	J	8270C-SI	05/28/09	1
Pyrene	0.0022	0.00096	0.0065	mg/kg	J	8270C-SI	05/28/09	1
1-Methylnaphthalene	U	0.0015	0.0065	mg/kg		8270C-SI	05/28/09	1
2-Methylnaphthalene	U	0.0020	0.0065	mg/kg		8270C-SI	05/28/09	1
2-Chloronaphthalene	U	0.0010	0.0065	mg/kg		8270C-SI	05/28/09	1
Surrogate Recovery								
Nitrobenzene-d5	65.7			% Rec.		8270C-SI	05/28/09	1
2-Fluorobiphenyl	78.5			% Rec.		8270C-SI	05/28/09	1
p-Terphenyl-d14	89.1			% Rec.		8270C-SI	05/28/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.018	mg/kg		8082	05/26/09	1
PCB 1221	U	0.0049	0.018	mg/kg		8082	05/26/09	1
PCB 1232	U	0.0072	0.018	mg/kg		8082	05/26/09	1
PCB 1242	U	0.0049	0.018	mg/kg		8082	05/26/09	1
PCB 1248	U	0.0027	0.018	mg/kg		8082	05/26/09	1
PCB 1254	U	0.0050	0.018	mg/kg		8082	05/26/09	1
PCB 1260	U	0.0028	0.018	mg/kg		8082	05/26/09	1
PCBs Surrogates								
Decachlorobiphenyl	61.8			% Rec.		8082	05/26/09	1
Tetrachloro-m-xylene	103.			% Rec.		8082	05/26/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-08

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	64.	33.	100	ug/l	J	NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	71.4			% Rec.		NWTPH-H	05/27/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-09

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	1.9	0.29	1.0	ug/l		6020	06/04/09	1
Antimony, Dissolved	0.41	0.29	1.0	ug/l	J	6020	06/03/09	1
Arsenic	53.	0.22	1.0	ug/l		6020	06/04/09	1
Arsenic, Dissolved	2.5	0.22	1.0	ug/l		6020	06/03/09	1
Thallium	U	0.22	1.0	ug/l		6020	06/04/09	1
Thallium, Dissolved	U	0.22	1.0	ug/l		6020	06/03/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/01/09	1
Mercury, Dissolved	U	0.044	0.20	ug/l		7470A	05/27/09	1
Beryllium	1.1	0.75	2.0	ug/l	J	6010B	06/02/09	1
Beryllium, Dissolved	U	0.75	2.0	ug/l		6010B	05/29/09	1
Cadmium	2.9	0.74	5.0	ug/l	J	6010B	06/02/09	1
Cadmium, Dissolved	U	0.74	5.0	ug/l		6010B	05/29/09	1
Chromium	43.	2.0	10.	ug/l		6010B	06/02/09	1
Chromium, Dissolved	6.8	2.0	10.	ug/l	J	6010B	05/29/09	1
Copper	77.	6.0	20.	ug/l		6010B	06/02/09	1
Copper, Dissolved	28.	6.0	20.	ug/l		6010B	05/29/09	1
Lead	25.	1.9	5.0	ug/l		6010B	06/02/09	1
Lead, Dissolved	U	1.9	5.0	ug/l		6010B	05/29/09	1
Nickel	56.	9.8	20.	ug/l		6010B	06/02/09	1
Nickel, Dissolved	30.	9.8	20.	ug/l		6010B	05/29/09	1
Selenium	17.	6.5	20.	ug/l	J	6010B	06/02/09	1
Selenium, Dissolved	U	6.5	20.	ug/l		6010B	05/29/09	1
Silver	U	3.2	10.	ug/l		6010B	06/02/09	1
Silver, Dissolved	U	3.2	10.	ug/l		6010B	05/29/09	1
Zinc	56.	8.8	30.	ug/l		6010B	06/02/09	1
Zinc, Dissolved	U	8.8	30.	ug/l		6010B	05/29/09	1
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-09

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8	96.5			% Rec.		8260B	05/29/09	1
Dibromofluoromethane	97.2			% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene	99.2			% Rec.		8260B	05/29/09	1

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RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-3D-GW
Collected By : CK
Collection Date : 05/21/09 08:40

ESC Sample # : L403980-09

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.070	0.012	0.050	ug/l		8270C-S	05/26/09	1
Acenaphthene	0.15	0.013	0.050	ug/l		8270C-S	05/26/09	1
Acenaphthylene	0.032	0.017	0.050	ug/l	J	8270C-S	05/26/09	1
Benzo(a)anthracene	0.076	0.023	0.050	ug/l		8270C-S	05/26/09	1
Benzo(a)pyrene	0.045	0.013	0.050	ug/l	J	8270C-S	05/26/09	1
Benzo(b)fluoranthene	0.083	0.024	0.050	ug/l		8270C-S	05/26/09	1
Benzo(g,h,i)perylene	0.044	0.018	0.050	ug/l	J	8270C-S	05/26/09	1
Benzo(k)fluoranthene	0.026	0.020	0.050	ug/l	J	8270C-S	05/26/09	1
Chrysene	0.068	0.018	0.050	ug/l		8270C-S	05/26/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l		8270C-S	05/26/09	1
Fluoranthene	0.26	0.020	0.050	ug/l		8270C-S	05/26/09	1
Fluorene	0.069	0.012	0.050	ug/l		8270C-S	05/26/09	1
Indeno(1,2,3-cd)pyrene	0.029	0.015	0.050	ug/l	J	8270C-S	05/26/09	1
Naphthalene	0.11	0.023	0.25	ug/l	J	8270C-S	05/26/09	1
Phenanthrene	0.21	0.018	0.050	ug/l		8270C-S	05/26/09	1
Pyrene	0.18	0.022	0.050	ug/l		8270C-S	05/26/09	1
1-Methylnaphthalene	0.058	0.014	0.25	ug/l	J	8270C-S	05/26/09	1
2-Methylnaphthalene	0.064	0.014	0.25	ug/l	J	8270C-S	05/26/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/26/09	1
Surrogate Recovery								
Nitrobenzene-d5	66.2			% Rec.		8270C-S	05/26/09	1
2-Fluorobiphenyl	73.2			% Rec.		8270C-S	05/26/09	1
p-Terphenyl-d14	74.7			% Rec.		8270C-S	05/26/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-9FT
Collected By : CK
Collection Date : 05/21/09 09:45

ESC Sample # : L403980-10

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	87.3			%		2540G	05/27/09	1
Mercury	0.0058	0.0025	0.023	mg/kg	J	7471	05/25/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	05/31/09	1
Arsenic	U	0.54	2.3	mg/kg	O	6010B	05/31/09	2
Beryllium	0.73	0.038	0.11	mg/kg		6010B	05/31/09	1
Cadmium	U	0.037	0.29	mg/kg		6010B	05/31/09	1
Chromium	32.	0.098	0.57	mg/kg		6010B	05/31/09	1
Copper	7.2	0.30	1.1	mg/kg		6010B	05/31/09	1
Lead	1.1	0.096	0.29	mg/kg	P1	6010B	06/03/09	1
Nickel	78.	0.49	1.1	mg/kg		6010B	05/31/09	1
Selenium	U	0.65	2.3	mg/kg	O	6010B	05/31/09	2
Silver	U	0.16	0.57	mg/kg		6010B	05/31/09	1
Thallium	U	3.0	11.	mg/kg	O	6010B	05/31/09	10
Zinc	31.	0.44	1.7	mg/kg		6010B	05/31/09	1
Volatile Organics								
Acetone	U	0.085	0.29	mg/kg		8260B	05/26/09	5
Benzene	U	0.0016	0.0057	mg/kg		8260B	05/26/09	5
Bromochloromethane	U	0.0022	0.0057	mg/kg		8260B	05/26/09	5
Bromodichloromethane	U	0.0019	0.0057	mg/kg		8260B	05/26/09	5
Bromoform	U	0.0029	0.0057	mg/kg		8260B	05/26/09	5
Bromomethane	U	0.0064	0.029	mg/kg		8260B	05/26/09	5
2-Butanone (MEK)	U	0.013	0.057	mg/kg		8260B	05/26/09	5
Carbon disulfide	U	0.0017	0.0057	mg/kg		8260B	05/26/09	5
Carbon tetrachloride	U	0.0016	0.0057	mg/kg		8260B	05/26/09	5
Chlorobenzene	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
Chloroethane	U	0.0029	0.029	mg/kg		8260B	05/26/09	5
Chloroform	U	0.0020	0.029	mg/kg		8260B	05/26/09	5
Chloromethane	U	0.0028	0.0057	mg/kg		8260B	05/26/09	5
1,2-Dibromo-3-Chloropropane	U	0.0058	0.029	mg/kg		8260B	05/26/09	5
Chlorodibromomethane	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
1,2-Dibromoethane	U	0.0016	0.0057	mg/kg		8260B	05/26/09	5
1,2-Dichlorobenzene	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
1,3-Dichlorobenzene	U	0.0019	0.0057	mg/kg		8260B	05/26/09	5
1,4-Dichlorobenzene	U	0.0011	0.0057	mg/kg		8260B	05/26/09	5
Dichlorodifluoromethane	U	0.0016	0.029	mg/kg		8260B	05/26/09	5
1,1-Dichloroethane	U	0.0013	0.0057	mg/kg		8260B	05/26/09	5
1,2-Dichloroethane	U	0.0026	0.0057	mg/kg		8260B	05/26/09	5
1,1-Dichloroethene	U	0.0037	0.0057	mg/kg		8260B	05/26/09	5
cis-1,2-Dichloroethene	U	0.0036	0.0057	mg/kg		8260B	05/26/09	5
trans-1,2-Dichloroethene	U	0.0034	0.0057	mg/kg		8260B	05/26/09	5

Results listed are dry weight basis.

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West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403980-10

Sample ID : PB-5A-9FT

Site ID :

Collected By : CK
Collection Date : 05/21/09 09:45

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.0038	0.0057	mg/kg		8260B	05/26/09	5
cis-1,3-Dichloropropene	U	0.0013	0.0057	mg/kg		8260B	05/26/09	5
trans-1,3-Dichloropropene	U	0.0018	0.0057	mg/kg		8260B	05/26/09	5
Ethylbenzene	U	0.0011	0.0057	mg/kg		8260B	05/26/09	5
2-Hexanone	U	0.0018	0.0057	mg/kg		8260B	05/26/09	5
Isopropylbenzene	U	0.0010	0.0057	mg/kg		8260B	05/26/09	5
4-Methyl-2-pentanone (MIBK)	U	0.0070	0.057	mg/kg		8260B	05/26/09	5
Methyl tert-butyl ether	U	0.0014	0.0057	mg/kg		8260B	05/26/09	5
Methylene Chloride	U	0.0030	0.029	mg/kg		8260B	05/26/09	5
Styrene	U	0.0010	0.0057	mg/kg		8260B	05/26/09	5
1,1,2,2-Tetrachloroethane	U	0.0016	0.0057	mg/kg		8260B	05/26/09	5
Tetrachloroethene	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
Toluene	U	0.0061	0.029	mg/kg		8260B	05/26/09	5
1,1,2-Trichloro-1,2,2-trifluoro	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
1,2,3-Trichlorobenzene	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
1,2,4-Trichlorobenzene	U	0.0012	0.0057	mg/kg		8260B	05/26/09	5
1,1,1-Trichloroethane	U	0.0026	0.0057	mg/kg		8260B	05/26/09	5
1,1,2-Trichloroethane	U	0.0023	0.0057	mg/kg		8260B	05/26/09	5
Trichloroethene	U	0.0017	0.0057	mg/kg		8260B	05/26/09	5
Trichlorofluoromethane	U	0.0014	0.029	mg/kg		8260B	05/26/09	5
Vinyl chloride	U	0.0014	0.0057	mg/kg		8260B	05/26/09	5
Xylenes, Total	U	0.0023	0.017	mg/kg		8260B	05/26/09	5
Cyclohexane	U	0.00033	0.0011	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.11	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.023	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0011	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	05/26/09	5
Dibromofluoromethane	87.7			% Rec.		8260B	05/26/09	5
4-Bromofluorobenzene	107.			% Rec.		8260B	05/26/09	5
Diesel Range Organics (DRO)	76.	1.3	4.6	mg/kg		NWTPHDX	06/05/09	1
Residual Range Organics (RRO)	620	16.	57.	mg/kg		NWTPHDX	06/05/09	5
Surrogate Recovery								
o-Terphenyl	54.0			% Rec.		NWTPHDX	06/05/09	5
Gasoline Range (C7-C10)	U	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	19.	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.6	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	550	16.	57.	mg/kg		NWTPH-HC	05/28/09	5

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L403980-10

Sample ID : PB-5A-9FT

Site ID :

Collected By : CK
Collection Date : 05/21/09 09:45

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Surrogate recovery(%)								
o-Terphenyl	68.2			% Rec.		NWTPH-HC	05/28/09	1
Base/Neutral Extractables								
Acenaphthylene	U	0.028	0.038	mg/kg		8270C	05/27/09	1
Acetophenone	U	0.011	0.038	mg/kg		8270C	05/27/09	1
Atrazine	U	0.11	0.38	mg/kg		8270C	05/27/09	1
Benzaldehyde	U	0.11	0.38	mg/kg		8270C	05/27/09	1
Biphenyl	U	0.11	0.38	mg/kg		8270C	05/27/09	1
Bis(2-chlorethoxy)methane	U	0.032	0.38	mg/kg		8270C	05/27/09	1
Bis(2-chloroethyl)ether	U	0.028	0.38	mg/kg		8270C	05/27/09	1
Bis(2-chloroisopropyl)ether	U	0.033	0.38	mg/kg		8270C	05/27/09	1
4-Bromophenyl-phenylether	U	0.022	0.38	mg/kg		8270C	05/27/09	1
2-Chloronaphthalene	U	0.026	0.38	mg/kg		8270C	05/27/09	1
4-Chlorophenyl-phenylether	U	0.025	0.38	mg/kg		8270C	05/27/09	1
3,3-Dichlorobenzidine	U	0.031	0.38	mg/kg		8270C	05/27/09	1
2,4-Dinitrotoluene	U	0.025	0.38	mg/kg		8270C	05/27/09	1
2,6-Dinitrotoluene	U	0.023	0.38	mg/kg		8270C	05/27/09	1
Hexachlorobenzene	U	0.025	0.38	mg/kg		8270C	05/27/09	1
Hexachloro-1,3-butadiene	U	0.032	0.38	mg/kg		8270C	05/27/09	1
Hexachlorocyclopentadiene	U	0.035	0.38	mg/kg		8270C	05/27/09	1
Hexachloroethane	U	0.033	0.38	mg/kg		8270C	05/27/09	1
Isophorone	U	0.038	0.38	mg/kg		8270C	05/27/09	1
2-Methylnaphthalene	U	0.026	0.38	mg/kg		8270C	05/27/09	1
2-Methylphenol	U	0.033	0.38	mg/kg		8270C	05/27/09	1
3&4-Methyl Phenol	U	0.033	0.38	mg/kg		8270C	05/27/09	1
2-Nitroaniline	U	0.021	0.38	mg/kg		8270C	05/27/09	1
3-Nitroaniline	U	0.065	0.38	mg/kg		8270C	05/27/09	1
4-Nitroaniline	U	0.038	0.38	mg/kg		8270C	05/27/09	1
Nitrobenzene	U	0.028	0.38	mg/kg		8270C	05/27/09	1
n-Nitrosodiphenylamine	U	0.034	0.38	mg/kg		8270C	05/27/09	1
n-Nitrosodi-n-propylamine	U	0.033	0.38	mg/kg		8270C	05/27/09	1
Benzylbutyl phthalate	U	0.038	0.38	mg/kg		8270C	05/27/09	1
Caprolactam	U	0.11	0.38	mg/kg		8270C	05/27/09	1
Carbazole	U	0.029	0.38	mg/kg		8270C	05/27/09	1
Bis(2-ethylhexyl)phthalate	U	0.060	0.38	mg/kg		8270C	05/27/09	1
4-Chloroaniline	U	0.036	0.38	mg/kg		8270C	05/27/09	1
Di-n-butyl phthalate	U	0.027	0.38	mg/kg		8270C	05/27/09	1
Dibenzofuran	U	0.022	0.38	mg/kg		8270C	05/27/09	1
Diethyl phthalate	U	0.040	0.38	mg/kg		8270C	05/27/09	1
Dimethyl phthalate	U	0.026	0.38	mg/kg		8270C	05/27/09	1
Di-n-octyl phthalate	U	0.036	0.38	mg/kg		8270C	05/27/09	1
Acid Extractables								

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-9FT
Collected By : CK
Collection Date : 05/21/09 09:45

ESC Sample # : L403980-10

Site ID :

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
4-Chloro-3-methylphenol	U	0.034	0.38	mg/kg		8270C	05/27/09	1
2-Chlorophenol	U	0.031	0.38	mg/kg		8270C	05/27/09	1
2,4-Dichlorophenol	U	0.024	0.38	mg/kg		8270C	05/27/09	1
2,4-Dimethylphenol	U	0.038	0.38	mg/kg	J4	8270C	05/27/09	1
4,6-Dinitro-2-methylphenol	U	0.040	0.38	mg/kg		8270C	05/27/09	1
2,4-Dinitrophenol	U	0.041	0.38	mg/kg		8270C	05/27/09	1
2-Nitrophenol	U	0.027	0.38	mg/kg		8270C	05/27/09	1
4-Nitrophenol	U	0.027	0.38	mg/kg		8270C	05/27/09	1
Pentachlorophenol	U	0.031	0.38	mg/kg		8270C	05/27/09	1
Phenol	U	0.029	0.38	mg/kg		8270C	05/27/09	1
1,2,4,5-Tetrachlorobenzene	U	0.016	0.057	mg/kg		8270C	05/27/09	1
2,4,5-Trichlorophenol	U	0.030	0.38	mg/kg		8270C	05/27/09	1
2,4,6-Trichlorophenol	U	0.028	0.38	mg/kg		8270C	05/27/09	1
2,3,4,6-Tetrachlorophenol	U	0.016	0.057	mg/kg	Q	8270C	06/25/09	1
Benzo(a)anthracene	U	0.032	0.38	mg/kg		8270C	05/27/09	1
Benzo(a)pyrene	U	0.027	0.38	mg/kg		8270C	05/27/09	1
Benzo(b)fluoranthene	U	0.030	0.38	mg/kg		8270C	05/27/09	1
Benzo(k)fluoranthene	U	0.031	0.38	mg/kg		8270C	05/27/09	1
Chrysene	U	0.035	0.38	mg/kg		8270C	05/27/09	1
Dibenz(a,h)anthracene	U	0.028	0.38	mg/kg		8270C	05/27/09	1
Indeno(1,2,3-cd)pyrene	U	0.029	0.38	mg/kg		8270C	05/27/09	1
Acenaphthene	U	0.024	0.38	mg/kg		8270C	05/27/09	1
Anthracene	U	0.023	0.38	mg/kg		8270C	05/27/09	1
Benzo(g,h,i)perylene	U	0.029	0.38	mg/kg		8270C	05/27/09	1
Fluoranthene	U	0.024	0.38	mg/kg		8270C	05/27/09	1
Fluorene	U	0.023	0.38	mg/kg		8270C	05/27/09	1
Naphthalene	U	0.026	0.38	mg/kg		8270C	05/27/09	1
Phenanthrene	U	0.025	0.38	mg/kg		8270C	05/27/09	1
Pyrene	U	0.036	0.38	mg/kg		8270C	05/27/09	1
Surrogate Recovery								
Nitrobenzene-d5	67.2			% Rec.		8270C	05/27/09	1
Nitrobenzene-d5	62.7			% Rec.		8270C	05/27/09	1
2-Fluorobiphenyl	61.4			% Rec.		8270C	05/27/09	1
2-Fluorobiphenyl	79.8			% Rec.		8270C	05/27/09	1
p-Terphenyl-d14	64.5			% Rec.		8270C	05/27/09	1
p-Terphenyl-d14	75.9			% Rec.		8270C	05/27/09	1
Phenol-d5	67.5			% Rec.		8270C	05/27/09	1
Phenol-d5	68.4			% Rec.		8270C	05/27/09	1
2-Fluorophenol	69.6			% Rec.		8270C	05/27/09	1
2-Fluorophenol	69.7			% Rec.		8270C	05/27/09	1
2,4,6-Tribromophenol	74.8			% Rec.		8270C	05/27/09	1
2,4,6-Tribromophenol	91.7			% Rec.		8270C	05/27/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-GW
Collected By : CK
Collection Date : 05/21/09 09:00

ESC Sample # : L403980-11

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	740	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	990	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	75.7			% Rec.		NWTPH-H	05/27/09	1

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June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-GW
Collected By : CK
Collection Date : 05/21/09 09:00

ESC Sample # : L403980-12

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-GW
Collected By : CK
Collection Date : 05/21/09 09:00

ESC Sample # : L403980-12

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/22/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/22/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/22/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/22/09	1
Surrogate Recovery								
Toluene-d8	95.6			% Rec.		8260B	05/29/09	1
Dibromofluoromethane	94.0			% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene	96.8			% Rec.		8260B	05/29/09	1
Diesel Range Organics (DRO)	400	33.	100	ug/l		NWTPHDX	05/28/09	1
Residual Range Organics (RRO)	360	82.	250	ug/l		NWTPHDX	05/28/09	1
Surrogate Recovery								
o-Terphenyl	83.5			% Rec.		NWTPHDX	05/28/09	1
Base/Neutral Extractables								
Acenaphthylene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Acetophenone	U	16.	50.	ug/l		8270C	05/28/09	1
Atrazine	U	3.3	10.	ug/l		8270C	05/28/09	1
Benzaldehyde	U	3.3	10.	ug/l		8270C	05/28/09	1
Biphenyl	U	3.3	10.	ug/l		8270C	05/28/09	1
Bis(2-chlorethoxy)methane	U	3.3	10.	ug/l		8270C	05/28/09	1
Bis(2-chloroethyl)ether	U	3.3	10.	ug/l		8270C	05/28/09	1
Bis(2-chloroisopropyl)ether	U	3.3	10.	ug/l		8270C	05/28/09	1
4-Bromophenyl-phenylether	U	3.3	10.	ug/l		8270C	05/28/09	1
2-Chloronaphthalene	U	3.3	10.	ug/l		8270C	05/28/09	1
4-Chlorophenyl-phenylether	U	3.3	10.	ug/l		8270C	05/28/09	1
3,3-Dichlorobenzidine	U	3.3	10.	ug/l		8270C	05/28/09	1
2,4-Dinitrotoluene	U	3.3	10.	ug/l		8270C	05/28/09	1
2,6-Dinitrotoluene	U	3.3	10.	ug/l		8270C	05/28/09	1
Hexachlorobenzene	U	3.3	10.	ug/l		8270C	05/28/09	1
Hexachloro-1,3-butadiene	U	3.3	10.	ug/l		8270C	05/28/09	1
Hexachlorocyclopentadiene	U	3.3	10.	ug/l		8270C	05/28/09	1
Hexachloroethane	U	3.3	10.	ug/l		8270C	05/28/09	1
Isophorone	U	3.3	10.	ug/l		8270C	05/28/09	1
2-Methylnaphthalene	U	3.3	10.	ug/l		8270C	05/28/09	1
2-Methylphenol	U	1.3	10.	ug/l		8270C	05/28/09	1
3&4-methyl phenol	U	1.1	10.	ug/l		8270C	05/28/09	1
2-Nitroaniline	U	1.5	10.	ug/l		8270C	05/28/09	1

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REPORT OF ANALYSIS

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1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-GW
Collected By : CK
Collection Date : 05/21/09 09:00

ESC Sample # : L403980-12

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
3-Nitroaniline	U	1.2	10.	ug/l		8270C	05/28/09	1
4-Nitroaniline	U	1.6	10.	ug/l		8270C	05/28/09	1
Nitrobenzene	U	3.3	10.	ug/l		8270C	05/28/09	1
n-Nitrosodiphenylamine	U	3.3	10.	ug/l		8270C	05/28/09	1
n-Nitrosodi-n-propylamine	U	3.3	10.	ug/l		8270C	05/28/09	1
Benzylbutyl phthalate	U	3.3	10.	ug/l		8270C	05/28/09	1
Caprolactam	U	3.3	10.	ug/l		8270C	05/28/09	1
Carbazole	U	0.95	10.	ug/l		8270C	05/28/09	1
Bis(2-ethylhexyl)phthalate	U	2.0	6.0	ug/l		8270C	05/28/09	1
4-Chloroaniline	U	2.6	10.	ug/l		8270C	05/28/09	1
Di-n-butyl phthalate	U	3.3	10.	ug/l		8270C	05/28/09	1
Dibenzofuran	U	1.5	10.	ug/l		8270C	05/28/09	1
Diethyl phthalate	U	3.3	10.	ug/l		8270C	05/28/09	1
Dimethyl phthalate	U	3.3	10.	ug/l	J3	8270C	05/28/09	1
Di-n-octyl phthalate	U	3.3	10.	ug/l		8270C	05/28/09	1
Acid Extractables								
4-Chloro-3-methylphenol	U	1.8	10.	ug/l		8270C	05/28/09	1
2-Chlorophenol	U	1.3	10.	ug/l		8270C	05/28/09	1
2,4-Dichlorophenol	U	2.0	10.	ug/l		8270C	05/28/09	1
2,4-Dimethylphenol	U	2.1	10.	ug/l		8270C	05/28/09	1
4,6-Dinitro-2-methylphenol	U	2.2	10.	ug/l		8270C	05/28/09	1
2,4-Dinitrophenol	U	1.2	10.	ug/l		8270C	05/28/09	1
2-Nitrophenol	U	2.1	10.	ug/l		8270C	05/28/09	1
4-Nitrophenol	U	0.76	10.	ug/l		8270C	05/28/09	1
Phenol	U	0.59	10.	ug/l		8270C	05/28/09	1
Pentachlorophenol	U	0.33	1.0	ug/l		8270C	05/28/09	1
1,2,4,5-Tetrachlorobenzene	U	16.	50.	ug/l		8270C	05/28/09	1
2,4,5-Trichlorophenol	U	1.7	50.	ug/l		8270C	05/28/09	1
2,4,6-Trichlorophenol	U	2.0	10.	ug/l		8270C	05/28/09	1
Benzo(a)anthracene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Benzo(a)pyrene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Benzo(b)fluoranthene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Benzo(k)fluoranthene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Chrysene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Dibenz(a,h)anthracene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Indeno(1,2,3-cd)pyrene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Acenaphthene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Anthracene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Benzo(g,h,i)perylene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Fluoranthene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Fluorene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Naphthalene	U	1.6	5.0	ug/l		8270C	05/28/09	1
Phenanthrene	U	0.33	1.0	ug/l		8270C	05/28/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/16/09 14:25 Revised: 06/29/09 13:04



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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 29, 2009

Date Received : May 22, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5A-GW
Collected By : CK
Collection Date : 05/21/09 09:00

ESC Sample # : L403980-12

Site ID :

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Pyrene	U	0.33	1.0	ug/l		8270C	05/28/09	1
Surrogate Recovery								
2-Fluorophenol	42.2			% Rec.		8270C	05/28/09	1
Phenol-d5	25.6			% Rec.		8270C	05/28/09	1
Nitrobenzene-d5	34.5			% Rec.		8270C	05/28/09	1
2-Fluorobiphenyl	75.5			% Rec.		8270C	05/28/09	1
2,4,6-Tribromophenol	84.4			% Rec.		8270C	05/28/09	1
p-Terphenyl-d14	72.2			% Rec.		8270C	05/28/09	1
Base/Neutral Extractables								
Acid Extractables								
2,3,4,6-Tetrachlorophenol	U	16.	50.	ug/l		8270C	06/16/09	1
Surrogate Recovery								

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/16/09 14:25 Revised: 06/29/09 13:04

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L403980-01	WG423787	SAMP	Acetone	R759206	J	
	WG423787	SAMP	2-Butanone (MEK)	R759206	J	
	WG427442	SAMP	Cyclohexane	R788346	Q	
	WG427442	SAMP	1,4-Dioxane	R788346	Q	
	WG427442	SAMP	Methyl Acetate	R788346	Q	
	WG427442	SAMP	Methyl Cyclohexane	R788346	Q	
	WG423454	SAMP	Thallium	R763886	O	
	WG424943	SAMP	o-Terphenyl	R771826	J7	
	WG423440	SAMP	Anthracene	R755726	J	
	WG423440	SAMP	Benzo(a)anthracene	R755726	J	
	WG423440	SAMP	Benzo(b)fluoranthene	R755726	J	
	WG423440	SAMP	Benzo(k)fluoranthene	R755726	J	
	WG423440	SAMP	Chrysene	R755726	J	
	WG423440	SAMP	Dibenz(a,h)anthracene	R755726	J	
	WG423440	SAMP	Fluoranthene	R755726	J	
	WG423440	SAMP	Fluorene	R755726	J	
	WG423440	SAMP	Indeno(1,2,3-cd)pyrene	R755726	J	
	WG423440	SAMP	Naphthalene	R755726	J	
	WG423440	SAMP	Pyrene	R755726	J	
	WG423440	SAMP	p-Terphenyl-d14	R755726	J7	
	L403980-03	WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
		WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3
		WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3
WG427744		SAMP	Cyclohexane	R789452	Q	
WG427744		SAMP	1,4-Dioxane	R789452	Q	
WG427744		SAMP	Methyl Acetate	R789452	Q	
WG427744		SAMP	Methyl Cyclohexane	R789452	Q	
WG426483		SAMP	Beryllium,Dissolved	R782806	J	
WG426483		SAMP	Silver,Dissolved	R782806	J	
WG426484		SAMP	Antimony,Dissolved	R783346	J	
WG426269		SAMP	Thallium	R782827	J	
WG423294		SAMP	Fluoranthene	R755687	J	
WG423294		SAMP	Fluorene	R755687	J	
WG423294		SAMP	Naphthalene	R755687	J	
WG423294		SAMP	Phenanthrene	R755687	J	
WG423294	SAMP	1-Methylnaphthalene	R755687	J		
WG423294	SAMP	2-Methylnaphthalene	R755687	J		
L403980-04	WG423454	SAMP	Selenium	R763886	O	
	WG423454	SAMP	Thallium	R763886	O	
	WG423109	SAMP	Mercury	R752950	J	
	WG424943	SAMP	o-Terphenyl	R771826	J7	
	WG423440	SAMP	Anthracene	R755726	J6	
	WG423440	SAMP	Acenaphthene	R755726	J6	
	WG423440	SAMP	Acenaphthylene	R755726	J6	
	WG423440	SAMP	Benzo(a)anthracene	R755726	JJ6	
	WG423440	SAMP	Benzo(a)pyrene	R755726	JJ6	
	WG423440	SAMP	Benzo(b)fluoranthene	R755726	JJ6	
	WG423440	SAMP	Benzo(g,h,i)perylene	R755726	JJ6J3	
	WG423440	SAMP	Benzo(k)fluoranthene	R755726	JJ6	
	WG423440	SAMP	Chrysene	R755726	JJ6	
	WG423440	SAMP	Dibenz(a,h)anthracene	R755726	J6	
	WG423440	SAMP	Fluoranthene	R755726	JJ6	
	WG423440	SAMP	Fluorene	R755726	J6	
	WG423440	SAMP	Indeno(1,2,3-cd)pyrene	R755726	J6	
	WG423440	SAMP	Naphthalene	R755726	JJ6	
	WG423440	SAMP	Phenanthrene	R755726	JJ6	
	WG423440	SAMP	Pyrene	R755726	JJ6	
	WG423440	SAMP	2-Methylnaphthalene	R755726	J	
	WG423440	SAMP	2-Chloronaphthalene	R755726	J6	
	L403980-06	WG423629	SAMP	Acetone	R759806	J
WG423629		SAMP	1,2-Dibromoethane	R759806	J4J3	
WG423629		SAMP	trans-1,3-Dichloropropene	R759806	J3	
WG423629		SAMP	1,2,3-Trichlorobenzene	R759806	J3	
WG427744		SAMP	Cyclohexane	R789452	Q	
WG427744		SAMP	1,4-Dioxane	R789452	Q	
WG427744		SAMP	Methyl Acetate	R789452	Q	
WG427744		SAMP	Methyl Cyclohexane	R789452	Q	
WG424232		SAMP	Cadmium	R766446	J	
WG423363		SAMP	Cadmium,Dissolved	R763047	J	

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
	WG423363	SAMP	Nickel,Dissolved	R763047	J
	WG423363	SAMP	Zinc,Dissolved	R763047	J
	WG424398	SAMP	Antimony	R775766	J
	WG423775	SAMP	Arsenic,Dissolved	R770926	J
	WG423294	SAMP	Acenaphthene	R755687	J
	WG423294	SAMP	Fluoranthene	R755687	J
	WG423294	SAMP	Fluorene	R755687	J
	WG423294	SAMP	Phenanthrene	R755687	J
L403980-07	WG423454	SAMP	Selenium	R763886	O
	WG423454	SAMP	Thallium	R763886	O
	WG424943	SAMP	Diesel Range Organics (DRO)	R771826	J
	WG423440	SAMP	Benzo(a)pyrene	R755726	J
	WG423440	SAMP	Benzo(b)fluoranthene	R755726	J
	WG423440	SAMP	Benzo(g,h,i)perylene	R755726	J
	WG423440	SAMP	Chrysene	R755726	J
	WG423440	SAMP	Fluoranthene	R755726	J
	WG423440	SAMP	Indeno(1,2,3-cd)pyrene	R755726	J
	WG423440	SAMP	Naphthalene	R755726	J
	WG423440	SAMP	Phenanthrene	R755726	J
	WG423440	SAMP	Pyrene	R755726	J
L403980-08	WG422935	SAMP	Diesel (C7-C26)	R754327	J
L403980-09	WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
	WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3
	WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3
	WG427744	SAMP	Cyclohexane	R789452	Q
	WG427744	SAMP	1,4-Dioxane	R789452	Q
	WG427744	SAMP	Methyl Acetate	R789452	Q
	WG427744	SAMP	Methyl Cyclohexane	R789452	Q
	WG424232	SAMP	Beryllium	R766446	J
	WG424232	SAMP	Cadmium	R766446	J
	WG423363	SAMP	Chromium,Dissolved	R763047	J
	WG424232	SAMP	Selenium	R766446	J
	WG423775	SAMP	Antimony,Dissolved	R770926	J
	WG423294	SAMP	Acenaphthylene	R755687	J
	WG423294	SAMP	Benzo(a)pyrene	R755687	J
	WG423294	SAMP	Benzo(g,h,i)perylene	R755687	J
	WG423294	SAMP	Benzo(k)fluoranthene	R755687	J
	WG423294	SAMP	Indeno(1,2,3-cd)pyrene	R755687	J
	WG423294	SAMP	Naphthalene	R755687	J
	WG423294	SAMP	1-Methylnaphthalene	R755687	J
L403980-10	WG423294	SAMP	2-Methylnaphthalene	R755687	J
	WG427442	SAMP	Cyclohexane	R788346	Q
	WG427442	SAMP	1,4-Dioxane	R788346	Q
	WG427442	SAMP	Methyl Acetate	R788346	Q
	WG427442	SAMP	Methyl Cyclohexane	R788346	Q
	WG423454	SAMP	Arsenic	R763886	O
	WG424566	SAMP	Lead	R769026	P1
	WG423454	SAMP	Selenium	R763886	O
	WG423454	SAMP	Thallium	R763886	O
	WG423109	SAMP	Mercury	R752950	J
	WG423526	SAMP	2,4-Dimethylphenol	R759406	J4
	WG428103	SAMP	2,3,4,6-Tetrachlorophenol	R793871	Q
L403980-12	WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
	WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3
	WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3
	WG427744	SAMP	Cyclohexane	R789452	Q
	WG427744	SAMP	1,4-Dioxane	R789452	Q
	WG427744	SAMP	Methyl Acetate	R789452	Q
	WG427744	SAMP	Methyl Cyclohexane	R789452	Q
	WG424340	SAMP	Dimethyl phthalate	R764086	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/29/09 at 13:04:03

TSR Signing Reports: 358
R5 - Desired TAT

Log all arsenic gw samples as ASG.

Sample: L403980-01 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
WA EIM EDD needed., Added NWTPHDX - MB 6/5/09
Sample: L403980-02 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Sample: L403980-03 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Metals pH adjusted at lab 6/10 1700
Sample: L403980-04 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Added NWTPHDX - MB 6/5/09
Sample: L403980-05 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Sample: L403980-06 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Removed 8082 per JW. AV 5/26 Added M6010PP per JW-5/29-JD
Sample: L403980-07 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Added NWTPHDX - MB 6/5/09
Sample: L403980-08 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Sample: L403980-09 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Removed 8082 per JW. AV 5/26 Added M6010PP per JW-5/29-jd
Sample: L403980-10 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Added SV8270 per JW. AV 5/26, Added NWTPHDX - MB 6/5/09
Sample: L403980-11 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
Sample: L403980-12 Account: SLRWLOR Received: 05/22/09 09:00 Due Date: 06/23/09 00:00 RPT Date: 06/16/09 14:25
added NWTPHDX and SV8270 per JW-5/27-jd



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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Mercury	< .02	mg/kg			WG423109	05/25/09 12:40
PCB 1016	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1221	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1232	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1242	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1248	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1254	< .017	mg/kg			WG423182	05/25/09 20:05
PCB 1260	< .017	mg/kg			WG423182	05/25/09 20:05
Decachlorobiphenyl		% Rec.	66.96	18.9-115.8	WG423182	05/25/09 20:05
Tetrachloro-m-xylene		% Rec.	91.59	31.8-115.7	WG423182	05/25/09 20:05
#6 Fuel Oil (C10-C32)	< .1	mg/l			WG422935	05/26/09 10:27
Diesel (C7-C26)	< .1	mg/l			WG422935	05/26/09 10:27
Hydraulic Fluid (C12-C33)	< .1	mg/l			WG422935	05/26/09 10:27
Kerosene (C9-C16)	< .1	mg/l			WG422935	05/26/09 10:27
Mineral Spirits	< .1	mg/l			WG422935	05/26/09 10:27
Motor Oil (C16-C40)	< .25	mg/l			WG422935	05/26/09 10:27
o-Terphenyl		% Rec.	106.9	50-150	WG422935	05/26/09 10:27
#6 Fuel Oil (C10-C32)	< 4	mg/kg			WG423285	05/26/09 12:02
Diesel (C7-C26)	< 4	mg/kg			WG423285	05/26/09 12:02
Hydraulic Fluid (C12-C33)	< 4	mg/kg			WG423285	05/26/09 12:02
Kerosene (C9-C16)	< 4	mg/kg			WG423285	05/26/09 12:02
Mineral Spirits	< 4	mg/kg			WG423285	05/26/09 12:02
Motor Oil (C16-C40)	< 10	mg/kg			WG423285	05/26/09 12:02
o-Terphenyl		% Rec.	105.9	50-150	WG423285	05/26/09 12:02
1,1,1-Trichloroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,1,2-Trichloroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,1-Dichloroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,1-Dichloroethene	< .001	mg/kg			WG423335	05/25/09 23:47
1,2,3-Trichlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47
1,2,4-Trichlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG423335	05/25/09 23:47
1,2-Dibromoethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,2-Dichlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47
1,2-Dichloroethane	< .001	mg/kg			WG423335	05/25/09 23:47
1,2-Dichloropropane	< .001	mg/kg			WG423335	05/25/09 23:47
1,3-Dichlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47
1,4-Dichlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47
2-Butanone (MEK)	< .01	mg/kg			WG423335	05/25/09 23:47
2-Hexanone	< .01	mg/kg			WG423335	05/25/09 23:47
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG423335	05/25/09 23:47
Acetone	< .05	mg/kg			WG423335	05/25/09 23:47
Benzene	< .001	mg/kg			WG423335	05/25/09 23:47
Bromochloromethane	< .001	mg/kg			WG423335	05/25/09 23:47
Bromodichloromethane	< .001	mg/kg			WG423335	05/25/09 23:47
Bromoform	< .001	mg/kg			WG423335	05/25/09 23:47
Bromomethane	< .005	mg/kg			WG423335	05/25/09 23:47
Carbon disulfide	< .001	mg/kg			WG423335	05/25/09 23:47
Carbon tetrachloride	< .001	mg/kg			WG423335	05/25/09 23:47
Chlorobenzene	< .001	mg/kg			WG423335	05/25/09 23:47

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Chlorodibromomethane	< .001	mg/kg			WG423335	05/25/09 23:47
Chloroethane	< .005	mg/kg			WG423335	05/25/09 23:47
Chloroform	< .005	mg/kg			WG423335	05/25/09 23:47
Chloromethane	< .001	mg/kg			WG423335	05/25/09 23:47
cis-1,2-Dichloroethene	< .001	mg/kg			WG423335	05/25/09 23:47
cis-1,3-Dichloropropene	< .001	mg/kg			WG423335	05/25/09 23:47
Dichlorodifluoromethane	< .005	mg/kg			WG423335	05/25/09 23:47
Ethylbenzene	< .001	mg/kg			WG423335	05/25/09 23:47
Isopropylbenzene	< .001	mg/kg			WG423335	05/25/09 23:47
Methyl tert-butyl ether	< .001	mg/kg			WG423335	05/25/09 23:47
Methylene Chloride	< .005	mg/kg			WG423335	05/25/09 23:47
Styrene	< .001	mg/kg			WG423335	05/25/09 23:47
Tetrachloroethene	< .001	mg/kg			WG423335	05/25/09 23:47
Toluene	< .005	mg/kg			WG423335	05/25/09 23:47
trans-1,2-Dichloroethene	< .001	mg/kg			WG423335	05/25/09 23:47
trans-1,3-Dichloropropene	< .001	mg/kg			WG423335	05/25/09 23:47
Trichloroethene	< .001	mg/kg			WG423335	05/25/09 23:47
Trichlorofluoromethane	< .005	mg/kg			WG423335	05/25/09 23:47
Vinyl chloride	< .001	mg/kg			WG423335	05/25/09 23:47
4-Bromofluorobenzene		% Rec.	96.15	59-140	WG423335	05/25/09 23:47
Dibromofluoromethane		% Rec.	94.74	63-139	WG423335	05/25/09 23:47
Toluene-d8		% Rec.	101.6	84-116	WG423335	05/25/09 23:47
Mercury	< .02	mg/kg			WG423494	05/26/09 22:37
Total Solids	< .1	%			WG423412	05/27/09 10:30
Total Solids	< .1	%			WG423413	05/27/09 11:00
1-Methylnaphthalene	< .01	ppm			WG423294	05/26/09 10:50
2-Chloronaphthalene	< .01	ppm			WG423294	05/26/09 10:50
2-Methylnaphthalene	< .01	ppm			WG423294	05/26/09 10:50
Acenaphthene	< .01	ppm			WG423294	05/26/09 10:50
Acenaphthylene	< .01	ppm			WG423294	05/26/09 10:50
Anthracene	< .01	ppm			WG423294	05/26/09 10:50
Benzo(a)anthracene	< .01	ppm			WG423294	05/26/09 10:50
Benzo(a)pyrene	< .01	ppm			WG423294	05/26/09 10:50
Benzo(b)fluoranthene	< .01	ppm			WG423294	05/26/09 10:50
Benzo(g,h,i)perylene	< .01	ppm			WG423294	05/26/09 10:50
Benzo(k)fluoranthene	< .01	ppm			WG423294	05/26/09 10:50
Chrysene	< .01	ppm			WG423294	05/26/09 10:50
Dibenz(a,h)anthracene	< .01	ppm			WG423294	05/26/09 10:50
Fluoranthene	< .01	ppm			WG423294	05/26/09 10:50
Fluorene	< .01	ppm			WG423294	05/26/09 10:50
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG423294	05/26/09 10:50
Naphthalene	< .01	ppm			WG423294	05/26/09 10:50
Phenanthrene	< .01	ppm			WG423294	05/26/09 10:50
Pyrene	< .01	ppm			WG423294	05/26/09 10:50
2-Fluorobiphenyl		% Rec.	74.05	26-122	WG423294	05/26/09 10:50
Nitrobenzene-d5		% Rec.	73.39	12-120	WG423294	05/26/09 10:50
p-Terphenyl-d14		% Rec.	80.71	34-149	WG423294	05/26/09 10:50
1-Methylnaphthalene	< .33	ppm			WG423440	05/27/09 10:56
2-Chloronaphthalene	< .33	ppm			WG423440	05/27/09 10:56

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Tax I.D. 62-0814289

Est. 1970

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Chris Kramer
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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2-Methylnaphthalene	< .33	ppm			WG423440	05/27/09 10:56
Acenaphthene	< .33	ppm			WG423440	05/27/09 10:56
Acenaphthylene	< .33	ppm			WG423440	05/27/09 10:56
Anthracene	< .33	ppm			WG423440	05/27/09 10:56
Benzo(a)anthracene	< .33	ppm			WG423440	05/27/09 10:56
Benzo(a)pyrene	< .33	ppm			WG423440	05/27/09 10:56
Benzo(b)fluoranthene	< .33	ppm			WG423440	05/27/09 10:56
Benzo(g,h,i)perylene	< .33	ppm			WG423440	05/27/09 10:56
Benzo(k)fluoranthene	< .33	ppm			WG423440	05/27/09 10:56
Chrysene	< .33	ppm			WG423440	05/27/09 10:56
Dibenz(a,h)anthracene	< .33	ppm			WG423440	05/27/09 10:56
Fluoranthene	< .33	ppm			WG423440	05/27/09 10:56
Fluorene	< .33	ppm			WG423440	05/27/09 10:56
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG423440	05/27/09 10:56
Naphthalene	< .33	ppm			WG423440	05/27/09 10:56
Phenanthrene	< .33	ppm			WG423440	05/27/09 10:56
Pyrene	< .33	ppm			WG423440	05/27/09 10:56
2-Fluorobiphenyl		% Rec.	78.40	30-120	WG423440	05/27/09 10:56
Nitrobenzene-d5		% Rec.	84.54	18-119	WG423440	05/27/09 10:56
p-Terphenyl-d14		% Rec.	83.55	23-143	WG423440	05/27/09 10:56
#6 Fuel Oil (C10-C32)	< .1	mg/l			WG423626	05/27/09 15:32
Diesel (C7-C26)	< .1	mg/l			WG423626	05/27/09 15:32
Hydraulic Fluid (C12-C33)	< .1	mg/l			WG423626	05/27/09 15:32
Kerosene (C9-C16)	< .1	mg/l			WG423626	05/27/09 15:32
Mineral Spirits	< .1	mg/l			WG423626	05/27/09 15:32
Motor Oil (C16-C40)	< .25	mg/l			WG423626	05/27/09 15:32
o-Terphenyl		% Rec.	86.48	50-150	WG423626	05/27/09 15:32
Mercury, Dissolved	< .0002	mg/l			WG423123	05/27/09 13:16
PCB 1016	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1221	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1232	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1242	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1248	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1254	< .017	mg/kg			WG423525	05/27/09 17:26
PCB 1260	< .017	mg/kg			WG423525	05/27/09 17:26
Decachlorobiphenyl		% Rec.	133.2*	18.9-115.8	WG423525	05/27/09 17:26
Tetrachloro-m-xylene		% Rec.	110.4	31.8-115.7	WG423525	05/27/09 17:26
1,1,1-Trichloroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,1,2-Trichloroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,1-Dichloroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,1-Dichloroethene	< .001	mg/kg			WG423787	05/28/09 11:39
1,2,3-Trichlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39
1,2,4-Trichlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG423787	05/28/09 11:39
1,2-Dibromoethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,2-Dichlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39
1,2-Dichloroethane	< .001	mg/kg			WG423787	05/28/09 11:39
1,2-Dichloropropane	< .001	mg/kg			WG423787	05/28/09 11:39
1,3-Dichlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,4-Dichlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39
2-Butanone (MEK)	< .01	mg/kg			WG423787	05/28/09 11:39
2-Hexanone	< .01	mg/kg			WG423787	05/28/09 11:39
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG423787	05/28/09 11:39
Acetone	< .05	mg/kg			WG423787	05/28/09 11:39
Benzene	< .001	mg/kg			WG423787	05/28/09 11:39
Bromochloromethane	< .001	mg/kg			WG423787	05/28/09 11:39
Bromodichloromethane	< .001	mg/kg			WG423787	05/28/09 11:39
Bromoform	< .001	mg/kg			WG423787	05/28/09 11:39
Bromomethane	< .005	mg/kg			WG423787	05/28/09 11:39
Carbon disulfide	< .001	mg/kg			WG423787	05/28/09 11:39
Carbon tetrachloride	< .001	mg/kg			WG423787	05/28/09 11:39
Chlorobenzene	< .001	mg/kg			WG423787	05/28/09 11:39
Chlorodibromomethane	< .001	mg/kg			WG423787	05/28/09 11:39
Chloroethane	< .005	mg/kg			WG423787	05/28/09 11:39
Chloroform	< .005	mg/kg			WG423787	05/28/09 11:39
Chloromethane	< .001	mg/kg			WG423787	05/28/09 11:39
cis-1,2-Dichloroethene	< .001	mg/kg			WG423787	05/28/09 11:39
cis-1,3-Dichloropropene	< .001	mg/kg			WG423787	05/28/09 11:39
Dichlorodifluoromethane	< .005	mg/kg			WG423787	05/28/09 11:39
Ethylbenzene	< .001	mg/kg			WG423787	05/28/09 11:39
Isopropylbenzene	< .001	mg/kg			WG423787	05/28/09 11:39
Methyl tert-butyl ether	< .001	mg/kg			WG423787	05/28/09 11:39
Methylene Chloride	< .005	mg/kg			WG423787	05/28/09 11:39
Styrene	< .001	mg/kg			WG423787	05/28/09 11:39
Tetrachloroethene	< .001	mg/kg			WG423787	05/28/09 11:39
Toluene	< .005	mg/kg			WG423787	05/28/09 11:39
trans-1,2-Dichloroethene	< .001	mg/kg			WG423787	05/28/09 11:39
trans-1,3-Dichloropropene	< .001	mg/kg			WG423787	05/28/09 11:39
Trichloroethene	< .001	mg/kg			WG423787	05/28/09 11:39
Trichlorofluoromethane	< .005	mg/kg			WG423787	05/28/09 11:39
Vinyl chloride	< .001	mg/kg			WG423787	05/28/09 11:39
4-Bromofluorobenzene		% Rec.	102.7	59-140	WG423787	05/28/09 11:39
Dibromofluoromethane		% Rec.	96.30	63-139	WG423787	05/28/09 11:39
Toluene-d8		% Rec.	101.2	84-116	WG423787	05/28/09 11:39
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG423526	05/27/09 10:47
2,4,5-Trichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4,6-Trichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dimethylphenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dinitrophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dinitrotoluene	< .33	ppm			WG423526	05/27/09 10:47
2,6-Dinitrotoluene	< .33	ppm			WG423526	05/27/09 10:47
2-Chloronaphthalene	< .33	ppm			WG423526	05/27/09 10:47
2-Chlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2-Methylnaphthalene	< .33	ppm			WG423526	05/27/09 10:47
2-Methylphenol	< .33	ppm			WG423526	05/27/09 10:47
2-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
2-Nitrophenol	< .33	ppm			WG423526	05/27/09 10:47
3&4-Methyl Phenol	< .33	ppm			WG423526	05/27/09 10:47
3,3-Dichlorobenzidine	< .33	ppm			WG423526	05/27/09 10:47
3-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
4,6-Dinitro-2-methylphenol	< .33	ppm			WG423526	05/27/09 10:47
4-Bromophenyl-phenylether	< .33	ppm			WG423526	05/27/09 10:47
4-Chloro-3-methylphenol	< .33	ppm			WG423526	05/27/09 10:47
4-Chloroaniline	< .33	ppm			WG423526	05/27/09 10:47
4-Chlorophenyl-phenylether	< .33	ppm			WG423526	05/27/09 10:47

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
4-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
4-Nitrophenol	< .33	ppm			WG423526	05/27/09 10:47
Acenaphthene	< .33	ppm			WG423526	05/27/09 10:47
Acenaphthylene	< .33	ppm			WG423526	05/27/09 10:47
Acetophenone	< .33	ppm			WG423526	05/27/09 10:47
Anthracene	< .33	ppm			WG423526	05/27/09 10:47
Atrazine	< .33	ppm			WG423526	05/27/09 10:47
Benzaldehyde	< .33	ppm			WG423526	05/27/09 10:47
Benzo(a)anthracene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(a)pyrene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(b)fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(g,h,i)perylene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(k)fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Benzylbutyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Biphenyl	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chloroethoxy)methane	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chloroethyl)ether	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chloroisopropyl)ether	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-ethylhexyl)phthalate	< .33	ppm			WG423526	05/27/09 10:47
Caprolactam	< .33	ppm			WG423526	05/27/09 10:47
Carbazole	< .33	ppm			WG423526	05/27/09 10:47
Chrysene	< .33	ppm			WG423526	05/27/09 10:47
Di-n-butyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Di-n-octyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Dibenz(a,h)anthracene	< .33	ppm			WG423526	05/27/09 10:47
Dibenzofuran	< .33	ppm			WG423526	05/27/09 10:47
Diethyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Dimethyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Fluorene	< .33	ppm			WG423526	05/27/09 10:47
Hexachloro-1,3-butadiene	< .33	ppm			WG423526	05/27/09 10:47
Hexachlorobenzene	< .33	ppm			WG423526	05/27/09 10:47
Hexachlorocyclopentadiene	< .33	ppm			WG423526	05/27/09 10:47
Hexachloroethane	< .33	ppm			WG423526	05/27/09 10:47
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG423526	05/27/09 10:47
Isophorone	< .33	ppm			WG423526	05/27/09 10:47
n-Nitrosodi-n-propylamine	< .33	ppm			WG423526	05/27/09 10:47
n-Nitrosodiphenylamine	< .33	ppm			WG423526	05/27/09 10:47
Naphthalene	< .33	ppm			WG423526	05/27/09 10:47
Nitrobenzene	< .33	ppm			WG423526	05/27/09 10:47
Pentachlorophenol	< .33	ppm			WG423526	05/27/09 10:47
Phenanthrene	< .33	ppm			WG423526	05/27/09 10:47
Phenol	< .33	ppm			WG423526	05/27/09 10:47
Pyrene	< .33	ppm			WG423526	05/27/09 10:47
2,4,6-Tribromophenol		% Rec.	68.61	25-137	WG423526	05/27/09 10:47
2-Fluorobiphenyl		% Rec.	68.89	30-120	WG423526	05/27/09 10:47
2-Fluorophenol		% Rec.	72.41	26-130	WG423526	05/27/09 10:47
Nitrobenzene-d5		% Rec.	66.45	18-119	WG423526	05/27/09 10:47
Phenol-d5		% Rec.	70.70	37-141	WG423526	05/27/09 10:47
p-Terphenyl-d14		% Rec.	81.75	23-143	WG423526	05/27/09 10:47
Diesel Range Organics (DRO)	< .1	ppm			WG423739	05/28/09 17:19
o-Terphenyl		% Rec.	95.77	50-150	WG423739	05/28/09 17:19
1,1,1-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2,2-Tetrachloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20

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Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,1,2-Trichloro-1,2,2-trifluoroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,3-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,4-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dibromo-3-Chloropropane	< .001	mg/l			WG423629	05/29/09 01:20
1,2-Dibromoethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloropropane	< .0005	mg/l			WG423629	05/29/09 01:20
1,3-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,4-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
2-Butanone (MEK)	< .0025	mg/l			WG423629	05/29/09 01:20
2-Hexanone	< .0025	mg/l			WG423629	05/29/09 01:20
4-Methyl-2-pentanone (MIBK)	< .0025	mg/l			WG423629	05/29/09 01:20
Acetone	< .025	mg/l			WG423629	05/29/09 01:20
Benzene	< .0005	mg/l			WG423629	05/29/09 01:20
Bromochloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromodichloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromoform	< .0005	mg/l			WG423629	05/29/09 01:20
Bromomethane	< .0005	mg/l			WG423629	05/29/09 01:20
Carbon disulfide	< .0005	mg/l			WG423629	05/29/09 01:20
Carbon tetrachloride	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorodibromomethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroform	< .0005	mg/l			WG423629	05/29/09 01:20
Chloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Dichlorodifluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Ethylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Isopropylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Methyl tert-butyl ether	< .0005	mg/l			WG423629	05/29/09 01:20
Methylene Chloride	< .0025	mg/l			WG423629	05/29/09 01:20
Styrene	< .0005	mg/l			WG423629	05/29/09 01:20
Tetrachloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Toluene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichlorofluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Vinyl chloride	< .0005	mg/l			WG423629	05/29/09 01:20
4-Bromofluorobenzene		% Rec.	99.83	75-128	WG423629	05/29/09 01:20
Dibromofluoromethane		% Rec.	99.79	79-125	WG423629	05/29/09 01:20
Toluene-d8		% Rec.	97.36	87-114	WG423629	05/29/09 01:20
Beryllium,Dissolved	< .002	mg/l			WG423363	05/29/09 15:47
Cadmium,Dissolved	< .005	mg/l			WG423363	05/29/09 15:47
Chromium,Dissolved	< .01	mg/l			WG423363	05/29/09 15:47
Copper,Dissolved	< .02	mg/l			WG423363	05/29/09 15:47
Lead,Dissolved	< .005	mg/l			WG423363	05/29/09 15:47
Nickel,Dissolved	< .02	mg/l			WG423363	05/29/09 15:47
Selenium,Dissolved	< .02	mg/l			WG423363	05/29/09 15:47
Silver,Dissolved	< .01	mg/l			WG423363	05/29/09 15:47
Zinc,Dissolved	< .03	mg/l			WG423363	05/29/09 15:47

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
PCB 1016	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1221	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1232	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1242	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1248	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1254	< .0005	mg/l			WG423854	05/29/09 17:13
PCB 1260	< .0005	mg/l			WG423854	05/29/09 17:13
Decachlorobiphenyl		% Rec.	69.08	10-122.6	WG423854	05/29/09 17:13
Tetrachloro-m-xylene		% Rec.	60.83	15.3-114.2	WG423854	05/29/09 17:13
Antimony	< 1	mg/kg			WG423454	05/31/09 14:30
Arsenic	< 1	mg/kg			WG423454	05/31/09 14:30
Beryllium	< .1	mg/kg			WG423454	05/31/09 14:30
Cadmium	< .25	mg/kg			WG423454	05/31/09 14:30
Chromium	< .5	mg/kg			WG423454	05/31/09 14:30
Copper	< 1	mg/kg			WG423454	05/31/09 14:30
Lead	< .25	mg/kg			WG423454	05/31/09 14:30
Nickel	< 1	mg/kg			WG423454	05/31/09 14:30
Selenium	< 1	mg/kg			WG423454	05/31/09 14:30
Silver	< .5	mg/kg			WG423454	05/31/09 14:30
Thallium	< 1	mg/kg			WG423454	05/31/09 14:30
Zinc	< 1.5	mg/kg			WG423454	05/31/09 14:30
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG424340	05/28/09 11:57
2,4,5-Trichlorophenol	< .01	ppm			WG424340	05/28/09 11:57
2,4,6-Trichlorophenol	< .01	ppm			WG424340	05/28/09 11:57
2,4-Dichlorophenol	< .01	ppm			WG424340	05/28/09 11:57
2,4-Dimethylphenol	< .01	ppm			WG424340	05/28/09 11:57
2,4-Dinitrophenol	< .01	ppm			WG424340	05/28/09 11:57
2,4-Dinitrotoluene	< .01	ppm			WG424340	05/28/09 11:57
2,6-Dinitrotoluene	< .01	ppm			WG424340	05/28/09 11:57
2-Chloronaphthalene	< .01	ppm			WG424340	05/28/09 11:57
2-Chlorophenol	< .01	ppm			WG424340	05/28/09 11:57
2-Methylnaphthalene	< .01	ppm			WG424340	05/28/09 11:57
2-Methylphenol	< .01	ppm			WG424340	05/28/09 11:57
2-Nitroaniline	< .01	ppm			WG424340	05/28/09 11:57
2-Nitrophenol	< .01	ppm			WG424340	05/28/09 11:57
3&4-methyl phenol	< .01	ppm			WG424340	05/28/09 11:57
3,3-Dichlorobenzidine	< .01	ppm			WG424340	05/28/09 11:57
3-Nitroaniline	< .01	ppm			WG424340	05/28/09 11:57
4,6-Dinitro-2-methylphenol	< .01	ppm			WG424340	05/28/09 11:57
4-Bromophenyl-phenylether	< .01	ppm			WG424340	05/28/09 11:57
4-Chloro-3-methylphenol	< .01	ppm			WG424340	05/28/09 11:57
4-Chloroaniline	< .01	ppm			WG424340	05/28/09 11:57
4-Chlorophenyl-phenylether	< .01	ppm			WG424340	05/28/09 11:57
4-Nitroaniline	< .01	ppm			WG424340	05/28/09 11:57
4-Nitrophenol	< .01	ppm			WG424340	05/28/09 11:57
Acenaphthene	< .01	ppm			WG424340	05/28/09 11:57
Acenaphthylene	< .01	ppm			WG424340	05/28/09 11:57
Acetophenone	< .01	ppm			WG424340	05/28/09 11:57
Anthracene	< .01	ppm			WG424340	05/28/09 11:57
Atrazine	< .01	ppm			WG424340	05/28/09 11:57
Benzaldehyde	< .01	ppm			WG424340	05/28/09 11:57
Benzo(a)anthracene	< .01	ppm			WG424340	05/28/09 11:57
Benzo(a)pyrene	< .01	ppm			WG424340	05/28/09 11:57
Benzo(b)fluoranthene	< .01	ppm			WG424340	05/28/09 11:57
Benzo(g,h,i)perylene	< .01	ppm			WG424340	05/28/09 11:57

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Level II

June 29, 2009

L403980

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(k)fluoranthene	< .01	ppm			WG424340	05/28/09 11:57
Benzybutyl phthalate	< .01	ppm			WG424340	05/28/09 11:57
Biphenyl	< .01	ppm			WG424340	05/28/09 11:57
Bis(2-chloroethoxy)methane	< .01	ppm			WG424340	05/28/09 11:57
Bis(2-chloroethyl)ether	< .01	ppm			WG424340	05/28/09 11:57
Bis(2-chloroisopropyl)ether	< .01	ppm			WG424340	05/28/09 11:57
Bis(2-ethylhexyl)phthalate	< .01	ppm			WG424340	05/28/09 11:57
Caprolactam	< .01	ppm			WG424340	05/28/09 11:57
Carbazole	< .01	ppm			WG424340	05/28/09 11:57
Chrysene	< .01	ppm			WG424340	05/28/09 11:57
Di-n-butyl phthalate	< .01	ppm			WG424340	05/28/09 11:57
Di-n-octyl phthalate	< .01	ppm			WG424340	05/28/09 11:57
Dibenz(a,h)anthracene	< .01	ppm			WG424340	05/28/09 11:57
Dibenzofuran	< .01	ppm			WG424340	05/28/09 11:57
Diethyl phthalate	< .01	ppm			WG424340	05/28/09 11:57
Dimethyl phthalate	< .01	ppm			WG424340	05/28/09 11:57
Fluoranthene	< .01	ppm			WG424340	05/28/09 11:57
Fluorene	< .01	ppm			WG424340	05/28/09 11:57
Hexachloro-1,3-butadiene	< .01	ppm			WG424340	05/28/09 11:57
Hexachlorobenzene	< .01	ppm			WG424340	05/28/09 11:57
Hexachlorocyclopentadiene	< .01	ppm			WG424340	05/28/09 11:57
Hexachloroethane	< .01	ppm			WG424340	05/28/09 11:57
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG424340	05/28/09 11:57
Isophorone	< .01	ppm			WG424340	05/28/09 11:57
n-Nitrosodi-n-propylamine	< .01	ppm			WG424340	05/28/09 11:57
n-Nitrosodiphenylamine	< .01	ppm			WG424340	05/28/09 11:57
Naphthalene	< .01	ppm			WG424340	05/28/09 11:57
Nitrobenzene	< .01	ppm			WG424340	05/28/09 11:57
Pentachlorophenol	< .01	ppm			WG424340	05/28/09 11:57
Phenanthrene	< .01	ppm			WG424340	05/28/09 11:57
Phenol	< .01	ppm			WG424340	05/28/09 11:57
Pyrene	< .01	ppm			WG424340	05/28/09 11:57
2,4,6-Tribromophenol		% Rec.	81.67	10-148	WG424340	05/28/09 11:57
2-Fluorobiphenyl		% Rec.	73.83	26-122	WG424340	05/28/09 11:57
2-Fluorophenol		% Rec.	37.20	10-87	WG424340	05/28/09 11:57
Nitrobenzene-d5		% Rec.	55.48	12-120	WG424340	05/28/09 11:57
Phenol-d5		% Rec.	24.82	10-67	WG424340	05/28/09 11:57
p-Terphenyl-d14		% Rec.	102.7	34-149	WG424340	05/28/09 11:57
Beryllium	< .002	mg/l			WG424232	06/01/09 23:10
Cadmium	< .005	mg/l			WG424232	06/01/09 23:10
Chromium	< .01	mg/l			WG424232	06/01/09 23:10
Copper	< .02	mg/l			WG424232	06/01/09 23:10
Lead	< .005	mg/l			WG424232	06/01/09 23:10
Nickel	< .02	mg/l			WG424232	06/01/09 23:10
Selenium	< .02	mg/l			WG424232	06/01/09 23:10
Silver	< .01	mg/l			WG424232	06/01/09 23:10
Zinc	< .03	mg/l			WG424232	06/01/09 23:10
Mercury	< .0002	mg/l			WG424233	06/01/09 18:52
Lead	< .25	mg/kg			WG424566	06/03/09 04:14
Antimony,Dissolved	< .001	mg/l			WG423775	06/03/09 22:32
Arsenic,Dissolved	< .001	mg/l			WG423775	06/03/09 22:32

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Level II

L403980

June 29, 2009

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Thallium, Dissolved	< .001	mg/l			WG423775	06/03/09 22:32
Diesel Range Organics (DRO)	< 4	ppm			WG424943	06/04/09 12:22
o-Terphenyl		% Rec.	107.2	50-150	WG424943	06/04/09 12:22
Antimony	< .001	mg/l			WG424398	06/04/09 14:21
Arsenic	< .001	mg/l			WG424398	06/04/09 14:21
Thallium	< .001	mg/l			WG424398	06/04/09 14:21
Mercury	< .0002	mg/l			WG426094	06/12/09 23:36
Mercury, Dissolved	< .0002	mg/l			WG426098	06/14/09 14:36
Beryllium	< .002	mg/l			WG426343	06/15/09 02:12
Cadmium	< .005	mg/l			WG426343	06/15/09 02:12
Chromium	< .01	mg/l			WG426343	06/15/09 02:12
Copper	< .02	mg/l			WG426343	06/15/09 02:12
Lead	< .005	mg/l			WG426343	06/15/09 02:12
Nickel	< .02	mg/l			WG426343	06/15/09 02:12
Selenium	< .02	mg/l			WG426343	06/15/09 02:12
Silver	< .01	mg/l			WG426343	06/15/09 02:12
Zinc	< .03	mg/l			WG426343	06/15/09 02:12
Antimony	< .001	mg/l			WG426269	06/14/09 21:35
Arsenic	< .001	mg/l			WG426269	06/14/09 21:35
Thallium	< .001	mg/l			WG426269	06/14/09 21:35
Antimony, Dissolved	< .001	mg/l			WG426484	06/16/09 04:56
Arsenic, Dissolved	< .001	mg/l			WG426484	06/16/09 04:56
Thallium, Dissolved	< .001	mg/l			WG426484	06/16/09 04:56
1,4-Dioxane	< .004	mg/l			WG427744	06/22/09 21:21
4-Bromofluorobenzene		% Rec.	91.74	75-128	WG427744	06/22/09 21:21
Dibromofluoromethane		% Rec.	101.1	79-125	WG427744	06/22/09 21:21
Toluene-d8		% Rec.	95.38	87-114	WG427744	06/22/09 21:21

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury	mg/kg	0.00450	0.00510		12.5	20	L403980-10	WG423109
Mercury	mg/kg	0.0140	0.0130		7.41	20	L403630-03	WG423494
Total Solids	%	93.4	94.0		0.672	5	L403960-03	WG423412
Total Solids	%	97.2	97.2		0.0166	5	L403985-08	WG423413

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Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Mercury, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L404005-03	WG423123
Beryllium, Dissolved	mg/l	0.00	0.000170	NA	NA	20	L404101-03	WG423363
Cadmium, Dissolved	mg/l	0.00	0.000770	NA	NA	20	L404101-03	WG423363
Chromium, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L404101-03	WG423363
Copper, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L404101-03	WG423363
Lead, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L404101-03	WG423363
Nickel, Dissolved	mg/l	0.00	0.0125	NA	NA	20	L404101-03	WG423363
Selenium, Dissolved	mg/l	0.00	0.0106	NA	NA	20	L404101-03	WG423363
Silver, Dissolved	mg/l	0.00	0.00200	NA	NA	20	L404101-03	WG423363
Zinc, Dissolved	mg/l	0.00	0.00640	NA	NA	20	L404101-03	WG423363
Antimony	mg/kg	0.00	0.0143	NA	NA	20	L403985-12	WG423454
Arsenic	mg/kg	3.44	3.00	13.7	13.7	20	L403985-12	WG423454
Beryllium	mg/kg	0.526	0.530	0.758	0.758	20	L403985-12	WG423454
Cadmium	mg/kg	0.0570	0.0620	8.40	8.40	20	L403985-12	WG423454
Chromium	mg/kg	31.9	30.0	6.14	6.14	20	L403985-12	WG423454
Copper	mg/kg	42.7	32.0	28.6*	28.6*	20	L403985-12	WG423454
Lead	mg/kg	12.4	13.0	4.72	4.72	20	L403985-12	WG423454
Nickel	mg/kg	12.5	11.4	9.21	9.21	20	L403985-12	WG423454
Selenium	mg/kg	0.00	0.00	0.00	0.00	20	L403985-12	WG423454
Silver	mg/kg	0.00	0.00	0.00	0.00	20	L403985-12	WG423454
Zinc	mg/kg	167.	173.	3.53	3.53	20	L403985-12	WG423454
Thallium	mg/kg	0.00	0.00	0.00	0.00	20	L403985-12	WG423454
Beryllium	mg/l	0.00	0.00	0.00	0.00	20	L404463-04	WG424232
Cadmium	mg/l	0.00	0.000110	NA	NA	20	L404463-04	WG424232
Chromium	mg/l	0.00	0.00	0.00	0.00	20	L404463-04	WG424232
Copper	mg/l	0.000700	0.00270	118.*	118.*	20	L404463-04	WG424232
Lead	mg/l	0.0110	0.0119	7.86	7.86	20	L404463-04	WG424232
Nickel	mg/l	0.00	0.00	0.00	0.00	20	L404463-04	WG424232
Selenium	mg/l	0.00	0.00	0.00	0.00	20	L404463-04	WG424232
Silver	mg/l	0.00	0.00	0.00	0.00	20	L404463-04	WG424232
Zinc	mg/l	0.00	0.00690	NA	NA	20	L404463-04	WG424232
Lead	mg/kg	1.23	0.990	21.6*	21.6*	20	L403980-10	WG424566
Antimony, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L403980-06	WG423775
Arsenic, Dissolved	mg/l	0.000740	0.000690	6.99	6.99	20	L403980-06	WG423775
Thallium, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L403980-06	WG423775
Antimony	mg/l	0.00	0.00	0.00	0.00	20	L404641-23	WG424398
Arsenic	mg/l	0.00320	0.00310	3.17	3.17	20	L404641-23	WG424398
Thallium	mg/l	0.00	0.00	0.00	0.00	20	L404641-23	WG424398
Mercury	mg/l	0.00	0.00	0.00	0.00	20	L406775-15	WG426094
Mercury, Dissolved	mg/l	0.00	0.00	0.00	0.00	20	L406945-16	WG426098
Beryllium	mg/l	0.00	0.00	0.00	0.00	20	L406969-23	WG426343

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L403980

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Cadmium	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Chromium	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Copper	mg/l	0.00	0.00250	NA	20	L406969-23	WG426343
Lead	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Nickel	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Selenium	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Silver	mg/l	0.00	0.00	0.00	20	L406969-23	WG426343
Zinc	mg/l	0.00	0.0129	NA	20	L406969-23	WG426343
Antimony	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269
Arsenic	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269
Thallium	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269
Antimony, Dissolved	mg/l	0.00	0.00	0.00	20	L407348-02	WG426484
Arsenic, Dissolved	mg/l	0.00321	0.00330	2.76	20	L407348-02	WG426484
Thallium, Dissolved	mg/l	0.00	0.000240	NA	20	L407348-02	WG426484

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Mercury	mg/kg	8.77	9.94	113.	71.6-127.7	WG423109
PCB 1260	mg/kg	.167	0.142	85.0	62-131	WG423182
Decachlorobiphenyl				79.76	18.9-115.8	WG423182
Tetrachloro-m-xylene				102.8	31.8-115.7	WG423182
Diesel (C7-C26)	mg/l	.75	0.624	83.2	50-150	WG422935
Motor Oil (C16-C40)	mg/l	.75	0.556	74.2	50-150	WG422935
o-Terphenyl				94.64	50-150	WG422935
Diesel (C7-C26)	mg/kg	30	23.6	78.6	50-150	WG423285
Motor Oil (C16-C40)	mg/kg	30	22.8	75.9	50-150	WG423285
o-Terphenyl				87.53	50-150	WG423285
1,1,1-Trichloroethane	mg/kg	.05	0.0528	106.	62-135	WG423335
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0443	88.5	74-129	WG423335
1,1,2-Trichloroethane	mg/kg	.05	0.0434	86.7	77-124	WG423335
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0394	78.9	49-155	WG423335
1,1-Dichloroethane	mg/kg	.05	0.0559	112.	61-134	WG423335
1,1-Dichloroethene	mg/kg	.05	0.0442	88.4	53-136	WG423335
1,2,3-Trichlorobenzene	mg/kg	.05	0.0460	92.0	62-146	WG423335
1,2,4-Trichlorobenzene	mg/kg	.05	0.0506	101.	61-148	WG423335
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0440	88.0	61-134	WG423335
1,2-Dibromoethane	mg/kg	.05	0.0466	93.2	76-127	WG423335
1,2-Dichlorobenzene	mg/kg	.05	0.0484	96.9	77-123	WG423335
1,2-Dichloroethane	mg/kg	.05	0.0578	116.	58-141	WG423335
1,2-Dichloropropane	mg/kg	.05	0.0515	103.	71-128	WG423335
1,3-Dichlorobenzene	mg/kg	.05	0.0474	94.8	71-132	WG423335
1,4-Dichlorobenzene	mg/kg	.05	0.0475	95.1	72-123	WG423335
2-Butanone (MEK)	mg/kg	.25	0.235	94.1	51-131	WG423335
2-Hexanone	mg/kg	.25	0.225	90.0	62-145	WG423335
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.238	95.4	61-143	WG423335
Acetone	mg/kg	.25	0.255	102.	44-140	WG423335

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Quality Assurance Report
Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/kg	.05	0.0528	106.	65-128	WG423335
Bromochloromethane	mg/kg	.05	0.0531	106.	73-130	WG423335
Bromodichloromethane	mg/kg	.05	0.0460	92.0	66-126	WG423335
Bromoform	mg/kg	.05	0.0423	84.6	64-139	WG423335
Bromomethane	mg/kg	.05	0.0470	93.9	41-175	WG423335
Carbon disulfide	mg/kg	.05	0.0420	84.0	36-161	WG423335
Carbon tetrachloride	mg/kg	.05	0.0536	107.	60-140	WG423335
Chlorobenzene	mg/kg	.05	0.0454	90.8	75-125	WG423335
Chlorodibromomethane	mg/kg	.05	0.0435	87.1	72-137	WG423335
Chloroethane	mg/kg	.05	0.0509	102.	44-159	WG423335
Chloroform	mg/kg	.05	0.0555	111.	63-123	WG423335
Chloromethane	mg/kg	.05	0.0531	106.	42-149	WG423335
cis-1,2-Dichloroethene	mg/kg	.05	0.0506	101.	71-129	WG423335
cis-1,3-Dichloropropene	mg/kg	.05	0.0533	107.	73-132	WG423335
Dichlorodifluoromethane	mg/kg	.05	0.0494	98.9	26-186	WG423335
Ethylbenzene	mg/kg	.05	0.0465	93.0	74-128	WG423335
Isopropylbenzene	mg/kg	.05	0.0461	92.2	73-130	WG423335
Methyl tert-butyl ether	mg/kg	.05	0.0462	92.4	44-148	WG423335
Methylene Chloride	mg/kg	.05	0.0477	95.4	57-129	WG423335
Styrene	mg/kg	.05	0.0470	94.0	76-133	WG423335
Tetrachloroethene	mg/kg	.05	0.0427	85.5	65-135	WG423335
Toluene	mg/kg	.05	0.0487	97.5	70-120	WG423335
trans-1,2-Dichloroethene	mg/kg	.05	0.0505	101.	61-133	WG423335
trans-1,3-Dichloropropene	mg/kg	.05	0.0520	104.	70-135	WG423335
Trichloroethene	mg/kg	.05	0.0486	97.2	71-126	WG423335
Trichlorofluoromethane	mg/kg	.05	0.0499	99.9	52-147	WG423335
Vinyl chloride	mg/kg	.05	0.0576	115.	50-151	WG423335
4-Bromofluorobenzene				93.99	59-140	WG423335
Dibromofluoromethane				103.3	63-139	WG423335
Toluene-d8				103.4	84-116	WG423335
Mercury	mg/kg	8.77	7.86	89.6	71.6-127.7	WG423494
Total Solids	%	50	50.0	100.	85-115	WG423412
Total Solids	%	50	50.0	100.	85-115	WG423413
1-Methylnaphthalene	ppm	.001	0.000752	75.2	30-123	WG423294
2-Chloronaphthalene	ppm	.001	0.000731	73.1	34-120	WG423294
2-Methylnaphthalene	ppm	.001	0.000737	73.7	29-116	WG423294
Acenaphthene	ppm	.001	0.000762	76.2	40-113	WG423294
Acenaphthylene	ppm	.001	0.000786	78.6	36-115	WG423294
Anthracene	ppm	.001	0.000791	79.1	45-118	WG423294
Benzo(a)anthracene	ppm	.001	0.000749	74.9	36-129	WG423294
Benzo(a)pyrene	ppm	.001	0.000810	81.0	44-124	WG423294
Benzo(b)fluoranthene	ppm	.001	0.000739	73.9	43-126	WG423294
Benzo(g,h,i)perylene	ppm	.001	0.000799	79.9	39-128	WG423294
Benzo(k)fluoranthene	ppm	.001	0.000875	87.5	44-127	WG423294
Chrysene	ppm	.001	0.000725	72.5	36-137	WG423294
Dibenz(a,h)anthracene	ppm	.001	0.000788	78.8	39-129	WG423294
Fluoranthene	ppm	.001	0.000783	78.3	45-123	WG423294
Fluorene	ppm	.001	0.000781	78.1	41-118	WG423294
Indeno(1,2,3-cd)pyrene	ppm	.001	0.000813	81.3	39-129	WG423294
Naphthalene	ppm	.001	0.000725	72.5	26-111	WG423294
Phenanthrene	ppm	.001	0.000757	75.7	41-116	WG423294

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Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Pyrene	ppm	.001	0.000730	73.0	32-136	WG423294
2-Fluorobiphenyl				71.16	26-122	WG423294
Nitrobenzene-d5				71.26	12-120	WG423294
p-Terphenyl-d14				77.29	34-149	WG423294
1-Methylnaphthalene	ppm	.033	0.0234	70.8	41-110	WG423440
2-Chloronaphthalene	ppm	.033	0.0232	70.2	43-109	WG423440
2-Methylnaphthalene	ppm	.033	0.0224	67.9	38-104	WG423440
Acenaphthene	ppm	.033	0.0244	74.0	48-103	WG423440
Acenaphthylene	ppm	.033	0.0258	78.3	43-106	WG423440
Anthracene	ppm	.033	0.0275	83.3	51-110	WG423440
Benzo(a)anthracene	ppm	.033	0.0269	81.5	38-126	WG423440
Benzo(a)pyrene	ppm	.033	0.0279	84.5	47-118	WG423440
Benzo(b)fluoranthene	ppm	.033	0.0265	80.4	47-118	WG423440
Benzo(g,h,i)perylene	ppm	.033	0.0275	83.3	40-125	WG423440
Benzo(k)fluoranthene	ppm	.033	0.0299	90.5	45-121	WG423440
Chrysene	ppm	.033	0.0247	74.8	35-135	WG423440
Dibenz(a,h)anthracene	ppm	.033	0.0278	84.4	41-124	WG423440
Fluoranthene	ppm	.033	0.0277	83.8	50-114	WG423440
Fluorene	ppm	.033	0.0257	77.8	49-109	WG423440
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0280	84.7	40-126	WG423440
Naphthalene	ppm	.033	0.0230	69.8	36-100	WG423440
Phenanthrene	ppm	.033	0.0268	81.3	46-108	WG423440
Pyrene	ppm	.033	0.0257	78.0	30-136	WG423440
2-Fluorobiphenyl				72.64	30-120	WG423440
Nitrobenzene-d5				68.87	18-119	WG423440
p-Terphenyl-d14				80.00	23-143	WG423440
Diesel (C7-C26)	mg/l	.75	0.586	78.1	50-150	WG423626
Motor Oil (C16-C40)	mg/l	.75	0.697	92.9	50-150	WG423626
o-Terphenyl				86.81	50-150	WG423626
Mercury, Dissolved	mg/l	.003	0.00325	108.	85-115	WG423123
PCB 1260	mg/kg	.167	0.180	108.	62-131	WG423525
Decachlorobiphenyl				119.9*	18.9-115.8	WG423525
Tetrachloro-m-xylene				108.8	31.8-115.7	WG423525
1,1,1-Trichloroethane	mg/kg	.05	0.0456	91.1	62-135	WG423787
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0480	96.0	74-129	WG423787
1,1,2-Trichloroethane	mg/kg	.05	0.0490	97.9	77-124	WG423787
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0482	96.4	49-155	WG423787
1,1-Dichloroethane	mg/kg	.05	0.0477	95.4	61-134	WG423787
1,1-Dichloroethene	mg/kg	.05	0.0505	101.	53-136	WG423787
1,2,3-Trichlorobenzene	mg/kg	.05	0.0459	91.9	62-146	WG423787
1,2,4-Trichlorobenzene	mg/kg	.05	0.0452	90.4	61-148	WG423787
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0481	96.1	61-134	WG423787
1,2-Dibromoethane	mg/kg	.05	0.0482	96.4	76-127	WG423787
1,2-Dichlorobenzene	mg/kg	.05	0.0462	92.4	77-123	WG423787
1,2-Dichloroethane	mg/kg	.05	0.0448	89.5	58-141	WG423787
1,2-Dichloropropane	mg/kg	.05	0.0500	100.	71-128	WG423787
1,3-Dichlorobenzene	mg/kg	.05	0.0496	99.3	71-132	WG423787
1,4-Dichlorobenzene	mg/kg	.05	0.0441	88.3	72-123	WG423787
2-Butanone (MEK)	mg/kg	.25	0.204	81.7	51-131	WG423787

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Quality Assurance Report
Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2-Hexanone	mg/kg	.25	0.249	99.6	62-145	WG423787
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.236	94.4	61-143	WG423787
Acetone	mg/kg	.25	0.248	99.4	44-140	WG423787
Benzene	mg/kg	.05	0.0472	94.4	65-128	WG423787
Bromochloromethane	mg/kg	.05	0.0510	102.	73-130	WG423787
Bromodichloromethane	mg/kg	.05	0.0486	97.2	66-126	WG423787
Bromoform	mg/kg	.05	0.0517	103.	64-139	WG423787
Bromomethane	mg/kg	.05	0.0502	100.	41-175	WG423787
Carbon disulfide	mg/kg	.05	0.0397	79.5	36-161	WG423787
Carbon tetrachloride	mg/kg	.05	0.0466	93.2	60-140	WG423787
Chlorobenzene	mg/kg	.05	0.0492	98.3	75-125	WG423787
Chlorodibromomethane	mg/kg	.05	0.0496	99.3	72-137	WG423787
Chloroethane	mg/kg	.05	0.0517	103.	44-159	WG423787
Chloroform	mg/kg	.05	0.0453	90.6	63-123	WG423787
Chloromethane	mg/kg	.05	0.0500	100.	42-149	WG423787
cis-1,2-Dichloroethene	mg/kg	.05	0.0495	99.0	71-129	WG423787
cis-1,3-Dichloropropene	mg/kg	.05	0.0468	93.7	73-132	WG423787
Dichlorodifluoromethane	mg/kg	.05	0.0585	117.	26-186	WG423787
Ethylbenzene	mg/kg	.05	0.0494	98.9	74-128	WG423787
Isopropylbenzene	mg/kg	.05	0.0505	101.	73-130	WG423787
Methyl tert-butyl ether	mg/kg	.05	0.0457	91.3	44-148	WG423787
Methylene Chloride	mg/kg	.05	0.0466	93.2	57-129	WG423787
Styrene	mg/kg	.05	0.0509	102.	76-133	WG423787
Tetrachloroethene	mg/kg	.05	0.0488	97.6	65-135	WG423787
Toluene	mg/kg	.05	0.0446	89.2	70-120	WG423787
trans-1,2-Dichloroethene	mg/kg	.05	0.0498	99.6	61-133	WG423787
trans-1,3-Dichloropropene	mg/kg	.05	0.0456	91.2	70-135	WG423787
Trichloroethene	mg/kg	.05	0.0496	99.3	71-126	WG423787
Trichlorofluoromethane	mg/kg	.05	0.0483	96.6	52-147	WG423787
Vinyl chloride	mg/kg	.05	0.0491	98.2	50-151	WG423787
4-Bromofluorobenzene				102.3	59-140	WG423787
Dibromofluoromethane				97.37	63-139	WG423787
Toluene-d8				98.08	84-116	WG423787
1,2,4,5-Tetrachlorobenzene	ppm	.333	0.277	83.2	51-112	WG423526
2,4,5-Trichlorophenol	ppm	.333	0.247	74.1	53-110	WG423526
2,4,6-Trichlorophenol	ppm	.333	0.249	74.7	56-109	WG423526
2,4-Dichlorophenol	ppm	.333	0.253	76.1	54-107	WG423526
2,4-Dimethylphenol	ppm	.333	0.432	130.*	58-119	WG423526
2,4-Dinitrophenol	ppm	.333	0.248	74.3	16-130	WG423526
2,4-Dinitrotoluene	ppm	.333	0.269	80.9	53-120	WG423526
2,6-Dinitrotoluene	ppm	.333	0.270	81.0	56-113	WG423526
2-Chloronaphthalene	ppm	.333	0.248	74.4	55-103	WG423526
2-Chlorophenol	ppm	.333	0.247	74.2	52-108	WG423526
2-Methylnaphthalene	ppm	.333	0.273	82.1	52-107	WG423526
2-Methylphenol	ppm	.333	0.287	86.1	58-116	WG423526
2-Nitroaniline	ppm	.333	0.248	74.3	54-116	WG423526
2-Nitrophenol	ppm	.333	0.275	82.5	38-110	WG423526
3&4-Methyl Phenol	ppm	.333	0.322	96.8	60-136	WG423526
3,3-Dichlorobenzidine	ppm	.333	0.238	71.4	24-123	WG423526
3-Nitroaniline	ppm	.333	0.246	73.8	17-135	WG423526
4,6-Dinitro-2-methylphenol	ppm	.333	0.234	70.4	34-111	WG423526
4-Bromophenyl-phenylether	ppm	.333	0.220	66.1	47-98	WG423526
4-Chloro-3-methylphenol	ppm	.333	0.278	83.4	54-116	WG423526
4-Chloroaniline	ppm	.333	0.289	86.8	18-130	WG423526
4-Chlorophenyl-phenylether	ppm	.333	0.249	74.8	55-106	WG423526
4-Nitroaniline	ppm	.333	0.257	77.1	16-133	WG423526
4-Nitrophenol	ppm	.333	0.261	78.5	34-123	WG423526

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Level II

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June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Acenaphthene	ppm	.333	0.269	80.7	54-102	WG423526
Acenaphthylene	ppm	.333	0.271	81.4	56-104	WG423526
Acetophenone	ppm	.333	0.258	77.5	42-92	WG423526
Anthracene	ppm	.333	0.288	86.6	57-112	WG423526
Atrazine	ppm	.333	0.292	87.6	40-143	WG423526
Benzaldehyde	ppm	.333	0.0869	26.1	0-69	WG423526
Benzo(a)anthracene	ppm	.333	0.293	88.1	55-105	WG423526
Benzo(a)pyrene	ppm	.333	0.269	80.7	59-114	WG423526
Benzo(b)fluoranthene	ppm	.333	0.234	70.4	44-116	WG423526
Benzo(g,h,i)perylene	ppm	.333	0.271	81.5	41-127	WG423526
Benzo(k)fluoranthene	ppm	.333	0.306	91.9	36-119	WG423526
Benzylbutyl phthalate	ppm	.333	0.295	88.4	57-130	WG423526
Biphenyl	ppm	.333	0.238	71.5	54-103	WG423526
Bis(2-chlorethoxy)methane	ppm	.333	0.250	75.2	52-107	WG423526
Bis(2-chloroethyl)ether	ppm	.333	0.232	69.6	38-115	WG423526
Bis(2-chloroisopropyl)ether	ppm	.333	0.253	76.0	49-106	WG423526
Bis(2-ethylhexyl)phthalate	ppm	.333	0.292	87.6	50-130	WG423526
Caprolactam	ppm	.333	0.292	87.7	43-131	WG423526
Carbazole	ppm	.333	0.269	80.7	42-120	WG423526
Chrysene	ppm	.333	0.266	80.0	54-103	WG423526
Di-n-butyl phthalate	ppm	.333	0.283	85.1	56-121	WG423526
Di-n-octyl phthalate	ppm	.333	0.281	84.4	50-128	WG423526
Dibenz(a,h)anthracene	ppm	.333	0.263	79.1	42-128	WG423526
Dibenzofuran	ppm	.333	0.262	78.8	56-111	WG423526
Diethyl phthalate	ppm	.333	0.251	75.3	57-110	WG423526
Dimethyl phthalate	ppm	.333	0.244	73.2	57-108	WG423526
Fluoranthene	ppm	.333	0.285	85.5	51-109	WG423526
Fluorene	ppm	.333	0.275	82.6	53-106	WG423526
Hexachloro-1,3-butadiene	ppm	.333	0.267	80.1	46-110	WG423526
Hexachlorobenzene	ppm	.333	0.254	76.1	51-117	WG423526
Hexachlorocyclopentadiene	ppm	.333	0.267	80.1	21-127	WG423526
Hexachloroethane	ppm	.333	0.236	70.8	43-104	WG423526
Indeno(1,2,3-cd)pyrene	ppm	.333	0.262	78.6	42-127	WG423526
Isophorone	ppm	.333	0.259	77.8	56-116	WG423526
n-Nitrosodi-n-propylamine	ppm	.333	0.239	71.7	54-113	WG423526
n-Nitrosodiphenylamine	ppm	.333	0.257	77.2	66-126	WG423526
Naphthalene	ppm	.333	0.249	74.9	46-97	WG423526
Nitrobenzene	ppm	.333	0.246	73.8	46-102	WG423526
Pentachlorophenol	ppm	.333	0.261	78.4	37-118	WG423526
Phenanthrene	ppm	.333	0.271	81.3	56-102	WG423526
Phenol	ppm	.333	0.269	80.7	55-115	WG423526
Pyrene	ppm	.333	0.281	84.4	53-111	WG423526
2,4,6-Tribromophenol				77.09	25-137	WG423526
2-Fluorobiphenyl				71.07	30-120	WG423526
2-Fluorophenol				77.89	26-130	WG423526
Nitrobenzene-d5				75.87	18-119	WG423526
Phenol-d5				78.27	37-141	WG423526
p-Terphenyl-d14				86.70	23-143	WG423526
Diesel Range Organics (DRO)	mg/l	.75	0.592	79.0	50-150	WG423739
Residual Range Organics (RRO)	mg/l	.75	0.569	75.8*	0-0	WG423739
o-Terphenyl				85.33	50-150	WG423739
1,1,1-Trichloroethane	mg/l	.025	0.0236	94.2	67-137	WG423629
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0184	73.7	72-128	WG423629
1,1,2-Trichloroethane	mg/l	.025	0.0199	79.7	79-123	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0206	82.3	51-149	WG423629

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Quality Assurance Report Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1-Dichloroethane	mg/l	.025	0.0238	95.4	67-133	WG423629
1,1-Dichloroethene	mg/l	.025	0.0241	96.4	60-130	WG423629
1,2,3-Trichlorobenzene	mg/l	.025	0.0207	82.8	63-138	WG423629
1,2,4-Trichlorobenzene	mg/l	.025	0.0218	87.3	65-137	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0189	75.7	55-134	WG423629
1,2-Dibromoethane	mg/l	.025	0.0187	74.7*	75-126	WG423629
1,2-Dichlorobenzene	mg/l	.025	0.0231	92.2	75-122	WG423629
1,2-Dichloroethane	mg/l	.025	0.0204	81.7	63-137	WG423629
1,2-Dichloropropane	mg/l	.025	0.0220	87.9	74-122	WG423629
1,3-Dichlorobenzene	mg/l	.025	0.0228	91.2	73-131	WG423629
1,4-Dichlorobenzene	mg/l	.025	0.0234	93.7	70-121	WG423629
2-Butanone (MEK)	mg/l	.125	0.0913	73.0	53-132	WG423629
2-Hexanone	mg/l	.125	0.0916	73.3	56-147	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.0967	77.4	60-142	WG423629
Acetone	mg/l	.125	0.106	84.9	48-134	WG423629
Benzene	mg/l	.025	0.0235	93.9	67-126	WG423629
Bromochloromethane	mg/l	.025	0.0216	86.5	75-128	WG423629
Bromodichloromethane	mg/l	.025	0.0224	89.5	68-133	WG423629
Bromoform	mg/l	.025	0.0207	82.9	60-139	WG423629
Bromomethane	mg/l	.025	0.0246	98.5	45-175	WG423629
Carbon disulfide	mg/l	.025	0.0242	96.9	41-148	WG423629
Carbon tetrachloride	mg/l	.025	0.0234	93.5	64-141	WG423629
Chlorobenzene	mg/l	.025	0.0230	91.9	77-125	WG423629
Chlorodibromomethane	mg/l	.025	0.0218	87.2	73-138	WG423629
Chloroethane	mg/l	.025	0.0247	98.7	49-155	WG423629
Chloroform	mg/l	.025	0.0216	86.4	66-126	WG423629
Chloromethane	mg/l	.025	0.0243	97.4	45-152	WG423629
cis-1,2-Dichloroethene	mg/l	.025	0.0237	94.7	72-128	WG423629
cis-1,3-Dichloropropene	mg/l	.025	0.0215	86.0	73-131	WG423629
Dichlorodifluoromethane	mg/l	.025	0.0246	98.3	39-189	WG423629
Ethylbenzene	mg/l	.025	0.0240	96.1	76-129	WG423629
Isopropylbenzene	mg/l	.025	0.0243	97.4	73-132	WG423629
Methyl tert-butyl ether	mg/l	.025	0.0211	84.3	51-142	WG423629
Methylene Chloride	mg/l	.025	0.0228	91.2	64-125	WG423629
Styrene	mg/l	.025	0.0229	91.4	78-130	WG423629
Tetrachloroethene	mg/l	.025	0.0243	97.4	67-135	WG423629
Toluene	mg/l	.025	0.0228	91.1	72-122	WG423629
trans-1,2-Dichloroethene	mg/l	.025	0.0241	96.5	67-129	WG423629
trans-1,3-Dichloropropene	mg/l	.025	0.0196	78.3	66-137	WG423629
Trichloroethene	mg/l	.025	0.0237	94.9	74-126	WG423629
Trichlorofluoromethane	mg/l	.025	0.0244	97.5	54-156	WG423629
Vinyl chloride	mg/l	.025	0.0239	95.5	55-153	WG423629
4-Bromofluorobenzene				92.07	75-128	WG423629
Dibromofluoromethane				100.3	79-125	WG423629
Toluene-d8				99.01	87-114	WG423629
Beryllium, Dissolved	mg/l	1.13	0.982	86.9	85-115	WG423363
Cadmium, Dissolved	mg/l	1.13	1.05	92.9	85-115	WG423363
Chromium, Dissolved	mg/l	1.13	1.04	92.0	85-115	WG423363
Copper, Dissolved	mg/l	1.13	1.04	92.0	85-115	WG423363
Lead, Dissolved	mg/l	1.13	1.09	96.5	85-115	WG423363
Nickel, Dissolved	mg/l	1.13	1.06	93.8	85-115	WG423363
Selenium, Dissolved	mg/l	1.13	1.01	89.4	85-115	WG423363
Silver, Dissolved	mg/l	1.13	1.03	91.2	85-115	WG423363
Zinc, Dissolved	mg/l	1.13	1.02	90.3	85-115	WG423363
PCB 1260	mg/l	.0005	0.000348	69.7	46-126	WG423854

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Quality Assurance Report
Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Decachlorobiphenyl				72.26	10-122.6	
Tetrachloro-m-xylene				60.70	15.3-114.2	
Antimony	mg/kg	85.1	39.1	45.9	1.2-242.1	WG423454
Arsenic	mg/kg	192	182.	94.8	78.6-120.8	WG423454
Beryllium	mg/kg	69.3	68.9	99.4	79.8-120.1	WG423454
Cadmium	mg/kg	70.1	67.2	95.9	78.5-121.5	WG423454
Chromium	mg/kg	168	171.	102.	80.4-120.2	WG423454
Copper	mg/kg	122	128.	105.	81.6-119.7	WG423454
Lead	mg/kg	113	106.	93.8	77.3-122.1	WG423454
Nickel	mg/kg	74.1	76.2	103.	78.8-121.2	WG423454
Selenium	mg/kg	176	170.	96.6	75.6-125.0	WG423454
Silver	mg/kg	115	101.	87.8	66-133.9	WG423454
Thallium	mg/kg	111	100.	90.1	77.6-122.5	WG423454
Zinc	mg/kg	437	427.	97.7	78.5-121.7	WG423454
1,2,4,5-Tetrachlorobenzene	ppm	.01	0.00745	74.5	39-116	WG424340
2,4,5-Trichlorophenol	ppm	.01	0.00740	74.0	48-120	WG424340
2,4,6-Trichlorophenol	ppm	.01	0.00736	73.6	49-118	WG424340
2,4-Dichlorophenol	ppm	.01	0.00697	69.7	46-115	WG424340
2,4-Dimethylphenol	ppm	.01	0.0102	102.	40-124	WG424340
2,4-Dinitrophenol	ppm	.01	0.00442	44.2	10-125	WG424340
2,4-Dinitrotoluene	ppm	.01	0.00786	78.6	56-128	WG424340
2,6-Dinitrotoluene	ppm	.01	0.00730	73.0	56-121	WG424340
2-Chloronaphthalene	ppm	.01	0.00696	69.6	44-110	WG424340
2-Chlorophenol	ppm	.01	0.00571	57.1	38-114	WG424340
2-Methylnaphthalene	ppm	.01	0.00717	71.7	28-122	WG424340
2-Methylphenol	ppm	.01	0.00569	56.9	42-99	WG424340
2-Nitroaniline	ppm	.01	0.00738	73.8	55-124	WG424340
2-Nitrophenol	ppm	.01	0.00706	70.6	35-118	WG424340
3&4-methyl phenol	ppm	.01	0.00558	55.8	36-102	WG424340
3,3-Dichlorobenzidine	ppm	.01	0.00819	81.9	46-145	WG424340
3-Nitroaniline	ppm	.01	0.00702	70.2	39-141	WG424340
4,6-Dinitro-2-methylphenol	ppm	.01	0.00676	67.6	24-119	WG424340
4-Bromophenyl-phenylether	ppm	.01	0.00643	64.3	45-105	WG424340
4-Chloro-3-methylphenol	ppm	.01	0.00629	62.9	47-116	WG424340
4-Chloroaniline	ppm	.01	0.00666	66.6	21-151	WG424340
4-Chlorophenyl-phenylether	ppm	.01	0.00741	74.1	49-116	WG424340
4-Nitroaniline	ppm	.01	0.00765	76.5	43-144	WG424340
4-Nitrophenol	ppm	.01	0.00173	17.3	10-66	WG424340
Acenaphthene	ppm	.01	0.00733	73.3	48-110	WG424340
Acenaphthylene	ppm	.01	0.00743	74.3	48-113	WG424340
Acetophenone	ppm	.01	0.00581	58.1	35-98	WG424340
Anthracene	ppm	.01	0.00824	82.4	55-127	WG424340
Atrazine	ppm	.01	0.00909	90.9	43-159	WG424340
Benzaldehyde	ppm	.01	0.00225	22.5	1-78	WG424340
Benzo(a)anthracene	ppm	.01	0.00797	79.7	57-115	WG424340
Benzo(a)pyrene	ppm	.01	0.00830	83.0	63-125	WG424340
Benzo(b)fluoranthene	ppm	.01	0.00848	84.8	50-123	WG424340
Benzo(g,h,i)perylene	ppm	.01	0.0101	101.	39-143	WG424340
Benzo(k)fluoranthene	ppm	.01	0.00679	67.9	45-126	WG424340
Benzylbutyl phthalate	ppm	.01	0.00380	38.0	22-154	WG424340
Biphenyl	ppm	.01	0.00685	68.5	45-111	WG424340
Bis(2-chlorethoxy)methane	ppm	.01	0.00658	65.8	42-116	WG424340
Bis(2-chloroethyl)ether	ppm	.01	0.00587	58.7	26-115	WG424340
Bis(2-chloroisopropyl)ether	ppm	.01	0.00570	57.0	32-115	WG424340
Bis(2-ethylhexyl)phthalate	ppm	.01	0.00791	79.1	47-143	WG424340
Caprolactam	ppm	.01	0.00153	15.3	11-33	WG424340
Carbazole	ppm	.01	0.00734	73.4	49-133	WG424340

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Quality Assurance Report
Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Chrysene	ppm	.01	0.00801	80.1	58-113	WG424340
Di-n-butyl phthalate	ppm	.01	0.00611	61.1	51-131	WG424340
Di-n-octyl phthalate	ppm	.01	0.00766	76.6	51-138	WG424340
Dibenz(a,h)anthracene	ppm	.01	0.00970	97.0	39-144	WG424340
Dibenzofuran	ppm	.01	0.00720	72.0	50-121	WG424340
Diethyl phthalate	ppm	.01	0.00478	47.8	36-128	WG424340
Dimethyl phthalate	ppm	.01	0.00230	23.0	10-135	WG424340
Fluoranthene	ppm	.01	0.00816	81.6	53-119	WG424340
Fluorene	ppm	.01	0.00777	77.7	49-116	WG424340
Hexachloro-1,3-butadiene	ppm	.01	0.00685	68.5	21-116	WG424340
Hexachlorobenzene	ppm	.01	0.00753	75.3	51-121	WG424340
Hexachlorocyclopentadiene	ppm	.01	0.00455	45.5	4-126	WG424340
Hexachloroethane	ppm	.01	0.00477	47.7	15-109	WG424340
Indeno(1,2,3-cd)pyrene	ppm	.01	0.00953	95.3	40-143	WG424340
Isophorone	ppm	.01	0.00644	64.4	48-126	WG424340
n-Nitrosodi-n-propylamine	ppm	.01	0.00607	60.7	47-122	WG424340
n-Nitrosodiphenylamine	ppm	.01	0.00683	68.3	59-143	WG424340
Naphthalene	ppm	.01	0.00651	65.1	29-103	WG424340
Nitrobenzene	ppm	.01	0.00569	56.9	31-105	WG424340
Pentachlorophenol	ppm	.01	0.00535	53.5	20-122	WG424340
Phenanthrene	ppm	.01	0.00759	75.9	54-112	WG424340
Phenol	ppm	.01	0.00279	27.9	17-52	WG424340
Pyrene	ppm	.01	0.00779	77.9	46-130	WG424340
2,4,6-Tribromophenol				84.72	10-148	WG424340
2-Fluorobiphenyl				71.63	26-122	WG424340
2-Fluorophenol				34.68	10-87	WG424340
Nitrobenzene-d5				52.09	12-120	WG424340
Phenol-d5				21.41	10-67	WG424340
p-Terphenyl-d14				96.77	34-149	WG424340
Beryllium	mg/l	1.13	1.08	95.6	85-115	WG424232
Cadmium	mg/l	1.13	1.10	97.3	85-115	WG424232
Chromium	mg/l	1.13	1.08	95.6	85-115	WG424232
Copper	mg/l	1.13	1.10	97.3	85-115	WG424232
Lead	mg/l	1.13	1.15	102.	85-115	WG424232
Nickel	mg/l	1.13	1.12	99.1	85-115	WG424232
Selenium	mg/l	1.13	1.10	97.3	85-115	WG424232
Silver	mg/l	1.13	1.11	98.2	85-115	WG424232
Zinc	mg/l	1.13	1.07	94.7	85-115	WG424232
Mercury	mg/l	.003	0.00338	113.	85-115	WG424233
Lead	mg/kg	113	114.	101.	77.3-122.1	WG424566
Antimony,Dissolved	mg/l	.0567	0.0515	90.8	85-115	WG423775
Arsenic,Dissolved	mg/l	.0567	0.0517	91.2	85-115	WG423775
Thallium,Dissolved	mg/l	.0567	0.0507	89.4	85-115	WG423775
Diesel Range Organics (DRO)	mg/kg	30	25.5	85.0	60-140	WG424943
Residual Range Organics (RRO)	mg/kg	30	24.9	82.9*	0-0	WG424943
o-Terphenyl				86.82	50-150	WG424943
Antimony	mg/l	.0567	0.0556	98.1	85-115	WG424398

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/l	.0567	0.0525	92.6	85-115	WG424398
Thallium	mg/l	.0567	0.0554	97.7	85-115	WG424398
Mercury	mg/l	.003	0.00311	104.	85-115	WG426094
Mercury, Dissolved	mg/l	.003	0.00291	97.0	85-115	WG426098
Beryllium	mg/l	1.13	1.08	95.6	85-115	WG426343
Cadmium	mg/l	1.13	1.13	100.	85-115	WG426343
Chromium	mg/l	1.13	1.07	94.7	85-115	WG426343
Copper	mg/l	1.13	1.13	100.	85-115	WG426343
Lead	mg/l	1.13	1.10	97.3	85-115	WG426343
Nickel	mg/l	1.13	1.10	97.3	85-115	WG426343
Selenium	mg/l	1.13	1.03	91.2	85-115	WG426343
Silver	mg/l	1.13	1.09	96.5	85-115	WG426343
Zinc	mg/l	1.13	1.09	96.5	85-115	WG426343
Antimony	mg/l	.0567	0.0577	102.	85-115	WG426269
Arsenic	mg/l	.0567	0.0547	96.5	85-115	WG426269
Thallium	mg/l	.0567	0.0573	101.	85-115	WG426269
Antimony, Dissolved	mg/l	.0567	0.0577	102.	85-115	WG426484
Arsenic, Dissolved	mg/l	.0567	0.0555	97.9	85-115	WG426484
Thallium, Dissolved	mg/l	.0567	0.0619	109.	85-115	WG426484

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
PCB 1260	mg/kg	0.133	0.142	79.0	62-131	6.90	22	WG423182
Decachlorobiphenyl				81.37	18.9-115.8			WG423182
Tetrachloro-m-xylene				103.5	31.8-115.7			WG423182
Diesel (C7-C26)	mg/l	0.559	0.624	75.0	50-150	10.9	20	WG422935
Motor Oil (C16-C40)	mg/l	0.481	0.556	64.0	50-150	14.6	25	WG422935
o-Terphenyl				85.65	50-150			WG422935
Diesel (C7-C26)	mg/kg	24.8	23.6	83.0	50-150	5.02	20	WG423285
Motor Oil (C16-C40)	mg/kg	23.1	22.8	77.0	50-150	1.24	25	WG423285
o-Terphenyl				90.89	50-150			WG423285
1,1,1-Trichloroethane	mg/kg	0.0503	0.0528	101.	62-135	4.95	20	WG423335
1,1,2,2-Tetrachloroethane	mg/kg	0.0430	0.0443	86.0	74-129	2.78	20	WG423335
1,1,2-Trichloroethane	mg/kg	0.0428	0.0434	86.0	77-124	1.40	20	WG423335
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0383	0.0394	77.0	49-155	2.82	20	WG423335
1,1-Dichloroethane	mg/kg	0.0539	0.0559	108.	61-134	3.70	20	WG423335
1,1-Dichloroethene	mg/kg	0.0431	0.0442	86.0	53-136	2.41	20	WG423335
1,2,3-Trichlorobenzene	mg/kg	0.0456	0.0460	91.0	62-146	0.889	20	WG423335
1,2,4-Trichlorobenzene	mg/kg	0.0485	0.0506	97.0	61-148	4.36	20	WG423335
1,2-Dibromo-3-Chloropropane	mg/kg	0.0430	0.0440	86.0	61-134	2.38	21	WG423335
1,2-Dibromoethane	mg/kg	0.0462	0.0466	92.0	76-127	0.859	20	WG423335
1,2-Dichlorobenzene	mg/kg	0.0468	0.0484	94.0	77-123	3.35	20	WG423335

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Tax I.D. 62-0814289

Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440

Quality Assurance Report
Level II

West Linn, OR 97068

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,2-Dichloroethane	mg/kg	0.0552	0.0578	110.	58-141	4.66	20	WG423335
1,2-Dichloropropane	mg/kg	0.0523	0.0515	105.	71-128	1.51	20	WG423335
1,3-Dichlorobenzene	mg/kg	0.0459	0.0474	92.0	71-132	3.14	20	WG423335
1,4-Dichlorobenzene	mg/kg	0.0466	0.0475	93.0	72-123	2.02	20	WG423335
2-Butanone (MEK)	mg/kg	0.229	0.235	92.0	51-131	2.48	25	WG423335
2-Hexanone	mg/kg	0.225	0.225	90.0	62-145	0.258	23	WG423335
4-Methyl-2-pentanone (MIBK)	mg/kg	0.237	0.238	95.0	61-143	0.512	23	WG423335
Acetone	mg/kg	0.244	0.255	98.0	44-140	4.35	25	WG423335
Benzene	mg/kg	0.0509	0.0528	102.	65-128	3.48	20	WG423335
Bromochloromethane	mg/kg	0.0522	0.0531	104.	73-130	1.71	20	WG423335
Bromodichloromethane	mg/kg	0.0450	0.0460	90.0	66-126	2.31	20	WG423335
Bromoform	mg/kg	0.0422	0.0423	84.0	64-139	0.239	20	WG423335
Bromomethane	mg/kg	0.0453	0.0470	91.0	41-175	3.54	20	WG423335
Carbon disulfide	mg/kg	0.0413	0.0420	83.0	36-161	1.68	20	WG423335
Carbon tetrachloride	mg/kg	0.0528	0.0536	106.	60-140	1.53	20	WG423335
Chlorobenzene	mg/kg	0.0444	0.0454	89.0	75-125	2.14	20	WG423335
Chlorodibromomethane	mg/kg	0.0424	0.0435	85.0	72-137	2.58	20	WG423335
Chloroethane	mg/kg	0.0495	0.0509	99.0	44-159	2.70	20	WG423335
Chloroform	mg/kg	0.0539	0.0555	108.	63-123	2.91	20	WG423335
Chloromethane	mg/kg	0.0517	0.0531	103.	42-149	2.65	20	WG423335
cis-1,2-Dichloroethene	mg/kg	0.0490	0.0506	98.0	71-129	3.26	20	WG423335
cis-1,3-Dichloropropene	mg/kg	0.0526	0.0533	105.	73-132	1.44	20	WG423335
Dichlorodifluoromethane	mg/kg	0.0473	0.0494	95.0	26-186	4.45	22	WG423335
Ethylbenzene	mg/kg	0.0458	0.0465	92.0	74-128	1.43	20	WG423335
Isopropylbenzene	mg/kg	0.0452	0.0461	90.0	73-130	1.87	20	WG423335
Methyl tert-butyl ether	mg/kg	0.0451	0.0462	90.0	44-148	2.48	20	WG423335
Methylene Chloride	mg/kg	0.0459	0.0477	92.0	57-129	3.88	20	WG423335
Styrene	mg/kg	0.0458	0.0470	92.0	76-133	2.54	20	WG423335
Tetrachloroethene	mg/kg	0.0435	0.0427	87.0	65-135	1.77	20	WG423335
Toluene	mg/kg	0.0486	0.0487	97.0	70-120	0.191	20	WG423335
trans-1,2-Dichloroethene	mg/kg	0.0494	0.0505	99.0	61-133	2.24	20	WG423335
trans-1,3-Dichloropropene	mg/kg	0.0511	0.0520	102.	70-135	1.86	20	WG423335
Trichloroethene	mg/kg	0.0485	0.0486	97.0	71-126	0.322	20	WG423335
Trichlorofluoromethane	mg/kg	0.0492	0.0499	98.0	52-147	1.42	20	WG423335
Vinyl chloride	mg/kg	0.0556	0.0576	111.	50-151	3.51	20	WG423335
4-Bromofluorobenzene				95.24	59-140			WG423335
Dibromofluoromethane				100.8	63-139			WG423335
Toluene-d8				104.5	84-116			WG423335
1-Methylnaphthalene	ppm	0.000792	0.000752	79.0	30-123	5.09	32	WG423294
2-Chloronaphthalene	ppm	0.000812	0.000731	81.0	34-120	10.5	30	WG423294
2-Methylnaphthalene	ppm	0.000803	0.000737	80.0	29-116	8.64	31	WG423294
Acenaphthene	ppm	0.000839	0.000762	84.0	40-113	9.59	25	WG423294
Acenaphthylene	ppm	0.000844	0.000786	84.0	36-115	7.12	25	WG423294
Anthracene	ppm	0.000888	0.000791	89.0	45-118	11.5	26	WG423294
Benzo(a)anthracene	ppm	0.000785	0.000749	78.0	36-129	4.59	26	WG423294
Benzo(a)pyrene	ppm	0.000848	0.000810	85.0	44-124	4.57	21	WG423294
Benzo(b)fluoranthene	ppm	0.000856	0.000739	86.0	43-126	14.6	38	WG423294
Benzo(g,h,i)perylene	ppm	0.000833	0.000799	83.0	39-128	4.16	20	WG423294
Benzo(k)fluoranthene	ppm	0.000846	0.000875	85.0	44-127	3.45	39	WG423294
Chrysene	ppm	0.000789	0.000725	79.0	36-137	8.49	22	WG423294
Dibenz(a,h)anthracene	ppm	0.000830	0.000788	83.0	39-129	5.13	20	WG423294
Fluoranthene	ppm	0.000883	0.000783	88.0	45-123	11.9	25	WG423294
Fluorene	ppm	0.000852	0.000781	85.0	41-118	8.66	26	WG423294
Indeno(1,2,3-cd)pyrene	ppm	0.000845	0.000813	85.0	39-129	3.92	20	WG423294
Naphthalene	ppm	0.000769	0.000725	77.0	26-111	5.82	32	WG423294
Phenanthrene	ppm	0.000899	0.000757	90.0	41-116	17.2	25	WG423294
Pyrene	ppm	0.000782	0.000730	78.0	32-136	6.77	22	WG423294

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Analyte	Laboratory Control Sample Duplicate				Limit	RPD	Limit	Batch
	Units	Result	Ref	%Rec				
2-Fluorobiphenyl				76.49	26-122			
Nitrobenzene-d5				77.02	12-120			
p-Terphenyl-d14				83.21	34-149			
1-Methylnaphthalene	ppm	0.0235	0.0234	71.0	41-110	0.538	24	WG423440
2-Chloronaphthalene	ppm	0.0236	0.0232	72.0	43-109	1.93	21	WG423440
2-Methylnaphthalene	ppm	0.0235	0.0224	71.0	38-104	4.70	24	WG423440
Acenaphthene	ppm	0.0256	0.0244	77.0	48-103	4.55	20	WG423440
Acenaphthylene	ppm	0.0268	0.0258	81.0	43-106	3.76	20	WG423440
Anthracene	ppm	0.0300	0.0275	91.0	51-110	8.88	22	WG423440
Benzo(a)anthracene	ppm	0.0282	0.0269	85.0	38-126	4.53	20	WG423440
Benzo(a)pyrene	ppm	0.0291	0.0279	88.0	47-118	4.38	20	WG423440
Benzo(b)fluoranthene	ppm	0.0269	0.0265	81.0	47-118	1.24	29	WG423440
Benzo(g,h,i)perylene	ppm	0.0290	0.0275	88.0	40-125	5.30	20	WG423440
Benzo(k)fluoranthene	ppm	0.0321	0.0299	97.0	45-121	7.34	31	WG423440
Chrysene	ppm	0.0267	0.0247	81.0	35-135	7.65	20	WG423440
Dibenz(a,h)anthracene	ppm	0.0288	0.0278	87.0	41-124	3.51	20	WG423440
Fluoranthene	ppm	0.0296	0.0277	90.0	50-114	6.66	20	WG423440
Fluorene	ppm	0.0268	0.0257	81.0	49-109	4.20	19	WG423440
Indeno(1,2,3-cd)pyrene	ppm	0.0292	0.0280	89.0	40-126	4.41	20	WG423440
Naphthalene	ppm	0.0239	0.0230	73.0	36-100	3.85	24	WG423440
Phenanthrene	ppm	0.0278	0.0268	84.0	46-108	3.57	21	WG423440
Pyrene	ppm	0.0279	0.0257	85.0	30-136	8.06	20	WG423440
2-Fluorobiphenyl				73.91	30-120			WG423440
Nitrobenzene-d5				71.07	18-119			WG423440
p-Terphenyl-d14				86.60	23-143			WG423440
Diesel (C7-C26)	mg/l	0.609	0.586	81.0	50-150	3.93	20	WG423626
Motor Oil (C16-C40)	mg/l	0.664	0.697	89.0	50-150	4.75	25	WG423626
o-Terphenyl				87.22	50-150			WG423626
PCB 1260	mg/kg	0.174	0.180	104.	62-131	3.00	22	WG423525
Decachlorobiphenyl				112.4	18.9-115.8			WG423525
Tetrachloro-m-xylene				106.2	31.8-115.7			WG423525
1,1,1-Trichloroethane	mg/kg	0.0439	0.0456	88.0	62-135	3.80	20	WG423787
1,1,2,2-Tetrachloroethane	mg/kg	0.0470	0.0480	94.0	74-129	2.19	20	WG423787
1,1,2-Trichloroethane	mg/kg	0.0491	0.0490	98.0	77-124	0.156	20	WG423787
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0441	0.0482	88.0	49-155	8.92	20	WG423787
1,1-Dichloroethane	mg/kg	0.0454	0.0477	91.0	61-134	5.02	20	WG423787
1,1-Dichloroethene	mg/kg	0.0467	0.0505	93.0	53-136	7.84	20	WG423787
1,2,3-Trichlorobenzene	mg/kg	0.0460	0.0459	92.0	62-146	0.145	20	WG423787
1,2,4-Trichlorobenzene	mg/kg	0.0457	0.0452	91.0	61-148	1.07	20	WG423787
1,2-Dibromo-3-Chloropropane	mg/kg	0.0518	0.0481	104.	61-134	7.50	21	WG423787
1,2-Dibromoethane	mg/kg	0.0484	0.0482	97.0	76-127	0.483	20	WG423787
1,2-Dichlorobenzene	mg/kg	0.0463	0.0462	93.0	77-123	0.276	20	WG423787
1,2-Dichloroethane	mg/kg	0.0438	0.0448	88.0	58-141	2.25	20	WG423787
1,2-Dichloropropane	mg/kg	0.0500	0.0500	100.	71-128	0.0425	20	WG423787
1,3-Dichlorobenzene	mg/kg	0.0478	0.0496	96.0	71-132	3.78	20	WG423787
1,4-Dichlorobenzene	mg/kg	0.0444	0.0441	89.0	72-123	0.509	20	WG423787
2-Butanone (MEK)	mg/kg	0.211	0.204	84.0	51-131	3.34	25	WG423787
2-Hexanone	mg/kg	0.248	0.249	99.0	62-145	0.284	23	WG423787
4-Methyl-2-pentanone (MIBK)	mg/kg	0.250	0.236	100.	61-143	5.61	23	WG423787
Acetone	mg/kg	0.239	0.248	96.0	44-140	3.74	25	WG423787
Benzene	mg/kg	0.0458	0.0472	92.0	65-128	3.06	20	WG423787
Bromochloromethane	mg/kg	0.0506	0.0510	101.	73-130	0.848	20	WG423787
Bromodichloromethane	mg/kg	0.0481	0.0486	96.0	66-126	1.04	20	WG423787

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L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Bromoform	mg/kg	0.0525	0.0517	105.	64-139	1.40	20	WG423787
Bromomethane	mg/kg	0.0484	0.0502	97.0	41-175	3.63	20	WG423787
Carbon disulfide	mg/kg	0.0367	0.0397	73.0	36-161	7.92	20	WG423787
Carbon tetrachloride	mg/kg	0.0447	0.0466	89.0	60-140	4.23	20	WG423787
Chlorobenzene	mg/kg	0.0482	0.0492	96.0	75-125	2.01	20	WG423787
Chlorodibromomethane	mg/kg	0.0506	0.0496	101.	72-137	1.82	20	WG423787
Chloroethane	mg/kg	0.0498	0.0517	100.	44-159	3.87	20	WG423787
Chloroform	mg/kg	0.0434	0.0453	87.0	63-123	4.40	20	WG423787
Chloromethane	mg/kg	0.0455	0.0500	91.0	42-149	9.52	20	WG423787
cis-1,2-Dichloroethene	mg/kg	0.0472	0.0495	94.0	71-129	4.79	20	WG423787
cis-1,3-Dichloropropene	mg/kg	0.0477	0.0468	95.0	73-132	1.80	20	WG423787
Dichlorodifluoromethane	mg/kg	0.0538	0.0585	108.	26-186	8.32	22	WG423787
Ethylbenzene	mg/kg	0.0478	0.0494	96.0	74-128	3.36	20	WG423787
Isopropylbenzene	mg/kg	0.0481	0.0505	96.0	73-130	4.86	20	WG423787
Methyl tert-butyl ether	mg/kg	0.0451	0.0457	90.0	44-148	1.16	20	WG423787
Methylene Chloride	mg/kg	0.0447	0.0466	89.0	57-129	4.19	20	WG423787
Styrene	mg/kg	0.0491	0.0509	98.0	76-133	3.69	20	WG423787
Tetrachloroethene	mg/kg	0.0484	0.0488	97.0	65-135	0.822	20	WG423787
Toluene	mg/kg	0.0463	0.0446	93.0	70-120	3.84	20	WG423787
trans-1,2-Dichloroethene	mg/kg	0.0472	0.0498	94.0	61-133	5.32	20	WG423787
trans-1,3-Dichloropropene	mg/kg	0.0476	0.0456	95.0	70-135	4.32	20	WG423787
Trichloroethene	mg/kg	0.0496	0.0496	99.0	71-126	0.126	20	WG423787
Trichlorofluoromethane	mg/kg	0.0458	0.0483	92.0	52-147	5.37	20	WG423787
Vinyl chloride	mg/kg	0.0456	0.0491	91.0	50-151	7.51	20	WG423787
4-Bromofluorobenzene				100.1	59-140			WG423787
Dibromofluoromethane				96.84	63-139			WG423787
Toluene-d8				102.2	84-116			WG423787
1,2,4,5-Tetrachlorobenzene	ppm	0.268	0.277	81.0	51-112	3.21	21	WG423526
2,4,5-Trichlorophenol	ppm	0.247	0.247	74.0	53-110	0.303	25	WG423526
2,4,6-Trichlorophenol	ppm	0.251	0.249	75.0	56-109	0.696	20	WG423526
2,4-Dichlorophenol	ppm	0.241	0.253	72.0	54-107	5.07	21	WG423526
2,4-Dimethylphenol	ppm	0.389	0.432	117.	58-119	10.5	23	WG423526
2,4-Dinitrophenol	ppm	0.215	0.248	65.0	16-130	13.9	45	WG423526
2,4-Dinitrotoluene	ppm	0.264	0.269	79.0	53-120	2.03	23	WG423526
2,6-Dinitrotoluene	ppm	0.257	0.270	77.0	56-113	4.92	22	WG423526
2-Chloronaphthalene	ppm	0.233	0.248	70.0	55-103	6.32	20	WG423526
2-Chlorophenol	ppm	0.237	0.247	71.0	52-108	4.01	24	WG423526
2-Methylnaphthalene	ppm	0.248	0.273	74.0	52-107	9.82	21	WG423526
2-Methylphenol	ppm	0.273	0.287	82.0	58-116	4.95	22	WG423526
2-Nitroaniline	ppm	0.250	0.248	75.0	54-116	0.883	24	WG423526
2-Nitrophenol	ppm	0.255	0.275	76.0	38-110	7.62	24	WG423526
3&4-Methyl Phenol	ppm	0.311	0.322	93.0	60-136	3.65	29	WG423526
3,3-Dichlorobenzidine	ppm	0.223	0.238	67.0	24-123	6.29	35	WG423526
3-Nitroaniline	ppm	0.221	0.246	66.0	17-135	10.8	33	WG423526
4,6-Dinitro-2-methylphenol	ppm	0.219	0.234	66.0	34-111	6.58	33	WG423526
4-Bromophenyl-phenylether	ppm	0.219	0.220	66.0	47-98	0.734	23	WG423526
4-Chloro-3-methylphenol	ppm	0.260	0.278	78.0	54-116	6.75	23	WG423526
4-Chloroaniline	ppm	0.264	0.289	79.0	18-130	9.14	31	WG423526
4-Chlorophenyl-phenylether	ppm	0.249	0.249	75.0	55-106	0.293	22	WG423526
4-Nitroaniline	ppm	0.249	0.257	75.0	16-133	3.19	37	WG423526
4-Nitrophenol	ppm	0.248	0.261	74.0	34-123	5.22	36	WG423526
Acenaphthene	ppm	0.257	0.269	77.0	54-102	4.34	20	WG423526
Acenaphthylene	ppm	0.256	0.271	77.0	56-104	5.89	20	WG423526
Acetophenone	ppm	0.244	0.258	73.0	42-92	5.71	22	WG423526
Anthracene	ppm	0.271	0.288	81.0	57-112	6.18	21	WG423526
Atrazine	ppm	0.284	0.292	85.0	40-143	2.70	25	WG423526
Benzaldehyde	ppm	0.0864	0.0869	26.0	0-69	0.576	32	WG423526

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Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(a)anthracene	ppm	0.261	0.293	78.0	55-105	11.6	21	WG423526
Benzo(a)pyrene	ppm	0.271	0.269	81.0	59-114	0.900	22	WG423526
Benzo(b)fluoranthene	ppm	0.273	0.234	82.0	44-116	15.1	33	WG423526
Benzo(g,h,i)perylene	ppm	0.258	0.271	78.0	41-127	4.90	29	WG423526
Benzo(k)fluoranthene	ppm	0.256	0.306	77.0	36-119	17.7	37	WG423526
Benzylobutyl phthalate	ppm	0.270	0.295	81.0	57-130	8.82	27	WG423526
Biphenyl	ppm	0.225	0.238	68.0	54-103	5.72	21	WG423526
Bis(2-chlorethoxy)methane	ppm	0.249	0.250	75.0	52-107	0.668	21	WG423526
Bis(2-chloroethyl)ether	ppm	0.234	0.232	70.0	38-115	0.743	28	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.239	0.253	72.0	49-106	5.68	25	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.268	0.292	80.0	50-130	8.53	29	WG423526
Caprolactam	ppm	0.270	0.292	81.0	43-131	7.82	24	WG423526
Carbazole	ppm	0.246	0.269	74.0	42-120	8.84	26	WG423526
Chrysene	ppm	0.270	0.266	81.0	54-103	1.28	23	WG423526
Di-n-butyl phthalate	ppm	0.254	0.283	76.0	56-121	10.9	22	WG423526
Di-n-octyl phthalate	ppm	0.254	0.281	76.0	50-128	10.1	26	WG423526
Dibenz(a,h)anthracene	ppm	0.245	0.263	74.0	42-128	7.28	28	WG423526
Dibenzofuran	ppm	0.250	0.262	75.0	56-111	4.97	21	WG423526
Diethyl phthalate	ppm	0.244	0.251	73.0	57-110	2.75	20	WG423526
Dimethyl phthalate	ppm	0.232	0.244	70.0	57-108	5.22	20	WG423526
Fluoranthene	ppm	0.271	0.285	81.0	51-109	4.97	26	WG423526
Fluorene	ppm	0.252	0.275	76.0	53-106	8.88	20	WG423526
Hexachloro-1,3-butadiene	ppm	0.248	0.267	74.0	46-110	7.40	25	WG423526
Hexachlorobenzene	ppm	0.243	0.254	73.0	51-117	4.37	24	WG423526
Hexachlorocyclopentadiene	ppm	0.247	0.267	74.0	21-127	7.45	40	WG423526
Hexachloroethane	ppm	0.226	0.236	68.0	43-104	4.02	27	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.253	0.262	76.0	42-127	3.36	28	WG423526
Isophorone	ppm	0.237	0.259	71.0	56-116	9.09	21	WG423526
n-Nitrosodi-n-propylamine	ppm	0.236	0.239	71.0	54-113	1.25	21	WG423526
n-Nitrosodiphenylamine	ppm	0.239	0.257	72.0	66-126	7.44	22	WG423526
Naphthalene	ppm	0.239	0.249	72.0	46-97	4.31	23	WG423526
Nitrobenzene	ppm	0.237	0.246	71.0	46-102	3.81	23	WG423526
Pentachlorophenol	ppm	0.239	0.261	72.0	37-118	8.65	28	WG423526
Phenanthrene	ppm	0.254	0.271	76.0	56-102	6.50	20	WG423526
Phenol	ppm	0.250	0.269	75.0	55-115	7.43	22	WG423526
Pyrene	ppm	0.249	0.281	75.0	53-111	12.2	26	WG423526
2,4,6-Tribromophenol				70.50	25-137			WG423526
2-Fluorobiphenyl				65.47	30-120			WG423526
2-Fluorophenol				76.25	26-130			WG423526
Nitrobenzene-d5				70.18	18-119			WG423526
Phenol-d5				73.17	37-141			WG423526
p-Terphenyl-d14				79.39	23-143			WG423526
Diesel Range Organics (DRO)	mg/l	0.583	0.592	78.0	50-150	1.56	20	WG423739
Residual Range Organics (RRO)	mg/l	0.535	0.569	71*	-	6.10*	0	WG423739
o-Terphenyl				83.81	50-150			WG423739
1,1,1-Trichloroethane	mg/l	0.0241	0.0236	97.0	67-137	2.43	20	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.0223	0.0184	89.0	72-128	19.2	20	WG423629
1,1,2-Trichloroethane	mg/l	0.0233	0.0199	93.0	79-123	15.8	20	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0213	0.0206	85.0	51-149	3.26	20	WG423629
1,1-Dichloroethane	mg/l	0.0244	0.0238	98.0	67-133	2.28	20	WG423629
1,1-Dichloroethene	mg/l	0.0235	0.0241	94.0	60-130	2.69	20	WG423629
1,2,3-Trichlorobenzene	mg/l	0.0256	0.0207	102.	63-138	21.1*	20	WG423629
1,2,4-Trichlorobenzene	mg/l	0.0255	0.0218	102.	65-137	15.6	20	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.0204	0.0189	81.0	55-134	7.37	20	WG423629
1,2-Dibromoethane	mg/l	0.0230	0.0187	92.0	75-126	20.6*	20	WG423629

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Est. 1970

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Chris Kramer
1800 Blankenship Road, Suite 440

Quality Assurance Report
Level II

West Linn, OR 97068

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,2-Dichlorobenzene	mg/l	0.0242	0.0231	97.0	75-122	4.83	20	WG423629
1,2-Dichloroethane	mg/l	0.0242	0.0204	97.0	63-137	16.8	20	WG423629
1,2-Dichloropropane	mg/l	0.0239	0.0220	96.0	74-122	8.53	20	WG423629
1,3-Dichlorobenzene	mg/l	0.0244	0.0228	98.0	73-131	6.71	20	WG423629
1,4-Dichlorobenzene	mg/l	0.0239	0.0234	96.0	70-121	2.12	20	WG423629
2-Butanone (MEK)	mg/l	0.104	0.0913	83.0	53-132	13.1	20	WG423629
2-Hexanone	mg/l	0.111	0.0916	89.0	56-147	19.4	20	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	0.118	0.0967	94.0	60-142	19.5	20	WG423629
Acetone	mg/l	0.0996	0.106	80.0	48-134	6.28	20	WG423629
Benzene	mg/l	0.0244	0.0235	97.0	67-126	3.70	20	WG423629
Bromochloromethane	mg/l	0.0240	0.0216	96.0	75-128	10.4	20	WG423629
Bromodichloromethane	mg/l	0.0249	0.0224	100.	68-133	10.6	20	WG423629
Bromoform	mg/l	0.0246	0.0207	98.0	60-139	17.1	20	WG423629
Bromomethane	mg/l	0.0253	0.0246	101.	45-175	2.61	20	WG423629
Carbon disulfide	mg/l	0.0225	0.0242	90.0	41-148	7.43	20	WG423629
Carbon tetrachloride	mg/l	0.0228	0.0234	91.0	64-141	2.44	20	WG423629
Chlorobenzene	mg/l	0.0239	0.0230	96.0	77-125	4.05	20	WG423629
Chlorodibromomethane	mg/l	0.0249	0.0218	99.0	73-138	13.2	20	WG423629
Chloroethane	mg/l	0.0252	0.0247	101.	49-155	1.98	20	WG423629
Chloroform	mg/l	0.0226	0.0216	91.0	66-126	4.69	20	WG423629
Chloromethane	mg/l	0.0249	0.0243	100.	45-152	2.23	20	WG423629
cis-1,2-Dichloroethene	mg/l	0.0241	0.0237	97.0	72-128	1.95	20	WG423629
cis-1,3-Dichloropropene	mg/l	0.0253	0.0215	101.	73-131	16.0	20	WG423629
Dichlorodifluoromethane	mg/l	0.0245	0.0246	98.0	39-189	0.338	24	WG423629
Ethylbenzene	mg/l	0.0241	0.0240	96.0	76-129	0.179	20	WG423629
Isopropylbenzene	mg/l	0.0250	0.0243	100.	73-132	2.82	20	WG423629
Methyl tert-butyl ether	mg/l	0.0241	0.0211	96.0	51-142	13.4	20	WG423629
Methylene Chloride	mg/l	0.0241	0.0228	96.0	64-125	5.49	20	WG423629
Styrene	mg/l	0.0246	0.0229	98.0	78-130	7.14	20	WG423629
Tetrachloroethene	mg/l	0.0242	0.0243	97.0	67-135	0.713	20	WG423629
Toluene	mg/l	0.0240	0.0228	96.0	72-122	5.50	20	WG423629
trans-1,2-Dichloroethene	mg/l	0.0237	0.0241	95.0	67-129	1.63	20	WG423629
trans-1,3-Dichloropropene	mg/l	0.0247	0.0196	99.0	66-137	23.1*	20	WG423629
Trichloroethene	mg/l	0.0241	0.0237	97.0	74-126	1.69	20	WG423629
Trichlorofluoromethane	mg/l	0.0251	0.0244	101.	54-156	3.08	20	WG423629
Vinyl chloride	mg/l	0.0239	0.0239	96.0	55-153	0.189	20	WG423629
4-Bromofluorobenzene				98.20	75-128			WG423629
Dibromofluoromethane				103.1	79-125			WG423629
Toluene-d8				100.4	87-114			WG423629
PCB 1260	mg/l	0.000356	0.000348	71.0	46-126	2.21	34	WG423854
Decachlorobiphenyl				67.68	10-122.6			WG423854
Tetrachloro-m-xylene				62.80	15.3-114.2			WG423854
1,2,4,5-Tetrachlorobenzene	ppm	0.00706	0.00745	71.0	39-116	5.41	33	WG424340
2,4,5-Trichlorophenol	ppm	0.00777	0.00740	78.0	48-120	4.92	29	WG424340
2,4,6-Trichlorophenol	ppm	0.00744	0.00736	74.0	49-118	1.07	28	WG424340
2,4-Dichlorophenol	ppm	0.00670	0.00697	67.0	46-115	4.05	28	WG424340
2,4-Dimethylphenol	ppm	0.00941	0.0102	94.0	40-124	7.78	36	WG424340
2,4-Dinitrophenol	ppm	0.00407	0.00442	41.0	10-125	8.30	50	WG424340
2,4-Dinitrotoluene	ppm	0.00774	0.00786	77.0	56-128	1.51	24	WG424340
2,6-Dinitrotoluene	ppm	0.00770	0.00730	77.0	56-121	5.29	23	WG424340
2-Chloronaphthalene	ppm	0.00697	0.00696	70.0	44-110	0.183	30	WG424340
2-Chlorophenol	ppm	0.00523	0.00571	52.0	38-114	8.78	36	WG424340
2-Methylnaphthalene	ppm	0.00677	0.00717	68.0	28-122	5.76	36	WG424340
2-Methylphenol	ppm	0.00516	0.00569	52.0	42-99	9.76	26	WG424340
2-Nitroaniline	ppm	0.00728	0.00738	73.0	55-124	1.43	22	WG424340

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Quality Assurance Report
Level II

L403980

June 29, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
2-Nitrophenol	ppm	0.00633	0.00706	63.0	35-118	10.9	35	WG424340
3&4-methyl phenol	ppm	0.00533	0.00558	53.0	36-102	4.66	31	WG424340
3,3-Dichlorobenzidine	ppm	0.00792	0.00819	79.0	46-145	3.37	31	WG424340
3-Nitroaniline	ppm	0.00722	0.00702	72.0	39-141	2.76	32	WG424340
4,6-Dinitro-2-methylphenol	ppm	0.00662	0.00676	66.0	24-119	2.16	50	WG424340
4-Bromophenyl-phenylether	ppm	0.00639	0.00643	64.0	45-105	0.559	26	WG424340
4-Chloro-3-methylphenol	ppm	0.00624	0.00629	62.0	47-116	0.860	22	WG424340
4-Chloroaniline	ppm	0.00597	0.00666	60.0	21-151	11.0	36	WG424340
4-Chlorophenyl-phenylether	ppm	0.00752	0.00741	75.0	49-116	1.42	26	WG424340
4-Nitroaniline	ppm	0.00782	0.00765	78.0	43-144	2.14	34	WG424340
4-Nitrophenol	ppm	0.00165	0.00173	16.0	10-66	4.81	37	WG424340
Acenaphthene	ppm	0.00733	0.00733	73.0	48-110	0.0744	26	WG424340
Acenaphthylene	ppm	0.00758	0.00743	76.0	48-113	2.01	28	WG424340
Acetophenone	ppm	0.00553	0.00581	55.0	35-98	4.83	38	WG424340
Anthracene	ppm	0.00814	0.00824	81.0	55-127	1.18	24	WG424340
Atrazine	ppm	0.00910	0.00909	91.0	43-159	0.132	26	WG424340
Benzaldehyde	ppm	0.00211	0.00225	21.0	1-78	6.35	49	WG424340
Benzo(a)anthracene	ppm	0.00775	0.00797	77.0	57-115	2.87	20	WG424340
Benzo(a)pyrene	ppm	0.00814	0.00830	81.0	63-125	1.87	22	WG424340
Benzo(b)fluoranthene	ppm	0.00797	0.00848	80.0	50-123	6.21	32	WG424340
Benzo(g,h,i)perylene	ppm	0.0101	0.0101	101.	39-143	0.391	31	WG424340
Benzo(k)fluoranthene	ppm	0.00691	0.00679	69.0	45-126	1.78	37	WG424340
Benzylbutyl phthalate	ppm	0.00493	0.00380	49.0	22-154	25.9	29	WG424340
Biphenyl	ppm	0.00696	0.00685	70.0	45-111	1.49	30	WG424340
Bis(2-chlorethoxy)methane	ppm	0.00618	0.00658	62.0	42-116	6.28	38	WG424340
Bis(2-chloroethyl)ether	ppm	0.00556	0.00587	56.0	26-115	5.50	50	WG424340
Bis(2-chloroisopropyl)ether	ppm	0.00537	0.00570	54.0	32-115	6.02	47	WG424340
Bis(2-ethylhexyl)phthalate	ppm	0.00735	0.00791	73.0	47-143	7.35	24	WG424340
Caprolactam	ppm	0.00155	0.00153	15.0	11-33	0.980	37	WG424340
Carbazole	ppm	0.00694	0.00734	69.0	49-133	5.52	29	WG424340
Chrysene	ppm	0.00787	0.00801	79.0	58-113	1.79	21	WG424340
Di-n-butyl phthalate	ppm	0.00647	0.00611	65.0	51-131	5.80	22	WG424340
Di-n-octyl phthalate	ppm	0.00720	0.00766	72.0	51-138	6.26	22	WG424340
Dibenz(a,h)anthracene	ppm	0.00948	0.00970	95.0	39-144	2.33	30	WG424340
Dibenzofuran	ppm	0.00749	0.00720	75.0	50-121	3.93	26	WG424340
Diethyl phthalate	ppm	0.00606	0.00478	61.0	36-128	23.6	27	WG424340
Dimethyl phthalate	ppm	0.00404	0.00230	40.0	10-135	54.9*	33	WG424340
Fluoranthene	ppm	0.00784	0.00816	78.0	53-119	4.02	28	WG424340
Fluorene	ppm	0.00772	0.00777	77.0	49-116	0.599	25	WG424340
Hexachloro-1,3-butadiene	ppm	0.00634	0.00685	63.0	21-116	7.61	50	WG424340
Hexachlorobenzene	ppm	0.00805	0.00753	80.0	51-121	6.70	23	WG424340
Hexachlorocyclopentadiene	ppm	0.00428	0.00455	43.0	4-126	6.13	50	WG424340
Hexachloroethane	ppm	0.00465	0.00477	46.0	15-109	2.59	50	WG424340
Indeno(1,2,3-cd)pyrene	ppm	0.00949	0.00953	95.0	40-143	0.425	30	WG424340
Isophorone	ppm	0.00612	0.00644	61.0	48-126	5.05	31	WG424340
n-Nitrosodi-n-propylamine	ppm	0.00585	0.00607	59.0	47-122	3.60	33	WG424340
n-Nitrosodiphenylamine	ppm	0.00676	0.00683	68.0	59-143	1.10	23	WG424340
Naphthalene	ppm	0.00637	0.00651	64.0	29-103	2.15	45	WG424340
Nitrobenzene	ppm	0.00540	0.00569	54.0	31-105	5.22	43	WG424340
Pentachlorophenol	ppm	0.00512	0.00535	51.0	20-122	4.22	50	WG424340
Phenanthrene	ppm	0.00716	0.00759	72.0	54-112	5.75	22	WG424340
Phenol	ppm	0.00257	0.00279	26.0	17-52	8.07	33	WG424340
Pyrene	ppm	0.00771	0.00779	77.0	46-130	1.01	28	WG424340
2,4,6-Tribromophenol				84.01	10-148			WG424340
2-Fluorobiphenyl				70.48	26-122			WG424340
2-Fluorophenol				32.33	10-87			WG424340
Nitrobenzene-d5				50.19	12-120			WG424340
Phenol-d5				19.40	10-67			WG424340
p-Terphenyl-d14				90.77	34-149			WG424340

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Quality Assurance Report
Level II

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June 29, 2009

L403980

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diesel Range Organics (DRO)	mg/kg	25.7	25.5	86.0	60-140	0.914	20	WG424943
Residual Range Organics (RRO)	mg/kg	24.8	24.9	83*	-	0.108*	0	WG424943
o-Terphenyl				84.27	50-150			WG424943

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Mercury	mg/kg	0.248	0.00510	.25	97.2	70-130	L403980-10	WG423109
PCB 1260	mg/kg	0.152	0.00	.167	91.1	10-197	L403858-03	WG423182
Decachlorobiphenyl					69.89	18.9-115.8		WG423182
Tetrachloro-m-xylene					93.53	31.8-115.7		WG423182

1,1,1-Trichloroethane	mg/kg	0.240	0.00	.05	96.1	23-147	L403858-01	WG423335
1,1,2,2-Tetrachloroethane	mg/kg	0.199	0.00	.05	79.5	18-150	L403858-01	WG423335
1,1,2-Trichloroethane	mg/kg	0.198	0.00	.05	79.1	35-140	L403858-01	WG423335
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.217	0.00	.05	86.8	10-145	L403858-01	WG423335
1,1-Dichloroethane	mg/kg	0.258	0.00	.05	103.	24-148	L403858-01	WG423335
1,1-Dichloroethene	mg/kg	0.216	0.00	.05	86.5	10-149	L403858-01	WG423335
1,2,3-Trichlorobenzene	mg/kg	0.166	0.00	.05	66.3	10-129	L403858-01	WG423335
1,2,4-Trichlorobenzene	mg/kg	0.182	0.00	.05	72.7	10-119	L403858-01	WG423335
1,2-Dibromo-3-Chloropropane	mg/kg	0.206	0.00	.05	82.4	19-145	L403858-01	WG423335
1,2-Dibromoethane	mg/kg	0.218	0.00	.05	87.2	24-145	L403858-01	WG423335
1,2-Dichlorobenzene	mg/kg	0.202	0.00	.05	80.7	12-130	L403858-01	WG423335
1,2-Dichloroethane	mg/kg	0.265	0.00	.05	106.	21-155	L403858-01	WG423335
1,2-Dichloropropane	mg/kg	0.234	0.00	.05	93.4	28-144	L403858-01	WG423335
1,3-Dichlorobenzene	mg/kg	0.195	0.00	.05	78.0	10-129	L403858-01	WG423335
1,4-Dichlorobenzene	mg/kg	0.203	0.00	.05	81.0	10-121	L403858-01	WG423335
2-Butanone (MEK)	mg/kg	1.14	0.00	.25	91.3	21-143	L403858-01	WG423335
2-Hexanone	mg/kg	1.06	0.00	.25	84.9	22-151	L403858-01	WG423335
4-Methyl-2-pentanone (MIBK)	mg/kg	1.13	0.00	.25	90.2	31-151	L403858-01	WG423335
Acetone	mg/kg	1.20	0.00	.25	96.0	13-158	L403858-01	WG423335
Benzene	mg/kg	0.241	0.00	.05	96.5	16-143	L403858-01	WG423335
Bromochloromethane	mg/kg	0.257	0.00	.05	103.	25-152	L403858-01	WG423335
Bromodichloromethane	mg/kg	0.209	0.00	.05	83.5	27-139	L403858-01	WG423335
Bromoform	mg/kg	0.193	0.00	.05	77.3	21-144	L403858-01	WG423335
Bromomethane	mg/kg	0.215	0.00	.05	86.1	0-180	L403858-01	WG423335
Carbon disulfide	mg/kg	0.244	0.00	.05	97.8	10-156	L403858-01	WG423335
Carbon tetrachloride	mg/kg	0.247	0.00	.05	99.0	12-149	L403858-01	WG423335
Chlorobenzene	mg/kg	0.200	0.00	.05	80.2	17-134	L403858-01	WG423335
Chlorodibromomethane	mg/kg	0.193	0.00	.05	77.0	28-147	L403858-01	WG423335
Chloroethane	mg/kg	0.235	0.00	.05	93.8	0-172	L403858-01	WG423335
Chloroform	mg/kg	0.254	0.00	.05	101.	28-138	L403858-01	WG423335
Chloromethane	mg/kg	0.249	0.00	.05	99.4	10-158	L403858-01	WG423335
cis-1,2-Dichloroethene	mg/kg	0.237	0.00	.05	94.6	21-147	L403858-01	WG423335
cis-1,3-Dichloropropene	mg/kg	0.238	0.00	.05	95.4	17-145	L403858-01	WG423335
Dichlorodifluoromethane	mg/kg	0.226	0.00	.05	90.2	0-192	L403858-01	WG423335
Ethylbenzene	mg/kg	0.206	0.00	.05	82.3	12-137	L403858-01	WG423335
Isopropylbenzene	mg/kg	0.201	0.00	.05	80.6	14-134	L403858-01	WG423335
Methyl tert-butyl ether	mg/kg	0.223	0.00	.05	89.2	21-157	L403858-01	WG423335
Methylene Chloride	mg/kg	0.224	0.00	.05	89.5	12-149	L403858-01	WG423335
Styrene	mg/kg	0.203	0.00	.05	81.1	10-140	L403858-01	WG423335
Tetrachloroethene	mg/kg	0.198	0.00	.05	79.2	10-131	L403858-01	WG423335
Toluene	mg/kg	0.225	0.00	.05	90.0	12-136	L403858-01	WG423335
trans-1,2-Dichloroethene	mg/kg	0.238	0.00	.05	95.4	10-143	L403858-01	WG423335
trans-1,3-Dichloropropene	mg/kg	0.233	0.00	.05	93.2	16-147	L403858-01	WG423335
Trichloroethene	mg/kg	0.221	0.00	.05	88.3	10-155	L403858-01	WG423335

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Est. 1970

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Chris Kramer
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West Linn, OR 97068

Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Trichlorofluoromethane	mg/kg	0.226	0.00	.05	90.3	10-154	L403858-01	WG423335
Vinyl chloride	mg/kg	0.264	0.00	.05	106.	10-159	L403858-01	WG423335
4-Bromofluorobenzene					92.53	59-140		WG423335
Dibromofluoromethane					101.7	63-139		WG423335
Toluene-d8					101.5	84-116		WG423335
Mercury	mg/kg	0.250	0.0130	.25	94.8	70-130	L403630-03	WG423494
1-Methylnaphthalene	ppm	0.00084	0.00	.001	84.8	30-123	L404241-02	WG423294
2-Chloronaphthalene	ppm	0.00082	0.00	.001	82.2	34-120	L404241-02	WG423294
2-Methylnaphthalene	ppm	0.00090	0.00	.001	90.8	29-116	L404241-02	WG423294
Acenaphthene	ppm	0.00087	0.00	.001	87.4	40-113	L404241-02	WG423294
Acenaphthylene	ppm	0.00087	0.00	.001	87.0	36-115	L404241-02	WG423294
Anthracene	ppm	0.00084	0.00	.001	84.8	45-118	L404241-02	WG423294
Benzo(a)anthracene	ppm	0.00097	0.00006	.001	91.0	36-129	L404241-02	WG423294
Benzo(a)pyrene	ppm	0.00097	0.00007	.001	89.7	44-124	L404241-02	WG423294
Benzo(b)fluoranthene	ppm	0.00110	0.00011	.001	99.3	43-126	L404241-02	WG423294
Benzo(g,h,i)perylene	ppm	0.00087	0.00007	.001	80.0	39-128	L404241-02	WG423294
Benzo(k)fluoranthene	ppm	0.00089	0.00	.001	89.2	44-127	L404241-02	WG423294
Chrysene	ppm	0.00090	0.00007	.001	82.7	36-137	L404241-02	WG423294
Dibenz(a,h)anthracene	ppm	0.00066	0.00	.001	66.6	39-129	L404241-02	WG423294
Fluoranthene	ppm	0.00149	0.00023	.001	126.*	45-123	L404241-02	WG423294
Fluorene	ppm	0.00090	0.00	.001	90.7	41-118	L404241-02	WG423294
Indeno(1,2,3-cd)pyrene	ppm	0.00088	0.00005	.001	82.6	39-129	L404241-02	WG423294
Naphthalene	ppm	0.00083	0.00	.001	83.9	26-111	L404241-02	WG423294
Phenanthrene	ppm	0.00129	0.00014	.001	115.	41-116	L404241-02	WG423294
Pyrene	ppm	0.00129	0.00020	.001	109.	32-136	L404241-02	WG423294
2-Fluorobiphenyl					84.37	26-122		WG423294
Nitrobenzene-d5					82.92	12-120		WG423294
p-Terphenyl-d14					86.10	34-149		WG423294
Mercury, Dissolved	mg/l	0.00282	0.00	.003	94.0	70-130	L404005-03	WG423123
PCB 1260	mg/kg	0.148	0.00	.167	88.8	10-197	L403960-03	WG423525
Decachlorobiphenyl					82.00	18.9-115.8		WG423525
Tetrachloro-m-xylene					91.99	31.8-115.7		WG423525
Diesel (C7-C26)	mg/kg	23.7	0.00	30	79.0	50-150	L404242-05	WG423285
Motor Oil (C16-C40)	mg/kg	30.2	3.80	30	88.0	50-150	L404242-05	WG423285
o-Terphenyl					76.66	50-150		WG423285
1,1,1-Trichloroethane	mg/kg	0.219	0.00	.05	87.5	23-147	L404233-01	WG423787
1,1,2,2-Tetrachloroethane	mg/kg	0.221	0.00	.05	88.4	18-150	L404233-01	WG423787
1,1,2-Trichloroethane	mg/kg	0.236	0.00031	.05	94.5	35-140	L404233-01	WG423787
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.241	0.00	.05	96.5	10-145	L404233-01	WG423787
1,1-Dichloroethane	mg/kg	0.223	0.00	.05	89.2	24-148	L404233-01	WG423787
1,1-Dichloroethene	mg/kg	0.233	0.00031	.05	92.9	10-149	L404233-01	WG423787
1,2,3-Trichlorobenzene	mg/kg	0.208	0.00064	.05	82.9	10-129	L404233-01	WG423787
1,2,4-Trichlorobenzene	mg/kg	0.206	0.00061	.05	82.2	10-119	L404233-01	WG423787
1,2-Dibromo-3-Chloropropane	mg/kg	0.224	0.00	.05	89.5	19-145	L404233-01	WG423787
1,2-Dibromoethane	mg/kg	0.231	0.00	.05	92.6	24-145	L404233-01	WG423787
1,2-Dichlorobenzene	mg/kg	0.216	0.00040	.05	86.3	12-130	L404233-01	WG423787
1,2-Dichloroethane	mg/kg	0.205	0.00	.05	81.9	21-155	L404233-01	WG423787

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L403980

June 29, 2009

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
1,2-Dichloropropane	mg/kg	0.231	0.00	.05	92.4	28-144	L404233-01	WG423787	
1,3-Dichlorobenzene	mg/kg	0.228	0.00052	.05	91.0	10-129	L404233-01	WG423787	
1,4-Dichlorobenzene	mg/kg	0.209	0.00081	.05	83.2	10-121	L404233-01	WG423787	
2-Butanone (MEK)	mg/kg	0.930	0.00164	.25	74.3	21-143	L404233-01	WG423787	
2-Hexanone	mg/kg	1.11	0.00289	.25	88.3	22-151	L404233-01	WG423787	
4-Methyl-2-pentanone (MIBK)	mg/kg	1.09	0.00073	.25	87.4	31-151	L404233-01	WG423787	
Acetone	mg/kg	1.02	0.0694	.25	75.8	13-158	L404233-01	WG423787	
Benzene	mg/kg	0.220	0.00	.05	87.9	16-143	L404233-01	WG423787	
Bromochloromethane	mg/kg	0.243	0.00	.05	97.4	25-152	L404233-01	WG423787	
Bromodichloromethane	mg/kg	0.222	0.00	.05	88.9	27-139	L404233-01	WG423787	
Bromoform	mg/kg	0.246	0.00	.05	98.5	21-144	L404233-01	WG423787	
Bromomethane	mg/kg	0.239	0.00043	.05	95.4	0-180	L404233-01	WG423787	
Carbon disulfide	mg/kg	0.223	0.00052	.05	89.0	10-156	L404233-01	WG423787	
Carbon tetrachloride	mg/kg	0.218	0.00043	.05	87.0	12-149	L404233-01	WG423787	
Chlorobenzene	mg/kg	0.240	0.00	.05	95.9	17-134	L404233-01	WG423787	
Chlorodibromomethane	mg/kg	0.239	0.00	.05	95.6	28-147	L404233-01	WG423787	
Chloroethane	mg/kg	0.243	0.00114	.05	96.7	0-172	L404233-01	WG423787	
Chloroform	mg/kg	0.210	0.00123	.05	83.5	28-138	L404233-01	WG423787	
Chloromethane	mg/kg	0.233	0.00073	.05	93.0	10-158	L404233-01	WG423787	
cis-1,2-Dichloroethene	mg/kg	0.229	0.00	.05	91.8	21-147	L404233-01	WG423787	
cis-1,3-Dichloropropene	mg/kg	0.222	0.00	.05	88.9	17-145	L404233-01	WG423787	
Dichlorodifluoromethane	mg/kg	0.273	0.00040	.05	109.	0-192	L404233-01	WG423787	
Ethylbenzene	mg/kg	0.240	0.00	.05	96.1	12-137	L404233-01	WG423787	
Isopropylbenzene	mg/kg	0.239	0.00	.05	95.5	14-134	L404233-01	WG423787	
Methyl tert-butyl ether	mg/kg	0.209	0.00	.05	83.7	21-157	L404233-01	WG423787	
Methylene Chloride	mg/kg	0.215	0.00	.05	86.1	12-149	L404233-01	WG423787	
Styrene	mg/kg	0.238	0.00	.05	95.4	10-140	L404233-01	WG423787	
Tetrachloroethene	mg/kg	0.238	0.00	.05	95.2	10-131	L404233-01	WG423787	
Toluene	mg/kg	0.223	0.00	.05	89.3	12-136	L404233-01	WG423787	
trans-1,2-Dichloroethene	mg/kg	0.237	0.00	.05	94.6	10-143	L404233-01	WG423787	
trans-1,3-Dichloropropene	mg/kg	0.219	0.00	.05	87.5	16-147	L404233-01	WG423787	
Trichloroethene	mg/kg	0.235	0.00	.05	94.0	10-155	L404233-01	WG423787	
Trichlorofluoromethane	mg/kg	0.233	0.00	.05	93.2	10-154	L404233-01	WG423787	
Vinyl chloride	mg/kg	0.234	0.00	.05	93.5	10-159	L404233-01	WG423787	
4-Bromofluorobenzene					102.7	59-140		WG423787	
Dibromofluoromethane					96.45	63-139		WG423787	
Toluene-d8					100.4	84-116		WG423787	
1,2,4,5-Tetrachlorobenzene	ppm	0.275	0.00	.333	82.7	47-111	L404242-05	WG423526	
2,4,5-Trichlorophenol	ppm	0.277	0.00	.333	83.3	28-128	L404242-05	WG423526	
2,4,6-Trichlorophenol	ppm	0.263	0.00	.333	78.9	27-128	L404242-05	WG423526	
2,4-Dichlorophenol	ppm	0.254	0.00	.333	76.2	39-116	L404242-05	WG423526	
2,4-Dimethylphenol	ppm	0.418	0.00	.333	125.*	50-119	L404242-05	WG423526	
2,4-Dinitrophenol	ppm	0.146	0.00	.333	44.0	10-123	L404242-05	WG423526	
2,4-Dinitrotoluene	ppm	0.281	0.00	.333	84.4	52-121	L404242-05	WG423526	
2,6-Dinitrotoluene	ppm	0.253	0.00	.333	75.9	53-114	L404242-05	WG423526	
2-Chloronaphthalene	ppm	0.233	0.00	.333	70.1	52-101	L404242-05	WG423526	
2-Chlorophenol	ppm	0.231	0.00	.333	69.3	41-112	L404242-05	WG423526	
2-Methylnaphthalene	ppm	0.238	0.00	.333	71.3	48-109	L404242-05	WG423526	
2-Methylphenol	ppm	0.259	0.00	.333	77.9	56-111	L404242-05	WG423526	
2-Nitroaniline	ppm	0.257	0.00	.333	77.3	52-117	L404242-05	WG423526	
2-Nitrophenol	ppm	0.252	0.00	.333	75.6	23-117	L404242-05	WG423526	
3&4-Methyl Phenol	ppm	0.298	0.00	.333	89.4	50-134	L404242-05	WG423526	
3,3-Dichlorobenzidine	ppm	0.132	0.00	.333	39.7	10-133	L404242-05	WG423526	
3-Nitroaniline	ppm	0.224	0.00	.333	67.2	5-134	L404242-05	WG423526	
4,6-Dinitro-2-methylphenol	ppm	0.175	0.00	.333	52.7	10-124	L404242-05	WG423526	
4-Bromophenyl-phenylether	ppm	0.224	0.00	.333	67.3	37-103	L404242-05	WG423526	
4-Chloro-3-methylphenol	ppm	0.255	0.00	.333	76.6	52-119	L404242-05	WG423526	

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June 29, 2009

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
4-Chloroaniline	ppm	0.245	0.00	.333	73.7	4-134	L404242-05	WG423526
4-Chlorophenyl-phenylether	ppm	0.236	0.00	.333	71.0	53-105	L404242-05	WG423526
4-Nitroaniline	ppm	0.260	0.00	.333	78.1	12-129	L404242-05	WG423526
4-Nitrophenol	ppm	0.267	0.00	.333	80.2	15-140	L404242-05	WG423526
Acenaphthene	ppm	0.258	0.00	.333	77.3	52-102	L404242-05	WG423526
Acenaphthylene	ppm	0.264	0.00	.333	79.2	54-103	L404242-05	WG423526
Acetophenone	ppm	0.230	0.00	.333	69.0	38-94	L404242-05	WG423526
Anthracene	ppm	0.257	0.00	.333	77.2	55-114	L404242-05	WG423526
Atrazine	ppm	0.303	0.00	.333	90.9	40-144	L404242-05	WG423526
Benzaldehyde	ppm	0.0946	0.00	.333	28.4	0-100	L404242-05	WG423526
Benzo(a)anthracene	ppm	0.263	0.00	.333	78.9	37-124	L404242-05	WG423526
Benzo(a)pyrene	ppm	0.266	0.00	.333	79.8	44-129	L404242-05	WG423526
Benzo(b)fluoranthene	ppm	0.239	0.00	.333	71.9	28-135	L404242-05	WG423526
Benzo(g,h,i)perylene	ppm	0.278	0.00	.333	83.4	25-123	L404242-05	WG423526
Benzo(k)fluoranthene	ppm	0.277	0.00	.333	83.1	41-116	L404242-05	WG423526
Benzylbutyl phthalate	ppm	0.282	0.00	.333	84.6	45-143	L404242-05	WG423526
Biphenyl	ppm	0.235	0.00	.333	70.7	49-103	L404242-05	WG423526
Bis(2-chloroethoxy)methane	ppm	0.236	0.00	.333	70.8	48-108	L404242-05	WG423526
Bis(2-chloroethyl)ether	ppm	0.201	0.00	.333	60.4	36-115	L404242-05	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.228	0.00	.333	68.5	44-109	L404242-05	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.278	0.00	.333	83.4	40-128	L404242-05	WG423526
Caprolactam	ppm	0.283	0.00	.333	85.1	26-140	L404242-05	WG423526
Carbazole	ppm	0.256	0.00	.333	76.8	43-122	L404242-05	WG423526
Chrysene	ppm	0.244	0.00	.333	73.1	39-119	L404242-05	WG423526
Di-n-butyl phthalate	ppm	0.266	0.00	.333	80.0	49-121	L404242-05	WG423526
Di-n-octyl phthalate	ppm	0.267	0.00	.333	80.3	40-132	L404242-05	WG423526
Dibenz(a,h)anthracene	ppm	0.249	0.00	.333	74.8	29-123	L404242-05	WG423526
Dibenzofuran	ppm	0.259	0.00	.333	77.8	54-111	L404242-05	WG423526
Diethyl phthalate	ppm	0.254	0.00	.333	76.3	51-113	L404242-05	WG423526
Dimethyl phthalate	ppm	0.257	0.00	.333	77.2	54-108	L404242-05	WG423526
Fluoranthene	ppm	0.276	0.00	.333	83.0	23-143	L404242-05	WG423526
Fluorene	ppm	0.274	0.00	.333	82.3	53-107	L404242-05	WG423526
Hexachloro-1,3-butadiene	ppm	0.267	0.00	.333	80.1	39-113	L404242-05	WG423526
Hexachlorobenzene	ppm	0.236	0.00	.333	71.0	49-108	L404242-05	WG423526
Hexachlorocyclopentadiene	ppm	0.214	0.00	.333	64.2	10-131	L404242-05	WG423526
Hexachloroethane	ppm	0.220	0.00	.333	66.2	25-118	L404242-05	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.254	0.00	.333	76.3	28-125	L404242-05	WG423526
Isophorone	ppm	0.230	0.00	.333	69.0	51-115	L404242-05	WG423526
n-Nitrosodi-n-propylamine	ppm	0.220	0.00	.333	66.1	54-110	L404242-05	WG423526
n-Nitrosodiphenylamine	ppm	0.233	0.00	.333	70.1	54-138	L404242-05	WG423526
Naphthalene	ppm	0.227	0.00	.333	68.2	41-100	L404242-05	WG423526
Nitrobenzene	ppm	0.217	0.00	.333	65.3	40-102	L404242-05	WG423526
Pentachlorophenol	ppm	0.289	0.00	.333	86.8	10-146	L404242-05	WG423526
Phenanthrene	ppm	0.261	0.00	.333	78.5	37-125	L404242-05	WG423526
Phenol	ppm	0.241	0.00	.333	72.5	52-111	L404242-05	WG423526
Pyrene	ppm	0.247	0.00	.333	74.2	22-151	L404242-05	WG423526
2,4,6-Tribromophenol					85.13	25-137		WG423526
2-Fluorobiphenyl					72.75	30-120		WG423526
2-Fluorophenol					76.59	26-130		WG423526
Nitrobenzene-d5					70.28	18-119		WG423526
Phenol-d5					72.13	37-141		WG423526
p-Terphenyl-d14					86.42	23-143		WG423526
1,1,1-Trichloroethane	mg/l	0.558	0.00	.025	89.3	31-161	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.510	0.00	.025	81.6	49-149	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.511	0.00	.025	81.7	46-145	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.601	0.320	.025	44.9	14-168	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.563	0.00	.025	90.1	30-159	L403957-01	WG423629

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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report Level II

June 29, 2009

L403980

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
1,1-Dichloroethene	mg/l	0.567	0.0210	.025	87.4	10-162	L403957-01	WG423629	
1,2,3-Trichlorobenzene	mg/l	0.529	0.00	.025	84.6	32-143	L403957-01	WG423629	
1,2,4-Trichlorobenzene	mg/l	0.547	0.00	.025	87.5	27-142	L403957-01	WG423629	
1,2-Dibromo-3-Chloropropane	mg/l	0.489	0.00	.025	78.3	37-148	L403957-01	WG423629	
1,2-Dibromoethane	mg/l	0.491	0.00	.025	78.6	41-149	L403957-01	WG423629	
1,2-Dichlorobenzene	mg/l	0.580	0.00	.025	92.7	40-139	L403957-01	WG423629	
1,2-Dichloroethane	mg/l	0.523	0.00	.025	83.6	29-167	L403957-01	WG423629	
1,2-Dichloropropane	mg/l	0.539	0.00	.025	86.3	39-148	L403957-01	WG423629	
1,3-Dichlorobenzene	mg/l	0.574	0.00	.025	91.9	32-148	L403957-01	WG423629	
1,4-Dichlorobenzene	mg/l	0.568	0.00	.025	90.8	32-136	L403957-01	WG423629	
2-Butanone (MEK)	mg/l	2.47	0.00	.125	79.0	32-151	L403957-01	WG423629	
2-Hexanone	mg/l	2.53	0.00	.125	80.9	41-155	L403957-01	WG423629	
4-Methyl-2-pentanone (MIBK)	mg/l	2.62	0.00	.125	84.0	40-160	L403957-01	WG423629	
Acetone	mg/l	2.84	0.00	.125	90.9	25-157	L403957-01	WG423629	
Benzene	mg/l	0.553	0.00	.025	88.4	16-158	L403957-01	WG423629	
Bromochloromethane	mg/l	0.548	0.00	.025	87.6	36-154	L403957-01	WG423629	
Bromodichloromethane	mg/l	0.564	0.00	.025	90.2	45-147	L403957-01	WG423629	
Bromoform	mg/l	0.548	0.00	.025	87.7	38-152	L403957-01	WG423629	
Bromomethane	mg/l	0.613	0.00	.025	98.1	0-191	L403957-01	WG423629	
Carbon disulfide	mg/l	0.541	0.00	.025	86.5	10-166	L403957-01	WG423629	
Carbon tetrachloride	mg/l	0.508	0.00	.025	81.2	22-168	L403957-01	WG423629	
Chlorobenzene	mg/l	0.556	0.00	.025	88.9	33-148	L403957-01	WG423629	
Chlorodibromomethane	mg/l	0.563	0.00	.025	90.1	48-151	L403957-01	WG423629	
Chloroethane	mg/l	0.577	0.00	.025	92.3	4-176	L403957-01	WG423629	
Chloroform	mg/l	0.526	0.00	.025	84.1	37-147	L403957-01	WG423629	
Chloromethane	mg/l	0.582	0.00	.025	93.1	10-174	L403957-01	WG423629	
cis-1,2-Dichloroethene	mg/l	0.766	0.180	.025	93.7	29-156	L403957-01	WG423629	
cis-1,3-Dichloropropene	mg/l	0.535	0.00	.025	85.5	35-148	L403957-01	WG423629	
Dichlorodifluoromethane	mg/l	0.562	0.00	.025	89.9	0-200	L403957-01	WG423629	
Ethylbenzene	mg/l	0.569	0.00	.025	91.1	29-150	L403957-01	WG423629	
Isopropylbenzene	mg/l	0.580	0.00	.025	92.8	35-147	L403957-01	WG423629	
Methyl tert-butyl ether	mg/l	0.560	0.00	.025	89.6	24-167	L403957-01	WG423629	
Methylene Chloride	mg/l	0.575	0.00	.025	92.0	23-151	L403957-01	WG423629	
Styrene	mg/l	0.562	0.00	.025	89.9	38-149	L403957-01	WG423629	
Tetrachloroethene	mg/l	3.09	2.40	.025	110.	13-157	L403957-01	WG423629	
Toluene	mg/l	0.536	0.0140	.025	83.6	22-152	L403957-01	WG423629	
trans-1,2-Dichloroethene	mg/l	0.568	0.00	.025	90.8	11-160	L403957-01	WG423629	
trans-1,3-Dichloropropene	mg/l	0.484	0.00	.025	77.5	33-153	L403957-01	WG423629	
Trichloroethene	mg/l	0.841	0.270	.025	91.3	18-163	L403957-01	WG423629	
Trichlorofluoromethane	mg/l	0.566	0.00	.025	90.6	10-177	L403957-01	WG423629	
Vinyl chloride	mg/l	0.558	0.00	.025	89.2	0-179	L403957-01	WG423629	
4-Bromofluorobenzene					94.44	75-128		WG423629	
Dibromofluoromethane					100.9	79-125		WG423629	
Toluene-d8					99.74	87-114		WG423629	
1-Methylnaphthalene	ppm	0.0742	0.0300	.033	26.8	19-131	L403980-04	WG423440	
2-Chloronaphthalene	ppm	0.0291	0.00	.033	17.6*	38-117	L403980-04	WG423440	
2-Methylnaphthalene	ppm	0.0618	0.0200	.033	25.3	18-125	L403980-04	WG423440	
Acenaphthene	ppm	0.0327	0.00	.033	19.8*	31-120	L403980-04	WG423440	
Acenaphthylene	ppm	0.0353	0.00	.033	21.4*	34-116	L403980-04	WG423440	
Anthracene	ppm	0.0303	0.00	.033	18.4*	32-131	L403980-04	WG423440	
Benzo(a)anthracene	ppm	0.0300	0.00900	.033	12.7*	32-131	L403980-04	WG423440	
Benzo(a)pyrene	ppm	0.0340	0.00780	.033	15.9*	28-130	L403980-04	WG423440	
Benzo(b)fluoranthene	ppm	0.0414	0.0120	.033	17.8*	37-130	L403980-04	WG423440	
Benzo(g,h,i)perylene	ppm	0.0191	0.00610	.033	7.91*	10-134	L403980-04	WG423440	
Benzo(k)fluoranthene	ppm	0.0403	0.00780	.033	19.7*	31-129	L403980-04	WG423440	
Chrysene	ppm	0.0316	0.00590	.033	15.6*	25-137	L403980-04	WG423440	
Dibenz(a,h)anthracene	ppm	0.0167	0.00	.033	10.2*	20-134	L403980-04	WG423440	

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Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Fluoranthene	ppm	0.0399	0.0120	.033	16.9*	27-138	L403980-04	WG423440
Fluorene	ppm	0.0357	0.00	.033	21.6*	26-136	L403980-04	WG423440
Indeno(1,2,3-cd)pyrene	ppm	0.0169	0.00	.033	10.3*	16-135	L403980-04	WG423440
Naphthalene	ppm	0.0393	0.0120	.033	16.5*	22-121	L403980-04	WG423440
Phenanthrene	ppm	0.0392	0.0110	.033	17.1*	27-133	L403980-04	WG423440
Pyrene	ppm	0.0381	0.0160	.033	13.4*	22-133	L403980-04	WG423440
2-Fluorobiphenyl					79.35	30-120		WG423440
Nitrobenzene-d5					56.30	18-119		WG423440
p-Terphenyl-d14					89.05	23-143		WG423440
Beryllium,Dissolved	mg/l	0.993	0.00017	1.13	87.9	75-125	L404101-03	WG423363
Cadmium,Dissolved	mg/l	1.05	0.00077	1.13	92.9	75-125	L404101-03	WG423363
Chromium,Dissolved	mg/l	1.04	0.00	1.13	92.0	75-125	L404101-03	WG423363
Copper,Dissolved	mg/l	1.06	0.00	1.13	93.8	75-125	L404101-03	WG423363
Lead,Dissolved	mg/l	1.09	0.00	1.13	96.5	75-125	L404101-03	WG423363
Nickel,Dissolved	mg/l	1.06	0.0125	1.13	92.7	75-125	L404101-03	WG423363
Selenium,Dissolved	mg/l	1.04	0.0106	1.13	91.1	75-125	L404101-03	WG423363
Silver,Dissolved	mg/l	0.0625	0.00200	1.13	5.35*	75-125	L404101-03	WG423363
Zinc,Dissolved	mg/l	1.04	0.00640	1.13	91.5	75-125	L404101-03	WG423363
Antimony	mg/kg	19.7	0.0143	50	39.4*	75-125	L403985-12	WG423454
Arsenic	mg/kg	50.4	3.00	50	94.8	75-125	L403985-12	WG423454
Beryllium	mg/kg	48.2	0.530	50	95.3	75-125	L403985-12	WG423454
Cadmium	mg/kg	44.6	0.0620	50	89.1	75-125	L403985-12	WG423454
Chromium	mg/kg	78.8	30.0	50	97.6	75-125	L403985-12	WG423454
Copper	mg/kg	89.0	32.0	50	114.	75-125	L403985-12	WG423454
Lead	mg/kg	58.8	13.0	50	91.6	75-125	L403985-12	WG423454
Nickel	mg/kg	60.1	11.4	50	97.4	75-125	L403985-12	WG423454
Selenium	mg/kg	43.0	0.00	50	86.0	75-125	L403985-12	WG423454
Silver	mg/kg	48.5	0.00	50	97.0	75-125	L403985-12	WG423454
Zinc	mg/kg	225.	173.	50	104.	75-125	L403985-12	WG423454
Thallium	mg/kg	42.7	0.00	10	85.4	75-125	L403985-12	WG423454
Beryllium	mg/l	1.09	0.00	1.13	96.5	75-125	L404463-04	WG424232
Cadmium	mg/l	1.09	0.00011	1.13	96.5	75-125	L404463-04	WG424232
Chromium	mg/l	1.06	0.00	1.13	93.8	75-125	L404463-04	WG424232
Copper	mg/l	1.09	0.00270	1.13	96.2	75-125	L404463-04	WG424232
Lead	mg/l	1.17	0.0119	1.13	102.	75-125	L404463-04	WG424232
Nickel	mg/l	1.13	0.00	1.13	100.	75-125	L404463-04	WG424232
Selenium	mg/l	1.11	0.00	1.13	98.2	75-125	L404463-04	WG424232
Silver	mg/l	0.200	0.00	1.13	17.7*	75-125	L404463-04	WG424232
Zinc	mg/l	1.08	0.00690	1.13	95.0	75-125	L404463-04	WG424232
Lead	mg/kg	48.2	0.990	50	94.4	75-125	L403980-10	WG424566
Antimony,Dissolved	mg/l	0.0530	0.00	.0567	93.5	75-125	L403980-06	WG423775
Arsenic,Dissolved	mg/l	0.0533	0.00069	.0567	92.8	75-125	L403980-06	WG423775
Thallium,Dissolved	mg/l	0.0496	0.00	.0567	87.5	75-125	L403980-06	WG423775
Antimony	mg/l	0.0570	0.00	.0567	101.	75-125	L404641-23	WG424398
Arsenic	mg/l	0.0532	0.00310	.0567	88.4	75-125	L404641-23	WG424398
Thallium	mg/l	0.0539	0.00	.0567	95.1	75-125	L404641-23	WG424398

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Analyte	Units	MS Res	Matrix Spike			Limit	Ref Samp	Batch
			Ref Res	TV	% Rec			
Mercury	mg/l	0.00314	0.00	.003	105.	70-130	L406775-15	WG426094
Mercury,Dissolved	mg/l	0.00330	0.00	.003	110.	70-130	L406945-16	WG426098
Beryllium	mg/l	1.08	0.00	1.13	95.6	75-125	L406969-23	WG426343
Cadmium	mg/l	1.14	0.00	1.13	101.	75-125	L406969-23	WG426343
Chromium	mg/l	1.07	0.00	1.13	94.7	75-125	L406969-23	WG426343
Copper	mg/l	1.14	0.00250	1.13	101.	75-125	L406969-23	WG426343
Lead	mg/l	1.11	0.00	1.13	98.2	75-125	L406969-23	WG426343
Nickel	mg/l	1.11	0.00	1.13	98.2	75-125	L406969-23	WG426343
Selenium	mg/l	1.03	0.00	1.13	91.2	75-125	L406969-23	WG426343
Silver	mg/l	0.140	0.00	1.13	12.4*	75-125	L406969-23	WG426343
Zinc	mg/l	1.12	0.0129	1.13	98.0	75-125	L406969-23	WG426343
Antimony	mg/l	0.0638	0.00	.0567	113.	75-125	L406118-02	WG426269
Arsenic	mg/l	0.0570	0.00	.0567	101.	75-125	L406118-02	WG426269
Thallium	mg/l	0.0648	0.00	.0567	114.	75-125	L406118-02	WG426269
Antimony,Dissolved	mg/l	0.0582	0.00	.0567	103.	75-125	L407348-02	WG426484
Arsenic,Dissolved	mg/l	0.0593	0.00330	.0567	98.8	75-125	L407348-02	WG426484
Thallium,Dissolved	mg/l	0.0607	0.00024	.0567	107.	75-125	L407348-02	WG426484

Analyte	Units	MSD	Matrix Spike Duplicate			Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec						
Mercury	mg/kg	0.281	0.248	110.		70-130	12.5	20	L403980-10	WG423109
PCB 1260	mg/kg	0.155	0.152	92.7		10-197	1.76	39	L403858-03	WG423182
Decachlorobiphenyl				72.44		18.9-115.8				WG423182
Tetrachloro-m-xylene				97.22		31.8-115.7				WG423182
1,1,1-Trichloroethane	mg/kg	0.246	0.240	98.3		23-147	2.19	32	L403858-01	WG423335
1,1,2,2-Tetrachloroethane	mg/kg	0.212	0.199	84.8		18-150	6.45	33	L403858-01	WG423335
1,1,2-Trichloroethane	mg/kg	0.210	0.198	84.1		35-140	6.13	29	L403858-01	WG423335
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.221	0.217	88.3		10-145	1.73	35	L403858-01	WG423335
1,1-Dichloroethane	mg/kg	0.260	0.258	104.		24-148	0.904	31	L403858-01	WG423335
1,1-Dichloroethene	mg/kg	0.219	0.216	87.5		10-149	1.14	34	L403858-01	WG423335
1,2,3-Trichlorobenzene	mg/kg	0.152	0.166	61.0		10-129	8.40	43	L403858-01	WG423335
1,2,4-Trichlorobenzene	mg/kg	0.166	0.182	66.3		10-119	9.33	44	L403858-01	WG423335
1,2-Dibromo-3-Chloropropane	mg/kg	0.212	0.206	84.9		19-145	2.95	35	L403858-01	WG423335
1,2-Dibromoethane	mg/kg	0.235	0.218	93.9		24-145	7.36	31	L403858-01	WG423335
1,2-Dichlorobenzene	mg/kg	0.201	0.202	80.4		12-130	0.322	35	L403858-01	WG423335
1,2-Dichloroethane	mg/kg	0.264	0.265	106.		21-155	0.231	29	L403858-01	WG423335
1,2-Dichloropropane	mg/kg	0.242	0.234	96.8		28-144	3.56	30	L403858-01	WG423335
1,3-Dichlorobenzene	mg/kg	0.194	0.195	77.7		10-129	0.349	38	L403858-01	WG423335
1,4-Dichlorobenzene	mg/kg	0.200	0.203	79.9		10-121	1.43	36	L403858-01	WG423335
2-Butanone (MEK)	mg/kg	1.20	1.14	96.0		21-143	5.02	37	L403858-01	WG423335
2-Hexanone	mg/kg	1.15	1.06	92.3		22-151	8.33	38	L403858-01	WG423335
4-Methyl-2-pentanone (MIBK)	mg/kg	1.20	1.13	96.3		31-151	6.56	36	L403858-01	WG423335
Acetone	mg/kg	1.24	1.20	99.2		13-158	3.34	34	L403858-01	WG423335
Benzene	mg/kg	0.244	0.241	97.7		16-143	1.25	31	L403858-01	WG423335
Bromochloromethane	mg/kg	0.265	0.257	106.		25-152	3.31	29	L403858-01	WG423335

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			Ref	%Rec						
Bromodichloromethane	mg/kg	0.218	0.209	87.3	27-139	4.40	30	L403858-01	WG423335	
Bromoform	mg/kg	0.209	0.193	83.5	21-144	7.72	34	L403858-01	WG423335	
Bromomethane	mg/kg	0.226	0.215	90.3	0-180	4.74	41	L403858-01	WG423335	
Carbon disulfide	mg/kg	0.246	0.244	98.3	10-156	0.509	38	L403858-01	WG423335	
Carbon tetrachloride	mg/kg	0.225	0.247	90.0	12-149	9.50	34	L403858-01	WG423335	
Chlorobenzene	mg/kg	0.209	0.200	83.5	17-134	4.13	34	L403858-01	WG423335	
Chlorodibromomethane	mg/kg	0.208	0.193	83.0	28-147	7.46	32	L403858-01	WG423335	
Chloroethane	mg/kg	0.238	0.235	95.4	0-172	1.66	38	L403858-01	WG423335	
Chloroform	mg/kg	0.261	0.254	104.	28-138	2.74	30	L403858-01	WG423335	
Chloromethane	mg/kg	0.251	0.249	101.	10-158	1.07	35	L403858-01	WG423335	
cis-1,2-Dichloroethene	mg/kg	0.240	0.237	96.0	21-147	1.47	31	L403858-01	WG423335	
cis-1,3-Dichloropropene	mg/kg	0.248	0.238	99.2	17-145	3.92	32	L403858-01	WG423335	
Dichlorodifluoromethane	mg/kg	0.222	0.226	88.9	0-192	1.47	38	L403858-01	WG423335	
Ethylbenzene	mg/kg	0.214	0.206	85.5	12-137	3.76	36	L403858-01	WG423335	
Isopropylbenzene	mg/kg	0.208	0.201	83.4	14-134	3.42	37	L403858-01	WG423335	
Methyl tert-butyl ether	mg/kg	0.229	0.223	91.7	21-157	2.78	31	L403858-01	WG423335	
Methylene Chloride	mg/kg	0.230	0.224	91.9	12-149	2.71	31	L403858-01	WG423335	
Styrene	mg/kg	0.214	0.203	85.8	10-140	5.67	35	L403858-01	WG423335	
Tetrachloroethene	mg/kg	0.210	0.198	84.0	10-131	5.88	35	L403858-01	WG423335	
Toluene	mg/kg	0.231	0.225	92.6	12-136	2.88	32	L403858-01	WG423335	
trans-1,2-Dichloroethene	mg/kg	0.242	0.238	96.9	10-143	1.61	33	L403858-01	WG423335	
trans-1,3-Dichloropropene	mg/kg	0.244	0.233	97.5	16-147	4.52	32	L403858-01	WG423335	
Trichloroethene	mg/kg	0.230	0.221	91.8	10-155	3.94	33	L403858-01	WG423335	
Trichlorofluoromethane	mg/kg	0.227	0.226	91.0	10-154	0.802	32	L403858-01	WG423335	
Vinyl chloride	mg/kg	0.264	0.264	106.	10-159	0.202	36	L403858-01	WG423335	
4-Bromofluorobenzene				96.25	59-140				WG423335	
Dibromofluoromethane				100.7	63-139				WG423335	
Toluene-d8				103.0	84-116				WG423335	
Mercury	mg/kg	0.239	0.250	90.4	70-130	4.50	20	L403630-03	WG423494	
1-Methylnaphthalene	ppm	0.0008	0.0008	80.0	30-123	5.75	32	L404241-02	WG423294	
2-Chloronaphthalene	ppm	0.0008	0.0008	80.0	34-120	2.69	30	L404241-02	WG423294	
2-Methylnaphthalene	ppm	0.0008	0.0009	80.1	29-116	12.4	31	L404241-02	WG423294	
Acenaphthene	ppm	0.0008	0.0008	86.5	40-113	1.02	25	L404241-02	WG423294	
Acenaphthylene	ppm	0.0008	0.0008	86.3	36-115	0.812	25	L404241-02	WG423294	
Anthracene	ppm	0.0009	0.0008	91.3	45-118	7.37	26	L404241-02	WG423294	
Benzo(a)anthracene	ppm	0.0009	0.0009	83.6	36-129	7.84	26	L404241-02	WG423294	
Benzo(a)pyrene	ppm	0.0006	0.0009	53.8	44-124	45.1*	21	L404241-02	WG423294	
Benzo(b)fluoranthene	ppm	0.0007	0.0011	68.0	43-126	33.1	38	L404241-02	WG423294	
Benzo(g,h,i)perylene	ppm	0.0005	0.0008	45.1	39-128	50.1*	20	L404241-02	WG423294	
Benzo(k)fluoranthene	ppm	0.0004	0.0008	46.0	44-127	63.9*	39	L404241-02	WG423294	
Chrysene	ppm	0.0008	0.0009	80.8	36-137	2.18	22	L404241-02	WG423294	
Dibenz(a,h)anthracene	ppm	0.0001	0.0006	15.266*	39-129	125.*	20	L404241-02	WG423294	
Fluoranthene	ppm	0.0017	0.0014	149.241*	45-123	14.7	25	L404241-02	WG423294	
Fluorene	ppm	0.0008	0.0009	86.0	41-118	5.39	26	L404241-02	WG423294	
Indeno(1,2,3-cd)pyrene	ppm	0.0004	0.0008	37.9*	39-129	67.6*	20	L404241-02	WG423294	
Naphthalene	ppm	0.0008	0.0008	80.2	26-111	4.50	32	L404241-02	WG423294	
Phenanthrene	ppm	0.0010	0.0012	94.6	41-116	16.9	25	L404241-02	WG423294	
Pyrene	ppm	0.0015	0.0012	130.	32-136	15.0	22	L404241-02	WG423294	
2-Fluorobiphenyl				81.29	26-122				WG423294	
Nitrobenzene-d5				76.99	12-120				WG423294	
p-Terphenyl-d14				83.54	34-149				WG423294	
Mercury,Dissolved	mg/l	0.0024	0.0028	82.0	70-130	13.6	20	L404005-03	WG423123	

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Quality Assurance Report
Level II

West Linn, OR 97068

June 29, 2009

L403980

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
PCB 1260	mg/kg	0.138	0.148	82.7	10-197	7.01	39	L403960-03	WG423525	
Decachlorobiphenyl				73.26	18.9-115.8				WG423525	
Tetrachloro-m-xylene				86.00	31.8-115.7				WG423525	
Diesel (C7-C26)	mg/kg	27.2	23.7	90.6	50-150	13.7	20	L404242-05	WG423285	
Motor Oil (C16-C40)	mg/kg	34.7	30.2	103.	50-150	13.9	25	L404242-05	WG423285	
o-Terphenyl				90.92	50-150				WG423285	
1,1,1-Trichloroethane	mg/kg	0.234	0.219	93.6	23-147	6.83	32	L404233-01	WG423787	
1,1,2,2-Tetrachloroethane	mg/kg	0.216	0.221	86.3	18-150	2.41	33	L404233-01	WG423787	
1,1,2-Trichloroethane	mg/kg	0.237	0.236	94.7	35-140	0.278	29	L404233-01	WG423787	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.248	0.241	99.1	10-145	2.65	35	L404233-01	WG423787	
1,1-Dichloroethane	mg/kg	0.227	0.223	90.8	24-148	1.75	31	L404233-01	WG423787	
1,1-Dichloroethene	mg/kg	0.250	0.233	100.	10-149	7.39	34	L404233-01	WG423787	
1,2,3-Trichlorobenzene	mg/kg	0.215	0.208	85.6	10-129	3.19	43	L404233-01	WG423787	
1,2,4-Trichlorobenzene	mg/kg	0.213	0.206	84.9	10-119	3.21	44	L404233-01	WG423787	
1,2-Dibromo-3-Chloropropane	mg/kg	0.233	0.224	93.2	19-145	4.01	35	L404233-01	WG423787	
1,2-Dibromoethane	mg/kg	0.235	0.231	93.9	24-145	1.46	31	L404233-01	WG423787	
1,2-Dichlorobenzene	mg/kg	0.225	0.216	89.8	12-130	3.87	35	L404233-01	WG423787	
1,2-Dichloroethane	mg/kg	0.208	0.205	83.1	21-155	1.48	29	L404233-01	WG423787	
1,2-Dichloropropane	mg/kg	0.243	0.231	97.4	28-144	5.24	30	L404233-01	WG423787	
1,3-Dichlorobenzene	mg/kg	0.228	0.228	90.9	10-129	0.080	38	L404233-01	WG423787	
1,4-Dichlorobenzene	mg/kg	0.214	0.209	85.3	10-121	2.49	36	L404233-01	WG423787	
2-Butanone (MEK)	mg/kg	0.924	0.930	73.8	21-143	0.604	37	L404233-01	WG423787	
2-Hexanone	mg/kg	1.07	1.11	85.1	22-151	3.67	38	L404233-01	WG423787	
4-Methyl-2-pentanone (MIBK)	mg/kg	1.06	1.09	84.8	31-151	3.03	36	L404233-01	WG423787	
Acetone	mg/kg	1.00	1.02	74.5	13-158	1.61	34	L404233-01	WG423787	
Benzene	mg/kg	0.230	0.220	91.8	16-143	4.38	31	L404233-01	WG423787	
Bromochloromethane	mg/kg	0.246	0.243	98.3	25-152	0.956	29	L404233-01	WG423787	
Bromodichloromethane	mg/kg	0.234	0.222	93.5	27-139	5.08	30	L404233-01	WG423787	
Bromoform	mg/kg	0.243	0.246	97.1	21-144	1.49	34	L404233-01	WG423787	
Bromomethane	mg/kg	0.254	0.239	101.	0-180	6.02	41	L404233-01	WG423787	
Carbon disulfide	mg/kg	0.230	0.223	91.9	10-156	3.15	38	L404233-01	WG423787	
Carbon tetrachloride	mg/kg	0.231	0.218	92.1	12-149	5.62	34	L404233-01	WG423787	
Chlorobenzene	mg/kg	0.240	0.240	95.8	17-134	0.059	34	L404233-01	WG423787	
Chlorodibromomethane	mg/kg	0.245	0.239	98.1	28-147	2.57	32	L404233-01	WG423787	
Chloroethane	mg/kg	0.251	0.243	99.8	0-172	3.15	38	L404233-01	WG423787	
Chloroform	mg/kg	0.217	0.210	86.3	28-138	3.21	30	L404233-01	WG423787	
Chloromethane	mg/kg	0.235	0.233	93.8	10-158	0.875	35	L404233-01	WG423787	
cis-1,2-Dichloroethene	mg/kg	0.235	0.229	93.9	21-147	2.31	31	L404233-01	WG423787	
cis-1,3-Dichloropropene	mg/kg	0.231	0.222	92.3	17-145	3.69	32	L404233-01	WG423787	
Dichlorodifluoromethane	mg/kg	0.278	0.273	111.	0-192	1.74	38	L404233-01	WG423787	
Ethylbenzene	mg/kg	0.238	0.240	95.4	12-137	0.724	36	L404233-01	WG423787	
Isopropylbenzene	mg/kg	0.242	0.239	96.9	14-134	1.51	37	L404233-01	WG423787	
Methyl tert-butyl ether	mg/kg	0.210	0.209	83.9	21-157	0.188	31	L404233-01	WG423787	
Methylene Chloride	mg/kg	0.218	0.215	87.2	12-149	1.28	31	L404233-01	WG423787	
Styrene	mg/kg	0.236	0.238	94.4	10-140	0.989	35	L404233-01	WG423787	
Tetrachloroethene	mg/kg	0.245	0.238	97.9	10-131	2.88	35	L404233-01	WG423787	
Toluene	mg/kg	0.233	0.223	93.1	12-136	4.20	32	L404233-01	WG423787	
trans-1,2-Dichloroethene	mg/kg	0.246	0.237	98.5	10-143	4.00	33	L404233-01	WG423787	
trans-1,3-Dichloropropene	mg/kg	0.226	0.219	90.3	16-147	3.17	32	L404233-01	WG423787	
Trichloroethene	mg/kg	0.250	0.235	99.9	10-155	6.18	33	L404233-01	WG423787	
Trichlorofluoromethane	mg/kg	0.245	0.233	97.9	10-154	4.90	32	L404233-01	WG423787	
Vinyl chloride	mg/kg	0.247	0.234	98.6	10-159	5.29	36	L404233-01	WG423787	
4-Bromofluorobenzene				97.08	59-140				WG423787	
Dibromofluoromethane				95.67	63-139				WG423787	

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Toluene-d8				101.9	84-116				
1,2,4,5-Tetrachlorobenzene	ppm	0.298	0.275	89.4	47-111	7.77	20	L404242-05	WG423526
2,4,5-Trichlorophenol	ppm	0.309	0.277	92.7	28-128	10.6	29	L404242-05	WG423526
2,4,6-Trichlorophenol	ppm	0.301	0.263	90.5	27-128	13.7	31	L404242-05	WG423526
2,4-Dichlorophenol	ppm	0.283	0.254	85.1	39-116	10.9	23	L404242-05	WG423526
2,4-Dimethylphenol	ppm	0.440	0.418	132.176*	50-119	5.25	27	L404242-05	WG423526
2,4-Dinitrophenol	ppm	0.118	0.146	35.5	10-123	21.4	42	L404242-05	WG423526
2,4-Dinitrotoluene	ppm	0.276	0.281	83.0	52-121	1.65	23	L404242-05	WG423526
2,6-Dinitrotoluene	ppm	0.294	0.253	88.4	53-114	15.2	22	L404242-05	WG423526
2-Chloronaphthalene	ppm	0.271	0.233	81.5	52-101	15.1	20	L404242-05	WG423526
2-Chlorophenol	ppm	0.265	0.231	79.6	41-112	13.9	27	L404242-05	WG423526
2-Methylnaphthalene	ppm	0.283	0.238	85.0	48-109	17.5	22	L404242-05	WG423526
2-Methylphenol	ppm	0.300	0.259	90.2	56-111	14.7	20	L404242-05	WG423526
2-Nitroaniline	ppm	0.287	0.257	86.2	52-117	10.9	24	L404242-05	WG423526
2-Nitrophenol	ppm	0.263	0.252	79.0	23-117	4.45	31	L404242-05	WG423526
3&4-Methyl Phenol	ppm	0.352	0.298	106.	50-134	16.7	32	L404242-05	WG423526
3,3-Dichlorobenzidine	ppm	0.126	0.132	37.9	10-133	4.58	41	L404242-05	WG423526
3-Nitroaniline	ppm	0.236	0.224	70.7	5-134	5.10	30	L404242-05	WG423526
4,6-Dinitro-2-methylphenol	ppm	0.117	0.175	35.1	10-124	40.0*	38	L404242-05	WG423526
4-Bromophenyl-phenylether	ppm	0.241	0.224	72.3	37-103	7.20	23	L404242-05	WG423526
4-Chloro-3-methylphenol	ppm	0.291	0.255	87.3	52-119	13.0	24	L404242-05	WG423526
4-Chloroaniline	ppm	0.236	0.245	70.7	4-134	4.05	28	L404242-05	WG423526
4-Chlorophenyl-phenylether	ppm	0.276	0.236	83.0	53-105	15.6	20	L404242-05	WG423526
4-Nitroaniline	ppm	0.268	0.260	80.4	12-129	2.98	34	L404242-05	WG423526
4-Nitrophenol	ppm	0.279	0.267	83.8	15-140	4.48	40	L404242-05	WG423526
Acenaphthene	ppm	0.289	0.258	86.9	52-102	11.6	23	L404242-05	WG423526
Acenaphthylene	ppm	0.291	0.264	87.3	54-103	9.69	22	L404242-05	WG423526
Acetophenone	ppm	0.281	0.230	84.4	38-94	20.1	22	L404242-05	WG423526
Anthracene	ppm	0.295	0.257	88.4	55-114	13.6	21	L404242-05	WG423526
Atrazine	ppm	0.335	0.303	101.	40-144	10.2	21	L404242-05	WG423526
Benzaldehyde	ppm	0.232	0.0946	69.6	0-100	84.1*	37	L404242-05	WG423526
Benzo(a)anthracene	ppm	0.265	0.263	79.5	37-124	0.729	33	L404242-05	WG423526
Benzo(a)pyrene	ppm	0.300	0.266	90.2	44-129	12.2	27	L404242-05	WG423526
Benzo(b)fluoranthene	ppm	0.312	0.239	93.8	28-135	26.5	33	L404242-05	WG423526
Benzo(g,h,i)perylene	ppm	0.221	0.278	66.4	25-123	22.7	35	L404242-05	WG423526
Benzo(k)fluoranthene	ppm	0.314	0.277	94.3	41-116	12.7	34	L404242-05	WG423526
Benzylbutyl phthalate	ppm	0.347	0.282	104.	45-143	20.8	39	L404242-05	WG423526
Biphenyl	ppm	0.261	0.235	78.5	49-103	10.5	24	L404242-05	WG423526
Bis(2-chloroethoxy)methane	ppm	0.258	0.236	77.4	48-108	8.93	23	L404242-05	WG423526
Bis(2-chloroethyl)ether	ppm	0.257	0.201	77.3	36-115	24.5	30	L404242-05	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.277	0.228	83.1	44-109	19.3	27	L404242-05	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.317	0.278	95.2	40-128	13.2	34	L404242-05	WG423526
Caprolactam	ppm	0.289	0.283	86.7	26-140	1.89	27	L404242-05	WG423526
Carbazole	ppm	0.275	0.256	82.6	43-122	7.19	25	L404242-05	WG423526
Chrysene	ppm	0.289	0.244	86.8	39-119	17.1	31	L404242-05	WG423526
Di-n-butyl phthalate	ppm	0.287	0.266	86.2	49-121	7.48	22	L404242-05	WG423526
Di-n-octyl phthalate	ppm	0.242	0.267	72.7	40-132	9.93	27	L404242-05	WG423526
Dibenz(a,h)anthracene	ppm	0.217	0.249	65.1	29-123	13.9	30	L404242-05	WG423526
Dibenzofuran	ppm	0.284	0.259	85.3	54-111	9.28	21	L404242-05	WG423526
Diethyl phthalate	ppm	0.282	0.254	84.7	51-113	10.4	21	L404242-05	WG423526
Dimethyl phthalate	ppm	0.276	0.257	82.8	54-108	7.07	23	L404242-05	WG423526
Fluoranthene	ppm	0.281	0.276	84.3	23-143	1.57	29	L404242-05	WG423526
Fluorene	ppm	0.300	0.274	90.1	53-107	9.01	22	L404242-05	WG423526
Hexachloro-1,3-butadiene	ppm	0.279	0.267	83.9	39-113	4.58	26	L404242-05	WG423526
Hexachlorobenzene	ppm	0.270	0.236	81.0	49-108	13.2	27	L404242-05	WG423526
Hexachlorocyclopentadiene	ppm	0.229	0.214	68.7	10-131	6.84	39	L404242-05	WG423526
Hexachloroethane	ppm	0.278	0.220	83.5	25-118	23.1	35	L404242-05	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.213	0.254	64.0	28-125	17.6	32	L404242-05	WG423526
Isophorone	ppm	0.262	0.230	78.8	51-115	13.3	22	L404242-05	WG423526

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Quality Assurance Report
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L403980

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
n-Nitrosodi-n-propylamine	ppm	0.256	0.220	76.7	54-110	14.9	23	L404242-05	WG423526
n-Nitrosodiphenylamine	ppm	0.273	0.233	82.1	54-138	15.7	26	L404242-05	WG423526
Naphthalene	ppm	0.270	0.227	80.9	41-100	17.2	26	L404242-05	WG423526
Nitrobenzene	ppm	0.247	0.217	74.1	40-102	12.6	24	L404242-05	WG423526
Pentachlorophenol	ppm	0.319	0.289	95.9	10-146	9.88	35	L404242-05	WG423526
Phenanthrene	ppm	0.279	0.261	83.7	37-125	6.39	27	L404242-05	WG423526
Phenol	ppm	0.273	0.241	81.9	52-111	12.2	22	L404242-05	WG423526
Pyrene	ppm	0.319	0.247	95.7	22-151	25.4	38	L404242-05	WG423526
2,4,6-Tribromophenol				94.49	25-137				WG423526
2-Fluorobiphenyl				80.03	30-120				WG423526
2-Fluorophenol				88.83	26-130				WG423526
Nitrobenzene-d5				81.00	18-119				WG423526
Phenol-d5				85.23	37-141				WG423526
p-Terphenyl-d14				98.95	23-143				WG423526
1,1,1-Trichloroethane	mg/l	0.535	0.558	85.7	31-161	4.19	23	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.583	0.510	93.3	49-149	13.4	22	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.575	0.511	91.9	46-145	11.8	20	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.574	0.601	40.7	14-168	4.46	24	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.546	0.563	87.3	30-159	3.10	21	L403957-01	WG423629
1,1-Dichloroethene	mg/l	0.526	0.567	80.8	10-162	7.63	23	L403957-01	WG423629
1,2,3-Trichlorobenzene	mg/l	0.631	0.529	101.	32-143	17.6	33	L403957-01	WG423629
1,2,4-Trichlorobenzene	mg/l	0.615	0.547	98.4	27-142	11.7	30	L403957-01	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.511	0.489	81.7	37-148	4.23	27	L403957-01	WG423629
1,2-Dibromoethane	mg/l	0.568	0.491	90.8	41-149	14.4	21	L403957-01	WG423629
1,2-Dichlorobenzene	mg/l	0.579	0.580	92.7	40-139	0.024	23	L403957-01	WG423629
1,2-Dichloroethane	mg/l	0.584	0.523	93.4	29-167	11.1	21	L403957-01	WG423629
1,2-Dichloropropane	mg/l	0.551	0.539	88.1	39-148	2.03	20	L403957-01	WG423629
1,3-Dichlorobenzene	mg/l	0.576	0.574	92.1	32-148	0.223	24	L403957-01	WG423629
1,4-Dichlorobenzene	mg/l	0.561	0.568	89.7	32-136	1.23	23	L403957-01	WG423629
2-Butanone (MEK)	mg/l	2.80	2.47	89.4	32-151	12.4	26	L403957-01	WG423629
2-Hexanone	mg/l	3.05	2.53	97.5	41-155	18.6	28	L403957-01	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	3.05	2.62	97.7	40-160	15.0	28	L403957-01	WG423629
Acetone	mg/l	2.49	2.84	79.6	25-157	13.3	26	L403957-01	WG423629
Benzene	mg/l	0.544	0.553	87.1	16-158	1.50	21	L403957-01	WG423629
Bromochloromethane	mg/l	0.580	0.548	92.8	36-154	5.74	21	L403957-01	WG423629
Bromodichloromethane	mg/l	0.578	0.564	92.5	45-147	2.49	20	L403957-01	WG423629
Bromoform	mg/l	0.640	0.548	102.	38-152	15.4	20	L403957-01	WG423629
Bromomethane	mg/l	0.578	0.613	92.5	0-191	5.85	35	L403957-01	WG423629
Carbon disulfide	mg/l	0.475	0.541	75.9	10-166	13.0	25	L403957-01	WG423629
Carbon tetrachloride	mg/l	0.484	0.508	77.4	22-168	4.83	24	L403957-01	WG423629
Chlorobenzene	mg/l	0.544	0.556	87.0	33-148	2.10	22	L403957-01	WG423629
Chlorodibromomethane	mg/l	0.609	0.563	97.4	48-151	7.78	21	L403957-01	WG423629
Chloroethane	mg/l	0.543	0.577	86.9	4-176	5.98	27	L403957-01	WG423629
Chloroform	mg/l	0.514	0.526	82.2	37-147	2.32	21	L403957-01	WG423629
Chloromethane	mg/l	0.542	0.582	86.7	10-174	7.14	28	L403957-01	WG423629
cis-1,2-Dichloroethene	mg/l	0.742	0.766	89.9	29-156	3.13	22	L403957-01	WG423629
cis-1,3-Dichloropropene	mg/l	0.583	0.535	93.3	35-148	8.66	21	L403957-01	WG423629
Dichlorodifluoromethane	mg/l	0.528	0.562	84.5	0-200	6.18	26	L403957-01	WG423629
Ethylbenzene	mg/l	0.535	0.569	85.5	29-150	6.25	24	L403957-01	WG423629
Isopropylbenzene	mg/l	0.552	0.580	88.3	35-147	4.97	25	L403957-01	WG423629
Methyl tert-butyl ether	mg/l	0.604	0.560	96.7	24-167	7.60	22	L403957-01	WG423629
Methylene Chloride	mg/l	0.570	0.575	91.1	23-151	0.930	21	L403957-01	WG423629
Styrene	mg/l	0.572	0.562	91.5	38-149	1.74	23	L403957-01	WG423629
Tetrachloroethene	mg/l	2.85	3.09	72.3	13-157	8.02	24	L403957-01	WG423629
Toluene	mg/l	0.532	0.536	82.8	22-152	0.894	22	L403957-01	WG423629
trans-1,2-Dichloroethene	mg/l	0.514	0.568	82.2	11-160	10.0	23	L403957-01	WG423629
trans-1,3-Dichloropropene	mg/l	0.570	0.484	91.1	33-153	16.2	22	L403957-01	WG423629

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Trichloroethene	mg/l	0.799	0.841	84.6	18-163	5.11	21	L403957-01	WG423629
Trichlorofluoromethane	mg/l	0.539	0.566	86.3	10-177	4.83	24	L403957-01	WG423629
Vinyl chloride	mg/l	0.516	0.558	82.6	0-179	7.71	26	L403957-01	WG423629
4-Bromofluorobenzene				99.84	75-128				WG423629
Dibromofluoromethane				103.3	79-125				WG423629
Toluene-d8				101.7	87-114				WG423629
1-Methylnaphthalene	ppm	0.0668	0.0742	112.	19-131	10.5	30	L403980-04	WG423440
2-Chloronaphthalene	ppm	0.0278	0.0291	84.2	38-117	4.57	26	L403980-04	WG423440
2-Methylnaphthalene	ppm	0.0507	0.0618	93.1	18-125	19.7	29	L403980-04	WG423440
Acenaphthene	ppm	0.0259	0.0327	78.5	31-120	23.4	30	L403980-04	WG423440
Acenaphthylene	ppm	0.0311	0.0353	94.3	34-116	12.7	29	L403980-04	WG423440
Anthracene	ppm	0.0265	0.0303	80.2	32-131	13.5	26	L403980-04	WG423440
Benzo(a)anthracene	ppm	0.0292	0.0300	61.3	32-131	2.48	31	L403980-04	WG423440
Benzo(a)pyrene	ppm	0.0300	0.0340	67.4	28-130	12.3	28	L403980-04	WG423440
Benzo(b)fluoranthene	ppm	0.0376	0.0414	77.7	37-130	9.42	41	L403980-04	WG423440
Benzo(g,h,i)perylene	ppm	0.0147	0.0191	25.9	10-134	26.5*	26	L403980-04	WG423440
Benzo(k)fluoranthene	ppm	0.0339	0.0403	79.1	31-129	17.2	42	L403980-04	WG423440
Chrysene	ppm	0.0314	0.0316	77.3	25-137	0.546	22	L403980-04	WG423440
Dibenz(a,h)anthracene	ppm	0.0153	0.0167	46.4	20-134	8.86	25	L403980-04	WG423440
Fluoranthene	ppm	0.0411	0.0399	88.1	27-138	2.88	35	L403980-04	WG423440
Fluorene	ppm	0.0314	0.0357	95.1	26-136	12.8	30	L403980-04	WG423440
Indeno(1,2,3-cd)pyrene	ppm	0.0142	0.0169	43.1	16-135	17.2	26	L403980-04	WG423440
Naphthalene	ppm	0.0342	0.0393	67.4	22-121	13.7	30	L403980-04	WG423440
Phenanthrene	ppm	0.0334	0.0392	68.0	27-133	15.8	36	L403980-04	WG423440
Pyrene	ppm	0.0407	0.0381	74.9	22-133	6.68	33	L403980-04	WG423440
2-Fluorobiphenyl				68.20	30-120				WG423440
Nitrobenzene-d5				54.60	18-119				WG423440
p-Terphenyl-d14				91.50	23-143				WG423440
Beryllium,Dissolved	mg/l	0.988	0.993	87.4	75-125	0.505	20	L404101-03	WG423363
Cadmium,Dissolved	mg/l	1.04	1.05	92.0	75-125	0.957	20	L404101-03	WG423363
Chromium,Dissolved	mg/l	1.02	1.04	90.3	75-125	1.94	20	L404101-03	WG423363
Copper,Dissolved	mg/l	1.04	1.06	92.0	75-125	1.90	20	L404101-03	WG423363
Lead,Dissolved	mg/l	1.06	1.09	93.8	75-125	2.79	20	L404101-03	WG423363
Nickel,Dissolved	mg/l	1.04	1.06	90.9	75-125	1.90	20	L404101-03	WG423363
Selenium,Dissolved	mg/l	1.03	1.04	90.2	75-125	0.966	20	L404101-03	WG423363
Silver,Dissolved	mg/l	0.0633	0.0625	5.425*	75-125	1.27	20	L404101-03	WG423363
Zinc,Dissolved	mg/l	1.02	1.04	89.7	75-125	1.94	20	L404101-03	WG423363
Antimony	mg/kg	20.8	19.7	41.571*	75-125	5.43	20	L403985-12	WG423454
Arsenic	mg/kg	51.8	50.4	97.6	75-125	2.74	20	L403985-12	WG423454
Beryllium	mg/kg	49.9	48.2	98.7	75-125	3.47	20	L403985-12	WG423454
Cadmium	mg/kg	46.3	44.6	92.5	75-125	3.74	20	L403985-12	WG423454
Chromium	mg/kg	77.4	78.8	94.8	75-125	1.79	20	L403985-12	WG423454
Copper	mg/kg	85.1	89.0	106.	75-125	4.48	20	L403985-12	WG423454
Lead	mg/kg	59.6	58.8	93.2	75-125	1.35	20	L403985-12	WG423454
Nickel	mg/kg	60.2	60.1	97.6	75-125	0.166	20	L403985-12	WG423454
Selenium	mg/kg	44.4	43.0	88.8	75-125	3.20	20	L403985-12	WG423454
Silver	mg/kg	50.0	48.5	100.	75-125	3.05	20	L403985-12	WG423454
Zinc	mg/kg	224.	225.	102.	75-125	0.445	20	L403985-12	WG423454
Thallium	mg/kg	60.9	42.7	122.	75-125	35.1*	20	L403985-12	WG423454
Beryllium	mg/l	1.10	1.09	97.3	75-125	0.913	20	L404463-04	WG424232
Cadmium	mg/l	1.10	1.09	97.3	75-125	0.913	20	L404463-04	WG424232

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Quality Assurance Report
Level II

June 29, 2009

L403980

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref	Samp	Batch
			Ref	%Rec						
Chromium	mg/l	1.08	1.06	95.6	75-125	1.87	20	L404463-04	WG424232	
Copper	mg/l	1.09	1.09	96.2	75-125	0.00	20	L404463-04	WG424232	
Lead	mg/l	1.17	1.17	102.	75-125	0.00	20	L404463-04	WG424232	
Nickel	mg/l	1.13	1.13	100.	75-125	0.00	20	L404463-04	WG424232	
Selenium	mg/l	1.09	1.11	96.5	75-125	1.82	20	L404463-04	WG424232	
Silver	mg/l	0.230	0.200	20.354*	75-125	14.0	20	L404463-04	WG424232	
Zinc	mg/l	1.09	1.08	95.9	75-125	0.922	20	L404463-04	WG424232	
Lead	mg/kg	48.7	48.2	95.4	75-125	1.03	20	L403980-10	WG424566	
Antimony, Dissolved	mg/l	0.0540	0.0530	95.2	75-125	1.87	20	L403980-06	WG423775	
Arsenic, Dissolved	mg/l	0.0534	0.0533	93.0	75-125	0.187	20	L403980-06	WG423775	
Thallium, Dissolved	mg/l	0.0504	0.0496	88.9	75-125	1.60	20	L403980-06	WG423775	
Antimony	mg/l	0.0561	0.0570	98.9	75-125	1.59	20	L404641-23	WG424398	
Arsenic	mg/l	0.0515	0.0532	85.4	75-125	3.25	20	L404641-23	WG424398	
Thallium	mg/l	0.0538	0.0539	94.9	75-125	0.186	20	L404641-23	WG424398	
Mercury	mg/l	0.0031	0.0031	105.	70-130	0.318	20	L406775-15	WG426094	
Mercury, Dissolved	mg/l	0.0033	0.0033	112.	70-130	2.10	20	L406945-16	WG426098	
Beryllium	mg/l	1.08	1.08	95.6	75-125	0.00	20	L406969-23	WG426343	
Cadmium	mg/l	1.13	1.14	100.	75-125	0.881	20	L406969-23	WG426343	
Chromium	mg/l	1.08	1.07	95.6	75-125	0.930	20	L406969-23	WG426343	
Copper	mg/l	1.14	1.14	101.	75-125	0.00	20	L406969-23	WG426343	
Lead	mg/l	1.12	1.11	99.1	75-125	0.897	20	L406969-23	WG426343	
Nickel	mg/l	1.12	1.11	99.1	75-125	0.897	20	L406969-23	WG426343	
Selenium	mg/l	1.05	1.03	92.9	75-125	1.92	20	L406969-23	WG426343	
Silver	mg/l	0.138	0.140	12.212*	75-125	1.44	20	L406969-23	WG426343	
Zinc	mg/l	1.11	1.12	97.1	75-125	0.897	20	L406969-23	WG426343	
Antimony	mg/l	0.0615	0.0638	108.	75-125	3.67	20	L406118-02	WG426269	
Arsenic	mg/l	0.0579	0.0570	102.	75-125	1.57	20	L406118-02	WG426269	
Thallium	mg/l	0.0581	0.0648	102.	75-125	10.9	20	L406118-02	WG426269	
Antimony, Dissolved	mg/l	0.0594	0.0582	105.	75-125	2.04	20	L407348-02	WG426484	
Arsenic, Dissolved	mg/l	0.0612	0.0593	102.	75-125	3.15	20	L407348-02	WG426484	
Thallium, Dissolved	mg/l	0.0614	0.0607	108.	75-125	1.15	20	L407348-02	WG426484	

Batch number / Run number / Sample number cross reference

WG423109: R752950: L403980-04 07 10
 WG423182: R753226: L403980-04 07
 WG422935: R754327: L403980-05 08 11
 WG423285: R754330: L403980-01 04 07 10
 WG423335: R754547: L403980-10
 WG423494: R754746: L403980-01
 WG423412: R755626: L403980-01 04
 WG423413: R755627: L403980-07 10

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June 29, 2009

L403980

WG423294: R755687: L403980-03 06 09
WG423440: R755726: L403980-01 04 07
WG423184: R756009: L403980-10
WG423626: R756626: L403980-02
WG423123: R756867: L403980-06 09
WG423525: R757126: L403980-01
WG423787: R759206: L403980-01
WG423526: R759406: L403980-10
WG423739: R759727: L403980-12
WG423629: R759806: L403980-03 06 09 12
WG423743: R760708: L403980-12
WG423854: R761426: L403980-03
WG423363: R763047: L403980-06 09
WG423454: R763886: L403980-01 04 07 10
WG424340: R764086: L403980-12
WG424232: R766446: L403980-06 09
WG424233: R766886: L403980-06 09
WG424566: R769026: L403980-10
WG423775: R770926: L403980-06 09
WG424943: R771826: L403980-01 04 07 10
WG424398: R775766: L403980-06 09
WG426094: R781586: L403980-03
WG426098: R781732: L403980-03
WG426343: R782088: L403980-03
WG426483: R782806: L403980-03
WG426269: R782827: L403980-03
WG426484: R783346: L403980-03
WG427442: R788346: L403980-01 10
WG427744: R789452: L403980-03 06 09 12
WG428103: R793871: L403980-10

* * Calculations are performed prior to rounding of reported values .
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L403980

June 29, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Report Summary

Thursday June 25, 2009

Report Number: L404242

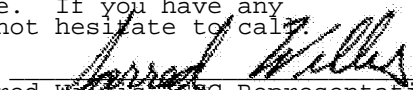
Samples Received: 05/23/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

Chris Kramer
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West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-01

Sample ID : PB-1B-13.5

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 14:20

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	84.8			%		2540G	05/29/09	1
Mercury	0.020	0.0025	0.024	mg/kg	J	7471	05/26/09	1
Antimony	3.3	0.52	1.2	mg/kg		6010B	06/02/09	1
Arsenic	4.0	0.27	1.2	mg/kg		6010B	05/30/09	1
Beryllium	U	0.38	1.2	mg/kg	O	6010B	05/31/09	10
Cadmium	0.35	0.037	0.29	mg/kg		6010B	05/30/09	1
Chromium	32.	0.098	0.59	mg/kg		6010B	05/30/09	1
Copper	16.	0.30	1.2	mg/kg		6010B	05/30/09	1
Lead	5.4	0.096	0.29	mg/kg		6010B	05/30/09	1
Nickel	40.	0.49	1.2	mg/kg		6010B	05/30/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	05/30/09	1
Silver	0.94	0.16	0.59	mg/kg		6010B	05/30/09	1
Thallium	8.7	0.30	1.2	mg/kg		6010B	05/30/09	1
Zinc	41.	0.44	1.8	mg/kg		6010B	05/30/09	1
Volatile Organics								
Acetone	U	0.017	0.059	mg/kg		8260B	05/27/09	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
Bromochloromethane	U	0.00045	0.0012	mg/kg		8260B	05/27/09	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	05/27/09	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	05/27/09	1
Bromomethane	U	0.0013	0.0059	mg/kg		8260B	05/27/09	1
2-Butanone (MEK)	U	0.0027	0.012	mg/kg		8260B	05/27/09	1
Carbon disulfide	0.0041	0.00033	0.0012	mg/kg		8260B	05/27/09	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
Chloroethane	U	0.00059	0.0059	mg/kg		8260B	05/27/09	1
Chloroform	U	0.00041	0.0059	mg/kg		8260B	05/27/09	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0059	mg/kg		8260B	05/27/09	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	05/27/09	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	05/27/09	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	05/27/09	1
Dichlorodifluoromethane	U	0.00032	0.0059	mg/kg		8260B	05/27/09	1
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	05/27/09	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	05/27/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	05/27/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	05/27/09	1

Results listed are dry weight basis.

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MDL = Minimum Detection Limit = LOD

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Reported: 06/23/09 12:58 Revised: 06/25/09 13:13



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1B-13.5
Collected By :
Collection Date : 05/21/09 14:20

ESC Sample # : L404242-01
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	05/27/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	05/27/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	05/27/09	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
2-Hexanone	U	0.00036	0.0012	mg/kg		8260B	05/27/09	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	05/27/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	05/27/09	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	05/27/09	1
Methylene Chloride	U	0.00060	0.0059	mg/kg		8260B	05/27/09	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	05/27/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	05/27/09	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
Toluene	U	0.0012	0.0059	mg/kg		8260B	05/27/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	05/27/09	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	05/27/09	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	05/27/09	1
Trichlorofluoromethane	U	0.00027	0.0059	mg/kg		8260B	05/27/09	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	05/27/09	1
Xylenes, Total	U	0.00046	0.0035	mg/kg		8260B	05/27/09	1
Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.12	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.024	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	99.9			% Rec.		8260B	05/27/09	1
Dibromofluoromethane	117.			% Rec.		8260B	05/27/09	1
4-Bromofluorobenzene	111.			% Rec.		8260B	05/27/09	1
Diesel Range Organics (DRO)	U	1.3	4.7	mg/kg		NWTPHDX	06/04/09	1
Residual Range Organics (RRO)	12.	3.3	12.	mg/kg		NWTPHDX	06/04/09	1
Surrogate Recovery								
o-Terphenyl	91.7			% Rec.		NWTPHDX	06/04/09	1
Gasoline Range (C7-C10)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	16.	3.3	12.	mg/kg		NWTPH-HC	05/28/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1B-13.5
Collected By :
Collection Date : 05/21/09 14:20

ESC Sample # : L404242-01
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Surrogate recovery(%) o-Terphenyl	104.			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0013	0.0071	mg/kg		8270C-SI	05/28/09	1
Acenaphthene	U	0.0013	0.0071	mg/kg		8270C-SI	05/28/09	1
Acenaphthylene	U	0.0011	0.0071	mg/kg		8270C-SI	05/28/09	1
Benzo(a)anthracene	U	0.00096	0.0071	mg/kg		8270C-SI	05/28/09	1
Benzo(a)pyrene	U	0.00083	0.0071	mg/kg		8270C-SI	05/28/09	1
Benzo(b)fluoranthene	U	0.0014	0.0071	mg/kg		8270C-SI	05/28/09	1
Benzo(g,h,i)perylene	U	0.00098	0.0071	mg/kg		8270C-SI	05/28/09	1
Benzo(k)fluoranthene	U	0.0012	0.0071	mg/kg		8270C-SI	05/28/09	1
Chrysene	0.0012	0.00087	0.0071	mg/kg	J	8270C-SI	05/28/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0071	mg/kg		8270C-SI	05/28/09	1
Fluoranthene	0.0018	0.00081	0.0071	mg/kg	J	8270C-SI	05/28/09	1
Fluorene	U	0.0010	0.0071	mg/kg		8270C-SI	05/28/09	1
Indeno(1,2,3-cd)pyrene	U	0.00088	0.0071	mg/kg		8270C-SI	05/28/09	1
Naphthalene	U	0.0014	0.0071	mg/kg		8270C-SI	05/28/09	1
Phenanthrene	0.0019	0.00098	0.0071	mg/kg	J	8270C-SI	05/28/09	1
Pyrene	0.0021	0.00096	0.0071	mg/kg	J	8270C-SI	05/28/09	1
1-Methylnaphthalene	U	0.0015	0.0071	mg/kg		8270C-SI	05/28/09	1
2-Methylnaphthalene	U	0.0020	0.0071	mg/kg		8270C-SI	05/28/09	1
2-Chloronaphthalene	U	0.0010	0.0071	mg/kg		8270C-SI	05/28/09	1
Surrogate Recovery								
Nitrobenzene-d5	59.9			% Rec.		8270C-SI	05/28/09	1
2-Fluorobiphenyl	58.1			% Rec.		8270C-SI	05/28/09	1
p-Terphenyl-d14	58.3			% Rec.		8270C-SI	05/28/09	1

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June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1B-GW
Collected By :
Collection Date : 05/21/09 14:30

ESC Sample # : L404242-02
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	1.5	0.29	1.0	ug/l		6020	06/14/09	1
Antimony,Dissolved	0.55	0.29	1.0	ug/l	J	6020	06/16/09	1
Arsenic	9.4	0.22	1.0	ug/l		6020	06/14/09	1
Arsenic,Dissolved	5.8	0.22	1.0	ug/l		6020	06/16/09	1
Thallium	0.65	0.22	1.0	ug/l	J	6020	06/14/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/16/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/12/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	06/14/09	1
Beryllium	U	0.75	2.0	ug/l		6010B	06/13/09	1
Beryllium,Dissolved	U	0.75	2.0	ug/l		6010B	06/15/09	1
Cadmium	2.4	0.74	5.0	ug/l	J	6010B	06/13/09	1
Cadmium,Dissolved	U	0.74	5.0	ug/l		6010B	06/15/09	1
Chromium	14.	2.0	10.	ug/l		6010B	06/13/09	1
Chromium,Dissolved	2.3	2.0	10.	ug/l	J	6010B	06/15/09	1
Copper	9.9	6.0	20.	ug/l	J	6010B	06/13/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	06/15/09	1
Lead	U	1.9	5.0	ug/l		6010B	06/13/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	06/15/09	1
Nickel	38.	9.8	20.	ug/l		6010B	06/13/09	1
Nickel,Dissolved	U	9.8	20.	ug/l		6010B	06/15/09	1
Selenium	U	6.5	20.	ug/l		6010B	06/13/09	1
Selenium,Dissolved	7.8	6.5	20.	ug/l	JB	6010B	06/15/09	1
Silver	4.4	3.2	10.	ug/l	J	6010B	06/13/09	1
Silver,Dissolved	4.7	3.2	10.	ug/l	J	6010B	06/15/09	1
Zinc	U	8.8	30.	ug/l		6010B	06/13/09	1
Zinc,Dissolved	U	8.8	30.	ug/l		6010B	06/15/09	1
Volatile Organics								
Acetone	12.	8.9	50.	ug/l	J	8260B	05/27/09	1
Benzene	U	0.29	1.0	ug/l		8260B	05/27/09	1
Bromochloromethane	U	0.44	1.0	ug/l		8260B	05/27/09	1
Bromodichloromethane	U	0.37	1.0	ug/l		8260B	05/27/09	1
Bromoform	U	0.51	1.0	ug/l		8260B	05/27/09	1
Bromomethane	U	0.89	5.0	ug/l		8260B	05/27/09	1
2-Butanone (MEK)	U	4.5	10.	ug/l		8260B	05/27/09	1
Carbon disulfide	0.64	0.32	1.0	ug/l	J	8260B	05/27/09	1
Carbon tetrachloride	U	0.31	1.0	ug/l		8260B	05/27/09	1
Chlorobenzene	U	0.26	1.0	ug/l		8260B	05/27/09	1
Chloroethane	U	0.86	5.0	ug/l		8260B	05/27/09	1
Chloroform	U	0.33	5.0	ug/l		8260B	05/27/09	1
Chloromethane	U	0.25	2.5	ug/l		8260B	05/27/09	1

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June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1B-GW
Collected By :
Collection Date : 05/21/09 14:30

ESC Sample # : L404242-02
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	5.0	ug/l		8260B	05/27/09	1
Chlorodibromomethane	U	0.42	5.0	ug/l		8260B	05/27/09	1
1,2-Dibromoethane	U	0.48	1.0	ug/l		8260B	05/27/09	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	05/27/09	1
1,3-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	05/27/09	1
1,4-Dichlorobenzene	U	0.30	1.0	ug/l		8260B	05/27/09	1
Dichlorodifluoromethane	U	0.54	5.0	ug/l		8260B	05/27/09	1
1,1-Dichloroethane	U	0.31	1.0	ug/l		8260B	05/27/09	1
1,2-Dichloroethane	U	0.27	1.0	ug/l		8260B	05/27/09	1
1,1-Dichloroethene	U	0.50	1.0	ug/l		8260B	05/27/09	1
cis-1,2-Dichloroethene	U	0.38	1.0	ug/l		8260B	05/27/09	1
trans-1,2-Dichloroethene	U	0.30	1.0	ug/l		8260B	05/27/09	1
1,2-Dichloropropane	U	0.52	1.0	ug/l		8260B	05/27/09	1
cis-1,3-Dichloropropene	U	0.26	1.0	ug/l		8260B	05/27/09	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	05/27/09	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	05/27/09	1
2-Hexanone	U	1.6	10.	ug/l		8260B	05/27/09	1
Isopropylbenzene	U	0.19	1.0	ug/l		8260B	05/27/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	10.	ug/l		8260B	05/27/09	1
Methyl tert-butyl ether	U	0.19	1.0	ug/l		8260B	05/27/09	1
Methylene Chloride	U	0.30	5.0	ug/l		8260B	05/27/09	1
Styrene	U	0.38	1.0	ug/l		8260B	05/27/09	1
1,1,2,2-Tetrachloroethane	U	0.22	1.0	ug/l		8260B	05/27/09	1
Tetrachloroethene	U	0.29	1.0	ug/l		8260B	05/27/09	1
Toluene	0.31	0.27	5.0	ug/l	J	8260B	05/27/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	1.0	ug/l		8260B	05/27/09	1
1,2,3-Trichlorobenzene	U	0.24	1.0	ug/l		8260B	05/27/09	1
1,2,4-Trichlorobenzene	U	0.26	1.0	ug/l		8260B	05/27/09	1
1,1,1-Trichloroethane	U	0.27	1.0	ug/l		8260B	05/27/09	1
1,1,2-Trichloroethane	U	0.45	1.0	ug/l		8260B	05/27/09	1
Trichloroethene	U	0.37	1.0	ug/l		8260B	05/27/09	1
Trichlorofluoromethane	U	0.29	5.0	ug/l		8260B	05/27/09	1
Vinyl chloride	U	0.27	1.0	ug/l		8260B	05/27/09	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	05/27/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/20/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/20/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8		102.		% Rec.		8260B	05/27/09	1
Dibromofluoromethane		96.2		% Rec.		8260B	05/27/09	1
4-Bromofluorobenzene		104.		% Rec.		8260B	05/27/09	1

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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-02

Sample ID : PB-1B-GW

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 14:30

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.020	0.012	0.050	ug/l	J	8270C-S	05/27/09	1
Acenaphthene	0.021	0.013	0.050	ug/l	J	8270C-S	05/27/09	1
Acenaphthylene	U	0.017	0.050	ug/l		8270C-S	05/27/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/27/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l		8270C-S	05/27/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/27/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l		8270C-S	05/27/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/27/09	1
Chrysene	0.028	0.018	0.050	ug/l	J	8270C-S	05/27/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l		8270C-S	05/27/09	1
Fluoranthene	0.067	0.020	0.050	ug/l		8270C-S	05/27/09	1
Fluorene	0.028	0.012	0.050	ug/l	J	8270C-S	05/27/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l		8270C-S	05/27/09	1
Naphthalene	0.22	0.023	0.25	ug/l	J	8270C-S	05/27/09	1
Phenanthrene	0.061	0.018	0.050	ug/l		8270C-S	05/27/09	1
Pyrene	0.050	0.022	0.050	ug/l		8270C-S	05/27/09	1
1-Methylnaphthalene	0.066	0.014	0.25	ug/l	J	8270C-S	05/27/09	1
2-Methylnaphthalene	0.097	0.014	0.25	ug/l	J	8270C-S	05/27/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/27/09	1
Surrogate Recovery								
Nitrobenzene-d5	51.1			% Rec.		8270C-S	05/27/09	1
2-Fluorobiphenyl	53.4			% Rec.		8270C-S	05/27/09	1
p-Terphenyl-d14	76.4			% Rec.		8270C-S	05/27/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

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West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-03

Sample ID : PB-1A-8

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 15:20

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	85.6			%		2540G	05/29/09	1
Mercury	0.0079	0.0025	0.023	mg/kg	J	7471	05/26/09	1
Antimony	3.2	0.52	1.2	mg/kg		6010B	06/02/09	1
Arsenic	4.1	0.27	1.2	mg/kg		6010B	05/30/09	1
Beryllium	U	0.38	1.2	mg/kg	O	6010B	05/31/09	10
Cadmium	0.36	0.037	0.29	mg/kg		6010B	05/30/09	1
Chromium	27.	0.098	0.58	mg/kg		6010B	05/30/09	1
Copper	14.	0.30	1.2	mg/kg		6010B	05/30/09	1
Lead	4.3	0.096	0.29	mg/kg		6010B	05/30/09	1
Nickel	28.	0.49	1.2	mg/kg		6010B	05/30/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	05/30/09	1
Silver	0.90	0.16	0.58	mg/kg		6010B	05/30/09	1
Thallium	9.5	0.30	1.2	mg/kg		6010B	05/30/09	1
Zinc	42.	0.44	1.8	mg/kg		6010B	05/30/09	1
Volatile Organics								
Acetone	U	0.017	0.058	mg/kg		8260B	05/27/09	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
Bromochloromethane	U	0.00045	0.0012	mg/kg		8260B	05/27/09	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	05/27/09	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	05/27/09	1
Bromomethane	U	0.0013	0.0058	mg/kg		8260B	05/27/09	1
2-Butanone (MEK)	U	0.0027	0.012	mg/kg		8260B	05/27/09	1
Carbon disulfide	U	0.00033	0.0012	mg/kg		8260B	05/27/09	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
Chloroethane	U	0.00059	0.0058	mg/kg		8260B	05/27/09	1
Chloroform	U	0.00041	0.0058	mg/kg		8260B	05/27/09	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0058	mg/kg		8260B	05/27/09	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	05/27/09	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	05/27/09	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	05/27/09	1
Dichlorodifluoromethane	U	0.00032	0.0058	mg/kg		8260B	05/27/09	1
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	05/27/09	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	05/27/09	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	05/27/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	05/27/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	05/27/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
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West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1A-8
Collected By :
Collection Date : 05/21/09 15:20

ESC Sample # : L404242-03
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	05/27/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	05/27/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	05/27/09	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
2-Hexanone	U	0.00036	0.0012	mg/kg		8260B	05/27/09	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	05/27/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	05/27/09	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	05/27/09	1
Methylene Chloride	U	0.00060	0.0058	mg/kg		8260B	05/27/09	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	05/27/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	05/27/09	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
Toluene	U	0.0012	0.0058	mg/kg		8260B	05/27/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	05/27/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	05/27/09	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	05/27/09	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	05/27/09	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	05/27/09	1
Trichlorofluoromethane	U	0.00027	0.0058	mg/kg		8260B	05/27/09	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	05/27/09	1
Xylenes, Total	U	0.00046	0.0035	mg/kg		8260B	05/27/09	1
Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
1,4-Dioxane	U	0.033	0.12	mg/kg	Q	8260B	06/20/09	1
Methyl Acetate	U	0.0066	0.023	mg/kg	Q	8260B	06/20/09	1
Methyl Cyclohexane	U	0.00033	0.0012	mg/kg	Q	8260B	06/20/09	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	05/27/09	1
Dibromofluoromethane	116.			% Rec.		8260B	05/27/09	1
4-Bromofluorobenzene	110.			% Rec.		8260B	05/27/09	1
Gasoline Range (C7-C10)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.7	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	U	3.3	12.	mg/kg		NWTPH-HC	05/28/09	1
Surrogate recovery(%)								
o-Terphenyl	88.7			% Rec.		NWTPH-HC	05/28/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0057	0.0013	0.0070	mg/kg	J	8270C-SI	05/28/09	1

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REPORT OF ANALYSIS

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SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-03

Sample ID : PB-1A-8

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 15:20

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthene	U	0.0013	0.0070	mg/kg		8270C-SI	05/28/09	1
Acenaphthylene	U	0.0011	0.0070	mg/kg		8270C-SI	05/28/09	1
Benzo(a)anthracene	0.0075	0.00096	0.0070	mg/kg		8270C-SI	05/28/09	1
Benzo(a)pyrene	0.0078	0.00083	0.0070	mg/kg		8270C-SI	05/28/09	1
Benzo(b)fluoranthene	0.0068	0.0014	0.0070	mg/kg	J	8270C-SI	05/28/09	1
Benzo(g,h,i)perylene	0.0049	0.00098	0.0070	mg/kg	J	8270C-SI	05/28/09	1
Benzo(k)fluoranthene	0.0033	0.0012	0.0070	mg/kg	J	8270C-SI	05/28/09	1
Chrysene	0.0075	0.00087	0.0070	mg/kg		8270C-SI	05/28/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0070	mg/kg		8270C-SI	05/28/09	1
Fluoranthene	0.018	0.00081	0.0070	mg/kg		8270C-SI	05/28/09	1
Fluorene	U	0.0010	0.0070	mg/kg		8270C-SI	05/28/09	1
Indeno(1,2,3-cd)pyrene	0.0038	0.00088	0.0070	mg/kg	J	8270C-SI	05/28/09	1
Naphthalene	U	0.0014	0.0070	mg/kg		8270C-SI	05/28/09	1
Phenanthrene	0.0099	0.00098	0.0070	mg/kg		8270C-SI	05/28/09	1
Pyrene	0.018	0.00096	0.0070	mg/kg		8270C-SI	05/28/09	1
1-Methylnaphthalene	U	0.0015	0.0070	mg/kg		8270C-SI	05/28/09	1
2-Methylnaphthalene	U	0.0020	0.0070	mg/kg		8270C-SI	05/28/09	1
2-Chloronaphthalene	U	0.0010	0.0070	mg/kg		8270C-SI	05/28/09	1
Surrogate Recovery								
Nitrobenzene-d5	49.4			% Rec.		8270C-SI	05/28/09	1
2-Fluorobiphenyl	50.7			% Rec.		8270C-SI	05/28/09	1
p-Terphenyl-d14	49.3			% Rec.		8270C-SI	05/28/09	1

Results listed are dry weight basis.

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June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1A-GW
Collected By :
Collection Date : 05/21/09 15:25

ESC Sample # : L404242-04
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	1.4	0.29	1.0	ug/l		6020	06/14/09	1
Antimony,Dissolved	0.60	0.29	1.0	ug/l	J	6020	06/16/09	1
Arsenic	18.	0.22	1.0	ug/l		6020	06/14/09	1
Arsenic,Dissolved	2.2	0.22	1.0	ug/l		6020	06/16/09	1
Thallium	0.68	0.22	1.0	ug/l	J	6020	06/14/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/16/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/12/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	06/14/09	1
Beryllium	U	0.75	2.0	ug/l		6010B	06/13/09	1
Beryllium,Dissolved	U	0.75	2.0	ug/l		6010B	06/15/09	1
Cadmium	U	0.74	5.0	ug/l		6010B	06/13/09	1
Cadmium,Dissolved	U	0.74	5.0	ug/l		6010B	06/15/09	1
Chromium	17.	2.0	10.	ug/l		6010B	06/13/09	1
Chromium,Dissolved	U	2.0	10.	ug/l		6010B	06/15/09	1
Copper	11.	6.0	20.	ug/l	J	6010B	06/13/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	06/15/09	1
Lead	2.9	1.9	5.0	ug/l	J	6010B	06/13/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	06/15/09	1
Nickel	44.	9.8	20.	ug/l		6010B	06/13/09	1
Nickel,Dissolved	U	9.8	20.	ug/l		6010B	06/15/09	1
Selenium	U	6.5	20.	ug/l		6010B	06/13/09	1
Selenium,Dissolved	7.8	6.5	20.	ug/l	JB	6010B	06/15/09	1
Silver	U	3.2	10.	ug/l		6010B	06/13/09	1
Silver,Dissolved	8.2	3.2	10.	ug/l	J	6010B	06/15/09	1
Zinc	42.	8.8	30.	ug/l		6010B	06/13/09	1
Zinc,Dissolved	U	8.8	30.	ug/l		6010B	06/15/09	1
Volatile Organics								
Acetone	U	8.9	25.	ug/l		8260B	05/29/09	1
Benzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Bromochloromethane	U	0.44	0.50	ug/l		8260B	05/29/09	1
Bromodichloromethane	U	0.37	0.50	ug/l		8260B	05/29/09	1
Bromoform	U	0.51	0.50	ug/l		8260B	05/29/09	1
Bromomethane	U	0.89	0.50	ug/l		8260B	05/29/09	1
2-Butanone (MEK)	U	4.5	2.5	ug/l		8260B	05/29/09	1
Carbon disulfide	U	0.32	0.50	ug/l		8260B	05/29/09	1
Carbon tetrachloride	U	0.31	0.50	ug/l		8260B	05/29/09	1
Chlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
Chloroethane	U	0.86	0.50	ug/l		8260B	05/29/09	1
Chloroform	U	0.33	0.50	ug/l		8260B	05/29/09	1
Chloromethane	U	0.25	0.50	ug/l		8260B	05/29/09	1

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RDL = Reported Detection Limit = LOQ = PQL = EQL

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REPORT OF ANALYSIS

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West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1A-GW
Collected By :
Collection Date : 05/21/09 15:25

ESC Sample # : L404242-04
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	1.0	ug/l		8260B	05/29/09	1
Chlorodibromomethane	U	0.42	0.50	ug/l		8260B	05/29/09	1
1,2-Dibromoethane	U	0.48	0.50	ug/l	J4J3	8260B	05/29/09	1
1,2-Dichlorobenzene	U	0.29	0.50	ug/l		8260B	05/29/09	1
1,3-Dichlorobenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
1,4-Dichlorobenzene	U	0.30	0.50	ug/l		8260B	05/29/09	1
Dichlorodifluoromethane	U	0.54	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethane	U	0.31	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1-Dichloroethene	U	0.50	0.50	ug/l		8260B	05/29/09	1
cis-1,2-Dichloroethene	U	0.38	0.50	ug/l		8260B	05/29/09	1
trans-1,2-Dichloroethene	U	0.30	0.50	ug/l		8260B	05/29/09	1
1,2-Dichloropropane	U	0.52	0.50	ug/l		8260B	05/29/09	1
cis-1,3-Dichloropropene	U	0.26	0.50	ug/l		8260B	05/29/09	1
trans-1,3-Dichloropropene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
Ethylbenzene	U	0.22	0.50	ug/l		8260B	05/29/09	1
2-Hexanone	U	0.16	2.5	ug/l		8260B	05/29/09	1
Isopropylbenzene	U	0.19	0.50	ug/l		8260B	05/29/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	2.5	ug/l		8260B	05/29/09	1
Methyl tert-butyl ether	U	0.19	0.50	ug/l		8260B	05/29/09	1
Methylene Chloride	U	0.30	2.5	ug/l		8260B	05/29/09	1
Styrene	U	0.38	0.50	ug/l		8260B	05/29/09	1
1,1,2,2-Tetrachloroethane	U	0.22	0.50	ug/l		8260B	05/29/09	1
Tetrachloroethene	U	0.29	0.50	ug/l		8260B	05/29/09	1
Toluene	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	0.50	ug/l		8260B	05/29/09	1
1,2,3-Trichlorobenzene	U	0.24	0.50	ug/l	J3	8260B	05/29/09	1
1,2,4-Trichlorobenzene	U	0.26	0.50	ug/l		8260B	05/29/09	1
1,1,1-Trichloroethane	U	0.27	0.50	ug/l		8260B	05/29/09	1
1,1,2-Trichloroethane	U	0.45	0.50	ug/l		8260B	05/29/09	1
Trichloroethene	U	0.37	0.50	ug/l		8260B	05/29/09	1
Trichlorofluoromethane	U	0.29	0.50	ug/l		8260B	05/29/09	1
Vinyl chloride	U	0.29	0.50	ug/l		8260B	05/29/09	1
Xylenes, Total	U	0.86	1.5	ug/l		8260B	05/29/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/21/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/21/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/21/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/21/09	1
Surrogate Recovery								
Toluene-d8		97.3		% Rec.		8260B	05/29/09	1
Dibromofluoromethane		98.9		% Rec.		8260B	05/29/09	1
4-Bromofluorobenzene		96.2		% Rec.		8260B	05/29/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1A-GW
Collected By :
Collection Date : 05/21/09 15:25

ESC Sample # : L404242-04
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.019	0.012	0.050	ug/l	J	8270C-S	05/29/09	1
Acenaphthene	U	0.013	0.050	ug/l	J3	8270C-S	05/29/09	1
Acenaphthylene	U	0.017	0.050	ug/l		8270C-S	05/29/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l		8270C-S	05/29/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l	J3	8270C-S	05/29/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	05/29/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l	J3	8270C-S	05/29/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	05/29/09	1
Chrysene	U	0.018	0.050	ug/l	J3	8270C-S	05/29/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l	J3	8270C-S	05/29/09	1
Fluoranthene	0.050	0.020	0.050	ug/l		8270C-S	05/29/09	1
Fluorene	0.013	0.012	0.050	ug/l	J	8270C-S	05/29/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l	J3	8270C-S	05/29/09	1
Naphthalene	0.061	0.023	0.25	ug/l	J	8270C-S	05/29/09	1
Phenanthrene	0.042	0.018	0.050	ug/l	J	8270C-S	05/29/09	1
Pyrene	0.033	0.022	0.050	ug/l	JJ3	8270C-S	05/29/09	1
1-Methylnaphthalene	0.018	0.014	0.25	ug/l	J	8270C-S	05/29/09	1
2-Methylnaphthalene	0.038	0.014	0.25	ug/l	J	8270C-S	05/29/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	05/29/09	1
Surrogate Recovery								
Nitrobenzene-d5	67.1			% Rec.		8270C-S	05/29/09	1
2-Fluorobiphenyl	77.5			% Rec.		8270C-S	05/29/09	1
p-Terphenyl-d14	82.7			% Rec.		8270C-S	05/29/09	1

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REPORT OF ANALYSIS

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June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B
Collected By :
Collection Date : 05/21/09 00:00

ESC Sample # : L404242-05
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	93.1			%		2540G	05/29/09	1
Volatile Organics								
Acetone	0.043	0.017	0.054	mg/kg	J	8260B	05/27/09	1
Benzene	U	0.00032	0.0011	mg/kg		8260B	05/27/09	1
Bromochloromethane	U	0.00045	0.0011	mg/kg		8260B	05/27/09	1
Bromodichloromethane	U	0.00039	0.0011	mg/kg		8260B	05/27/09	1
Bromoform	U	0.00058	0.0011	mg/kg		8260B	05/27/09	1
Bromomethane	U	0.0013	0.0054	mg/kg		8260B	05/27/09	1
2-Butanone (MEK)	0.0071	0.0027	0.011	mg/kg	J	8260B	05/27/09	1
Carbon disulfide	U	0.00033	0.0011	mg/kg		8260B	05/27/09	1
Carbon tetrachloride	U	0.00032	0.0011	mg/kg		8260B	05/27/09	1
Chlorobenzene	U	0.00025	0.0011	mg/kg		8260B	05/27/09	1
Chloroethane	U	0.00059	0.0054	mg/kg		8260B	05/27/09	1
Chloroform	U	0.00041	0.0054	mg/kg		8260B	05/27/09	1
Chloromethane	U	0.00056	0.0011	mg/kg		8260B	05/27/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0054	mg/kg		8260B	05/27/09	1
Chlorodibromomethane	U	0.00023	0.0011	mg/kg		8260B	05/27/09	1
1,2-Dibromoethane	U	0.00032	0.0011	mg/kg		8260B	05/27/09	1
1,2-Dichlorobenzene	U	0.00024	0.0011	mg/kg		8260B	05/27/09	1
1,3-Dichlorobenzene	U	0.00038	0.0011	mg/kg		8260B	05/27/09	1
1,4-Dichlorobenzene	U	0.00022	0.0011	mg/kg		8260B	05/27/09	1
Dichlorodifluoromethane	U	0.00032	0.0054	mg/kg		8260B	05/27/09	1
1,1-Dichloroethane	U	0.00026	0.0011	mg/kg		8260B	05/27/09	1
1,2-Dichloroethane	U	0.00053	0.0011	mg/kg		8260B	05/27/09	1
1,1-Dichloroethene	U	0.00074	0.0011	mg/kg		8260B	05/27/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0011	mg/kg		8260B	05/27/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0011	mg/kg		8260B	05/27/09	1
1,2-Dichloropropane	U	0.00075	0.0011	mg/kg		8260B	05/27/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0011	mg/kg		8260B	05/27/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0011	mg/kg		8260B	05/27/09	1
Ethylbenzene	U	0.00023	0.0011	mg/kg		8260B	05/27/09	1
2-Hexanone	U	0.00036	0.0011	mg/kg		8260B	05/27/09	1
Isopropylbenzene	U	0.00021	0.0011	mg/kg		8260B	05/27/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.011	mg/kg		8260B	05/27/09	1
Methyl tert-butyl ether	U	0.00028	0.0011	mg/kg		8260B	05/27/09	1
Methylene Chloride	U	0.00060	0.0054	mg/kg		8260B	05/27/09	1
Styrene	U	0.00020	0.0011	mg/kg		8260B	05/27/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0011	mg/kg		8260B	05/27/09	1
Tetrachloroethene	U	0.00023	0.0011	mg/kg		8260B	05/27/09	1
Toluene	U	0.0012	0.0054	mg/kg		8260B	05/27/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0011	mg/kg		8260B	05/27/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0011	mg/kg		8260B	05/27/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B
Collected By :
Collection Date : 05/21/09 00:00

ESC Sample # : L404242-05
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2,4-Trichlorobenzene	U	0.00025	0.0011	mg/kg		8260B	05/27/09	1
1,1,1-Trichloroethane	U	0.00052	0.0011	mg/kg		8260B	05/27/09	1
1,1,2-Trichloroethane	U	0.00046	0.0011	mg/kg		8260B	05/27/09	1
Trichloroethene	U	0.00034	0.0011	mg/kg		8260B	05/27/09	1
Trichlorofluoromethane	U	0.00027	0.0054	mg/kg		8260B	05/27/09	1
Vinyl chloride	U	0.00029	0.0011	mg/kg		8260B	05/27/09	1
Xylenes, Total	U	0.00046	0.0032	mg/kg		8260B	05/27/09	1
Cyclohexane	U	0.00036	0.0012	mg/kg	Q	8260B	06/20/09	1.1
1,4-Dioxane	U	0.036	0.12	mg/kg	Q	8260B	06/20/09	1.1
Methyl Acetate	U	0.0073	0.024	mg/kg	Q	8260B	06/20/09	1.1
Methyl Cyclohexane	U	0.00036	0.0012	mg/kg	Q	8260B	06/20/09	1.1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	05/27/09	1
Dibromofluoromethane	92.4			% Rec.		8260B	05/27/09	1
4-Bromofluorobenzene	95.2			% Rec.		8260B	05/27/09	1
Gasoline Range (C7-C10)	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
Mineral Spirits	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
Kerosene (C9-C16)	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
Diesel (C7-C26)	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.3	mg/kg		NWTPH-HC	05/28/09	1
Motor Oil (C16-C40)	4.1	3.3	11.	mg/kg	J	NWTPH-HC	05/28/09	1
Surrogate recovery(%)								
o-Terphenyl	104.			% Rec.		NWTPH-HC	05/28/09	1
Acid Extractables								
Pentachlorophenol	U	0.031	0.35	mg/kg		8270C	05/27/09	1
Surrogate Recovery								
2-Fluorophenol	74.2			% Rec.		8270C	05/27/09	1
Phenol-d5	70.7			% Rec.		8270C	05/27/09	1
Nitrobenzene-d5	63.5			% Rec.		8270C	05/27/09	1
2-Fluorobiphenyl	62.5			% Rec.		8270C	05/27/09	1
2,4,6-Tribromophenol	77.9			% Rec.		8270C	05/27/09	1
p-Terphenyl-d14	96.4			% Rec.		8270C	05/27/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-06

Sample ID : PB-5B-GW

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 00:00

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Base/Neutral Extractables								
Acenaphthylene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Acetophenone	U	16.	50.	ug/l		8270C	05/27/09	1
Atrazine	U	3.3	10.	ug/l		8270C	05/27/09	1
Benzaldehyde	U	3.3	10.	ug/l		8270C	05/27/09	1
Biphenyl	U	3.3	10.	ug/l		8270C	05/27/09	1
Bis(2-chlorethoxy)methane	U	3.3	10.	ug/l		8270C	05/27/09	1
Bis(2-chloroethyl)ether	U	3.3	10.	ug/l		8270C	05/27/09	1
Bis(2-chloroisopropyl)ether	U	3.3	10.	ug/l		8270C	05/27/09	1
4-Bromophenyl-phenylether	U	3.3	10.	ug/l		8270C	05/27/09	1
2-Chloronaphthalene	U	3.3	10.	ug/l		8270C	05/27/09	1
4-Chlorophenyl-phenylether	U	3.3	10.	ug/l		8270C	05/27/09	1
3,3-Dichlorobenzidine	U	3.3	10.	ug/l		8270C	05/27/09	1
2,4-Dinitrotoluene	U	3.3	10.	ug/l		8270C	05/27/09	1
2,6-Dinitrotoluene	U	3.3	10.	ug/l		8270C	05/27/09	1
Hexachlorobenzene	U	3.3	10.	ug/l		8270C	05/27/09	1
Hexachloro-1,3-butadiene	U	3.3	10.	ug/l		8270C	05/27/09	1
Hexachlorocyclopentadiene	U	3.3	10.	ug/l		8270C	05/27/09	1
Hexachloroethane	U	3.3	10.	ug/l		8270C	05/27/09	1
Isophorone	U	3.3	10.	ug/l		8270C	05/27/09	1
2-Methylnaphthalene	U	3.3	10.	ug/l		8270C	05/27/09	1
2-Methylphenol	U	1.3	10.	ug/l		8270C	05/27/09	1
3&4-methyl phenol	U	1.1	10.	ug/l		8270C	05/27/09	1
2-Nitroaniline	U	1.5	10.	ug/l		8270C	05/27/09	1
3-Nitroaniline	U	1.2	10.	ug/l		8270C	05/27/09	1
4-Nitroaniline	U	1.6	10.	ug/l		8270C	05/27/09	1
Nitrobenzene	U	3.3	10.	ug/l		8270C	05/27/09	1
n-Nitrosodiphenylamine	U	3.3	10.	ug/l		8270C	05/27/09	1
n-Nitrosodi-n-propylamine	U	3.3	10.	ug/l		8270C	05/27/09	1
Benzylbutyl phthalate	U	3.3	10.	ug/l		8270C	05/27/09	1
Caprolactam	U	3.3	10.	ug/l		8270C	05/27/09	1
Carbazole	U	0.95	10.	ug/l		8270C	05/27/09	1
Bis(2-ethylhexyl)phthalate	U	2.0	6.0	ug/l		8270C	05/27/09	1
4-Chloroaniline	U	2.6	10.	ug/l		8270C	05/27/09	1
Di-n-butyl phthalate	U	3.3	10.	ug/l		8270C	05/27/09	1
Dibenzofuran	U	1.5	10.	ug/l		8270C	05/27/09	1
Diethyl phthalate	U	3.3	10.	ug/l		8270C	05/27/09	1
Dimethyl phthalate	U	3.3	10.	ug/l	J3	8270C	05/27/09	1
Di-n-octyl phthalate	U	3.3	10.	ug/l		8270C	05/27/09	1
Acid Extractables								
4-Chloro-3-methylphenol	U	1.8	10.	ug/l		8270C	05/27/09	1
2-Chlorophenol	U	1.3	10.	ug/l		8270C	05/27/09	1
2,4-Dichlorophenol	U	2.0	10.	ug/l		8270C	05/27/09	1

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REPORT OF ANALYSIS

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1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 25, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L404242-06

Sample ID : PB-5B-GW

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 00:00

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
2,4-Dimethylphenol	U	2.1	10.	ug/l		8270C	05/27/09	1
4,6-Dinitro-2-methylphenol	U	2.2	10.	ug/l		8270C	05/27/09	1
2,4-Dinitrophenol	U	1.2	10.	ug/l		8270C	05/27/09	1
2-Nitrophenol	U	2.1	10.	ug/l		8270C	05/27/09	1
4-Nitrophenol	U	0.76	10.	ug/l		8270C	05/27/09	1
Phenol	U	0.59	10.	ug/l		8270C	05/27/09	1
Pentachlorophenol	U	0.33	1.0	ug/l		8270C	05/29/09	1
1,2,4,5-Tetrachlorobenzene	U	16.	50.	ug/l		8270C	05/27/09	1
2,4,5-Trichlorophenol	U	1.7	50.	ug/l		8270C	05/27/09	1
2,4,6-Trichlorophenol	U	2.0	10.	ug/l		8270C	05/27/09	1
2,3,4,6-Tetrachlorophenol	U	16.	50.	ug/l		8270C	06/16/09	1
Benzo(a)anthracene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Benzo(a)pyrene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Benzo(b)fluoranthene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Benzo(k)fluoranthene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Chrysene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Dibenz(a,h)anthracene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Indeno(1,2,3-cd)pyrene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Acenaphthene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Anthracene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Benzo(g,h,i)perylene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Fluoranthene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Fluorene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Naphthalene	U	1.6	5.0	ug/l		8270C	05/27/09	1
Phenanthrene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Pyrene	U	0.33	1.0	ug/l		8270C	05/27/09	1
Surrogate Recovery								
2-Fluorophenol	38.4			% Rec.		8270C	05/27/09	1
Phenol-d5	23.3			% Rec.		8270C	05/27/09	1
Nitrobenzene-d5	44.9			% Rec.		8270C	05/27/09	1
2-Fluorobiphenyl	46.0			% Rec.		8270C	05/27/09	1
2,4,6-Tribromophenol	83.5			% Rec.		8270C	05/27/09	1
p-Terphenyl-d14	57.2			% Rec.		8270C	05/27/09	1

U = ND (Not Detected)

RDL = Reported Detection Limit = LOQ = PQL = EQL

MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/23/09 12:58 Revised: 06/25/09 13:13

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L404242-01	WG427442	SAMP	Cyclohexane	R788346	Q	
	WG427442	SAMP	1,4-Dioxane	R788346	Q	
	WG427442	SAMP	Methyl Acetate	R788346	Q	
	WG427442	SAMP	Methyl Cyclohexane	R788346	Q	
	WG423987	SAMP	Beryllium	R763507	O	
	WG423494	SAMP	Mercury	R754746	J	
	WG423537	SAMP	Chrysene	R762466	J	
	WG423537	SAMP	Fluoranthene	R762466	J	
	WG423537	SAMP	Phenanthrene	R762466	J	
	WG423537	SAMP	Pyrene	R762466	J	
	L404242-02	WG423451	SAMP	Acetone	R755907	J
		WG423451	SAMP	Carbon disulfide	R755907	J
		WG423451	SAMP	Toluene	R755907	J
		WG427509	SAMP	Cyclohexane	R788627	Q
WG427509		SAMP	1,4-Dioxane	R788627	Q	
WG427509		SAMP	Methyl Acetate	R788627	Q	
WG427509		SAMP	Methyl Cyclohexane	R788627	Q	
WG426333		SAMP	Cadmium	R781860	J	
WG426483		SAMP	Chromium, Dissolved	R782806	J	
WG426333		SAMP	Copper	R781860	J	
WG426483		SAMP	Selenium, Dissolved	R782806	JB	
WG426333		SAMP	Silver	R781860	J	
WG426483		SAMP	Silver, Dissolved	R782806	J	
WG426484		SAMP	Antimony, Dissolved	R783346	J	
WG426269		SAMP	Thallium	R782827	J	
WG423352		SAMP	Anthracene	R759666	J	
WG423352		SAMP	Acenaphthene	R759666	J	
WG423352		SAMP	Chrysene	R759666	J	
WG423352		SAMP	Fluorene	R759666	J	
WG423352		SAMP	Naphthalene	R759666	J	
WG423352		SAMP	1-Methylnaphthalene	R759666	J	
WG423352		SAMP	2-Methylnaphthalene	R759666	J	
L404242-03		WG427442	SAMP	Cyclohexane	R788346	Q
		WG427442	SAMP	1,4-Dioxane	R788346	Q
		WG427442	SAMP	Methyl Acetate	R788346	Q
		WG427442	SAMP	Methyl Cyclohexane	R788346	Q
		WG423987	SAMP	Beryllium	R763507	O
		WG423494	SAMP	Mercury	R754746	J
		WG423537	SAMP	Anthracene	R762466	J
		WG423537	SAMP	Benzo(b)fluoranthene	R762466	J
		WG423537	SAMP	Benzo(g,h,i)perylene	R762466	J
		WG423537	SAMP	Benzo(k)fluoranthene	R762466	J
	WG423537	SAMP	Indeno(1,2,3-cd)pyrene	R762466	J	
	L404242-04	WG423629	SAMP	1,2-Dibromoethane	R759806	J4J3
		WG423629	SAMP	trans-1,3-Dichloropropene	R759806	J3
		WG423629	SAMP	1,2,3-Trichlorobenzene	R759806	J3
WG427650		SAMP	Cyclohexane	R788347	Q	
WG427650		SAMP	1,4-Dioxane	R788347	Q	
WG427650		SAMP	Methyl Acetate	R788347	Q	
WG427650		SAMP	Methyl Cyclohexane	R788347	Q	
WG426333		SAMP	Copper	R781860	J	
WG426333		SAMP	Lead	R781860	J	
WG426483		SAMP	Selenium, Dissolved	R782806	JB	
WG426483		SAMP	Silver, Dissolved	R782806	J	
WG426484		SAMP	Antimony, Dissolved	R783346	J	
WG426269		SAMP	Thallium	R782827	J	
WG423939		SAMP	Anthracene	R762766	J	
WG423939		SAMP	Acenaphthene	R762766	J3	
WG423939		SAMP	Benzo(a)pyrene	R762766	J3	
WG423939		SAMP	Benzo(g,h,i)perylene	R762766	J3	
WG423939		SAMP	Chrysene	R762766	J3	
WG423939		SAMP	Dibenz(a,h)anthracene	R762766	J3	
WG423939		SAMP	Fluorene	R762766	J	
WG423939		SAMP	Indeno(1,2,3-cd)pyrene	R762766	J3	
WG423939		SAMP	Naphthalene	R762766	J	
WG423939		SAMP	Phenanthrene	R762766	J	
WG423939		SAMP	Pyrene	R762766	JJ3	
WG423939		SAMP	1-Methylnaphthalene	R762766	J	
WG423939		SAMP	2-Methylnaphthalene	R762766	J	

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L404242-05	WG423576	SAMP	Acetone	R757627	J
	WG423576	SAMP	2-Butanone (MEK)	R757627	J
	WG427442	SAMP	Cyclohexane	R788346	Q
	WG427442	SAMP	1,4-Dioxane	R788346	Q
	WG427442	SAMP	Methyl Acetate	R788346	Q
	WG427442	SAMP	Methyl Cyclohexane	R788346	Q
	WG423285	SAMP	Motor Oil (C16-C40)	R754330	J
L404242-06	WG423529	SAMP	Dimethyl phthalate	R756806	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
B	(EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/25/09 at 13:13:55

TSR Signing Reports: 358
R5 - Desired TAT

Log all arsenic gw samples as ASG.

Sample: L404242-01 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58
Added NWTPHDX - MB 6/4/09 Added M6010PP, PAHSIM, and V8260 per JW. AV 5/26 - WA EIM EDD
needed.

Sample: L404242-02 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58
Metals pH adjusted at lab 6/10 1700. Added V8260 per JW. AV 5/26 Moved HCID to L404262 per JW.
AV 5/26

Sample: L404242-03 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58
Added M6010PP, PAHSIM, and V8260 per JW. AV 5/26

Sample: L404242-04 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58
Metals pH adjusted at lab 6/10 1700. Moved HCID to L404262 per JW. AV 5/26 changed to V8260 per
JW-6/20-jd

Sample: L404242-05 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58

Sample: L404242-06 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 12:58



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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
#6 Fuel Oil (C10-C32)	< 4	mg/kg			WG423285	05/26/09 12:02
Diesel (C7-C26)	< 4	mg/kg			WG423285	05/26/09 12:02
Hydraulic Fluid (C12-C33)	< 4	mg/kg			WG423285	05/26/09 12:02
Kerosene (C9-C16)	< 4	mg/kg			WG423285	05/26/09 12:02
Mineral Spirits	< 4	mg/kg			WG423285	05/26/09 12:02
Motor Oil (C16-C40)	< 10	mg/kg			WG423285	05/26/09 12:02
o-Terphenyl		% Rec.	105.9	50-150	WG423285	05/26/09 12:02
Mercury	< .02	mg/kg			WG423494	05/26/09 22:37
1,1,1-Trichloroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,1,2-Trichloroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,1-Dichloroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,1-Dichloroethene	< .001	mg/l			WG423451	05/27/09 06:06
1,2,3-Trichlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
1,2,4-Trichlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG423451	05/27/09 06:06
1,2-Dibromoethane	< .001	mg/l			WG423451	05/27/09 06:06
1,2-Dichlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
1,2-Dichloroethane	< .001	mg/l			WG423451	05/27/09 06:06
1,2-Dichloropropane	< .001	mg/l			WG423451	05/27/09 06:06
1,3-Dichlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
1,4-Dichlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
2-Butanone (MEK)	< .01	mg/l			WG423451	05/27/09 06:06
2-Hexanone	< .01	mg/l			WG423451	05/27/09 06:06
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG423451	05/27/09 06:06
Acetone	< .05	mg/l			WG423451	05/27/09 06:06
Benzene	< .001	mg/l			WG423451	05/27/09 06:06
Bromochloromethane	< .001	mg/l			WG423451	05/27/09 06:06
Bromodichloromethane	< .001	mg/l			WG423451	05/27/09 06:06
Bromoform	< .001	mg/l			WG423451	05/27/09 06:06
Bromomethane	< .005	mg/l			WG423451	05/27/09 06:06
Carbon disulfide	< .001	mg/l			WG423451	05/27/09 06:06
Carbon tetrachloride	< .001	mg/l			WG423451	05/27/09 06:06
Chlorobenzene	< .001	mg/l			WG423451	05/27/09 06:06
Chlorodibromomethane	< .001	mg/l			WG423451	05/27/09 06:06
Chloroethane	< .001	mg/l			WG423451	05/27/09 06:06
Chloroform	< .005	mg/l			WG423451	05/27/09 06:06
Chloromethane	< .001	mg/l			WG423451	05/27/09 06:06
cis-1,2-Dichloroethene	< .001	mg/l			WG423451	05/27/09 06:06
cis-1,3-Dichloropropene	< .001	mg/l			WG423451	05/27/09 06:06
Dichlorodifluoromethane	< .005	mg/l			WG423451	05/27/09 06:06
Ethylbenzene	< .001	mg/l			WG423451	05/27/09 06:06
Isopropylbenzene	< .001	mg/l			WG423451	05/27/09 06:06
Methyl tert-butyl ether	< .001	mg/l			WG423451	05/27/09 06:06
Methylene Chloride	< .005	mg/l			WG423451	05/27/09 06:06
Styrene	< .001	mg/l			WG423451	05/27/09 06:06
Tetrachloroethene	< .001	mg/l			WG423451	05/27/09 06:06
Toluene	< .005	mg/l			WG423451	05/27/09 06:06
trans-1,2-Dichloroethene	< .001	mg/l			WG423451	05/27/09 06:06
trans-1,3-Dichloropropene	< .001	mg/l			WG423451	05/27/09 06:06
Trichloroethene	< .001	mg/l			WG423451	05/27/09 06:06
Trichlorofluoromethane	< .005	mg/l			WG423451	05/27/09 06:06
Vinyl chloride	< .001	mg/l			WG423451	05/27/09 06:06
4-Bromofluorobenzene		% Rec.	105.0	75-128	WG423451	05/27/09 06:06

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Est. 1970

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Chris Kramer
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West Linn, OR 97068

Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromofluoromethane		% Rec.	99.29	79-125		05/27/09 06:06
Toluene-d8		% Rec.	100.5	87-114		05/27/09 06:06
1,1,1-Trichloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,1,2-Trichloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,1-Dichloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,1-Dichloroethene	< .001	mg/kg			WG423541	05/27/09 04:09
1,2,3-Trichlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
1,2,4-Trichlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG423541	05/27/09 04:09
1,2-Dibromoethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,2-Dichlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
1,2-Dichloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
1,2-Dichloropropane	< .001	mg/kg			WG423541	05/27/09 04:09
1,3-Dichlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
1,4-Dichlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
2-Butanone (MEK)	< .01	mg/kg			WG423541	05/27/09 04:09
2-Hexanone	< .01	mg/kg			WG423541	05/27/09 04:09
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG423541	05/27/09 04:09
Acetone	< .05	mg/kg			WG423541	05/27/09 04:09
Benzene	< .001	mg/kg			WG423541	05/27/09 04:09
Bromochloromethane	< .001	mg/kg			WG423541	05/27/09 04:09
Bromodichloromethane	< .001	mg/kg			WG423541	05/27/09 04:09
Bromoform	< .001	mg/kg			WG423541	05/27/09 04:09
Bromomethane	< .005	mg/kg			WG423541	05/27/09 04:09
Carbon disulfide	< .001	mg/kg			WG423541	05/27/09 04:09
Carbon tetrachloride	< .001	mg/kg			WG423541	05/27/09 04:09
Chlorobenzene	< .001	mg/kg			WG423541	05/27/09 04:09
Chlorodibromomethane	< .001	mg/kg			WG423541	05/27/09 04:09
Chloroethane	< .005	mg/kg			WG423541	05/27/09 04:09
Chloroform	< .005	mg/kg			WG423541	05/27/09 04:09
Chloromethane	< .001	mg/kg			WG423541	05/27/09 04:09
cis-1,2-Dichloroethene	< .001	mg/kg			WG423541	05/27/09 04:09
cis-1,3-Dichloropropene	< .001	mg/kg			WG423541	05/27/09 04:09
Dichlorodifluoromethane	< .005	mg/kg			WG423541	05/27/09 04:09
Ethylbenzene	< .001	mg/kg			WG423541	05/27/09 04:09
Isopropylbenzene	< .001	mg/kg			WG423541	05/27/09 04:09
Methyl tert-butyl ether	< .001	mg/kg			WG423541	05/27/09 04:09
Methylene Chloride	< .005	mg/kg			WG423541	05/27/09 04:09
Styrene	< .001	mg/kg			WG423541	05/27/09 04:09
Tetrachloroethane	< .001	mg/kg			WG423541	05/27/09 04:09
Toluene	< .005	mg/kg			WG423541	05/27/09 04:09
trans-1,2-Dichloroethene	< .001	mg/kg			WG423541	05/27/09 04:09
trans-1,3-Dichloropropene	< .001	mg/kg			WG423541	05/27/09 04:09
Trichloroethene	< .001	mg/kg			WG423541	05/27/09 04:09
Trichlorofluoromethane	< .005	mg/kg			WG423541	05/27/09 04:09
Vinyl chloride	< .001	mg/kg			WG423541	05/27/09 04:09
4-Bromofluorobenzene		% Rec.	108.3	59-140	WG423541	05/27/09 04:09
Dibromofluoromethane		% Rec.	110.2	63-139	WG423541	05/27/09 04:09
Toluene-d8		% Rec.	101.8	84-116	WG423541	05/27/09 04:09
1,1,1-Trichloroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,1,2-Trichloroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,1-Dichloroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,1-Dichloroethene	< .001	mg/kg			WG423576	05/27/09 12:30

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**ENVIRONMENTAL
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Chris Kramer
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Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,2,3-Trichlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
1,2,4-Trichlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG423576	05/27/09 12:30
1,2-Dibromoethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,2-Dichlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
1,2-Dichloroethane	< .001	mg/kg			WG423576	05/27/09 12:30
1,2-Dichloropropane	< .001	mg/kg			WG423576	05/27/09 12:30
1,3-Dichlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
1,4-Dichlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
2-Butanone (MEK)	< .01	mg/kg			WG423576	05/27/09 12:30
2-Hexanone	< .01	mg/kg			WG423576	05/27/09 12:30
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG423576	05/27/09 12:30
Acetone	< .05	mg/kg			WG423576	05/27/09 12:30
Benzene	< .001	mg/kg			WG423576	05/27/09 12:30
Bromochloromethane	< .001	mg/kg			WG423576	05/27/09 12:30
Bromodichloromethane	< .001	mg/kg			WG423576	05/27/09 12:30
Bromoform	< .001	mg/kg			WG423576	05/27/09 12:30
Bromomethane	< .005	mg/kg			WG423576	05/27/09 12:30
Carbon disulfide	< .001	mg/kg			WG423576	05/27/09 12:30
Carbon tetrachloride	< .001	mg/kg			WG423576	05/27/09 12:30
Chlorobenzene	< .001	mg/kg			WG423576	05/27/09 12:30
Chlorodibromomethane	< .001	mg/kg			WG423576	05/27/09 12:30
Chloroethane	< .005	mg/kg			WG423576	05/27/09 12:30
Chloroform	< .005	mg/kg			WG423576	05/27/09 12:30
Chloromethane	< .001	mg/kg			WG423576	05/27/09 12:30
cis-1,2-Dichloroethene	< .001	mg/kg			WG423576	05/27/09 12:30
cis-1,3-Dichloropropene	< .001	mg/kg			WG423576	05/27/09 12:30
Dichlorodifluoromethane	< .005	mg/kg			WG423576	05/27/09 12:30
Ethylbenzene	< .001	mg/kg			WG423576	05/27/09 12:30
Isopropylbenzene	< .001	mg/kg			WG423576	05/27/09 12:30
Methyl tert-butyl ether	< .001	mg/kg			WG423576	05/27/09 12:30
Methylene Chloride	< .005	mg/kg			WG423576	05/27/09 12:30
Styrene	< .001	mg/kg			WG423576	05/27/09 12:30
Tetrachloroethene	< .001	mg/kg			WG423576	05/27/09 12:30
Toluene	< .005	mg/kg			WG423576	05/27/09 12:30
trans-1,2-Dichloroethene	< .001	mg/kg			WG423576	05/27/09 12:30
trans-1,3-Dichloropropene	< .001	mg/kg			WG423576	05/27/09 12:30
Trichloroethene	< .001	mg/kg			WG423576	05/27/09 12:30
Trichlorofluoromethane	< .005	mg/kg			WG423576	05/27/09 12:30
Vinyl chloride	< .001	mg/kg			WG423576	05/27/09 12:30
4-Bromofluorobenzene		% Rec.	95.88	59-140	WG423576	05/27/09 12:30
Dibromofluoromethane		% Rec.	86.14	63-139	WG423576	05/27/09 12:30
Toluene-d8		% Rec.	102.8	84-116	WG423576	05/27/09 12:30
Pentachlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4,6-Tribromophenol		% Rec.	68.61	25-137	WG423526	05/27/09 10:47
2-Fluorobiphenyl		% Rec.	68.89	30-120	WG423526	05/27/09 10:47
2-Fluorophenol		% Rec.	72.41	26-130	WG423526	05/27/09 10:47
Nitrobenzene-d5		% Rec.	66.45	18-119	WG423526	05/27/09 10:47
Phenol-d5		% Rec.	70.70	37-141	WG423526	05/27/09 10:47
p-Terphenyl-d14		% Rec.	81.75	23-143	WG423526	05/27/09 10:47
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG423529	05/27/09 10:01
2,4,5-Trichlorophenol	< .01	ppm			WG423529	05/27/09 10:01
2,4,6-Trichlorophenol	< .01	ppm			WG423529	05/27/09 10:01
2,4-Dichlorophenol	< .01	ppm			WG423529	05/27/09 10:01
2,4-Dimethylphenol	< .01	ppm			WG423529	05/27/09 10:01

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June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2,4-Dinitrophenol	< .01	ppm			WG423529	05/27/09 10:01
2,4-Dinitrotoluene	< .01	ppm			WG423529	05/27/09 10:01
2,6-Dinitrotoluene	< .01	ppm			WG423529	05/27/09 10:01
2-Chloronaphthalene	< .01	ppm			WG423529	05/27/09 10:01
2-Chlorophenol	< .01	ppm			WG423529	05/27/09 10:01
2-Methylnaphthalene	< .01	ppm			WG423529	05/27/09 10:01
2-Methylphenol	< .01	ppm			WG423529	05/27/09 10:01
2-Nitroaniline	< .01	ppm			WG423529	05/27/09 10:01
2-Nitrophenol	< .01	ppm			WG423529	05/27/09 10:01
3&4-methyl phenol	< .01	ppm			WG423529	05/27/09 10:01
3,3-Dichlorobenzidine	< .01	ppm			WG423529	05/27/09 10:01
3-Nitroaniline	< .01	ppm			WG423529	05/27/09 10:01
4,6-Dinitro-2-methylphenol	< .01	ppm			WG423529	05/27/09 10:01
4-Bromophenyl-phenylether	< .01	ppm			WG423529	05/27/09 10:01
4-Chloro-3-methylphenol	< .01	ppm			WG423529	05/27/09 10:01
4-Chloroaniline	< .01	ppm			WG423529	05/27/09 10:01
4-Chlorophenyl-phenylether	< .01	ppm			WG423529	05/27/09 10:01
4-Nitroaniline	< .01	ppm			WG423529	05/27/09 10:01
4-Nitrophenol	< .01	ppm			WG423529	05/27/09 10:01
Acenaphthene	< .01	ppm			WG423529	05/27/09 10:01
Acenaphthylene	< .01	ppm			WG423529	05/27/09 10:01
Acetophenone	< .01	ppm			WG423529	05/27/09 10:01
Anthracene	< .01	ppm			WG423529	05/27/09 10:01
Atrazine	< .01	ppm			WG423529	05/27/09 10:01
Benzaldehyde	< .01	ppm			WG423529	05/27/09 10:01
Benzo(a)anthracene	< .01	ppm			WG423529	05/27/09 10:01
Benzo(a)pyrene	< .01	ppm			WG423529	05/27/09 10:01
Benzo(b)fluoranthene	< .01	ppm			WG423529	05/27/09 10:01
Benzo(g,h,i)perylene	< .01	ppm			WG423529	05/27/09 10:01
Benzo(k)fluoranthene	< .01	ppm			WG423529	05/27/09 10:01
Benzylbutyl phthalate	< .01	ppm			WG423529	05/27/09 10:01
Biphenyl	< .01	ppm			WG423529	05/27/09 10:01
Bis(2-chloroethoxy)methane	< .01	ppm			WG423529	05/27/09 10:01
Bis(2-chloroethyl)ether	< .01	ppm			WG423529	05/27/09 10:01
Bis(2-chloroisopropyl)ether	< .01	ppm			WG423529	05/27/09 10:01
Bis(2-ethylhexyl)phthalate	< .01	ppm			WG423529	05/27/09 10:01
Caprolactam	< .01	ppm			WG423529	05/27/09 10:01
Carbazole	< .01	ppm			WG423529	05/27/09 10:01
Chrysene	< .01	ppm			WG423529	05/27/09 10:01
Di-n-butyl phthalate	< .01	ppm			WG423529	05/27/09 10:01
Di-n-octyl phthalate	< .01	ppm			WG423529	05/27/09 10:01
Dibenz(a,h)anthracene	< .01	ppm			WG423529	05/27/09 10:01
Dibenzofuran	< .01	ppm			WG423529	05/27/09 10:01
Diethyl phthalate	< .01	ppm			WG423529	05/27/09 10:01
Dimethyl phthalate	< .01	ppm			WG423529	05/27/09 10:01
Fluoranthene	< .01	ppm			WG423529	05/27/09 10:01
Fluorene	< .01	ppm			WG423529	05/27/09 10:01
Hexachloro-1,3-butadiene	< .01	ppm			WG423529	05/27/09 10:01
Hexachlorobenzene	< .01	ppm			WG423529	05/27/09 10:01
Hexachlorocyclopentadiene	< .01	ppm			WG423529	05/27/09 10:01
Hexachloroethane	< .01	ppm			WG423529	05/27/09 10:01
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG423529	05/27/09 10:01
Isophorone	< .01	ppm			WG423529	05/27/09 10:01
n-Nitrosodi-n-propylamine	< .01	ppm			WG423529	05/27/09 10:01
n-Nitrosodiphenylamine	< .01	ppm			WG423529	05/27/09 10:01
Naphthalene	< .01	ppm			WG423529	05/27/09 10:01
Nitrobenzene	< .01	ppm			WG423529	05/27/09 10:01
Pentachlorophenol	< .01	ppm			WG423529	05/27/09 10:01
Phenanthrene	< .01	ppm			WG423529	05/27/09 10:01

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L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Phenol	< .01	ppm			WG423529	05/27/09 10:01
Pyrene	< .01	ppm			WG423529	05/27/09 10:01
2,4,6-Tribromophenol		% Rec.	72.03	10-148	WG423529	05/27/09 10:01
2-Fluorobiphenyl		% Rec.	73.89	26-122	WG423529	05/27/09 10:01
2-Fluorophenol		% Rec.	39.88	10-87	WG423529	05/27/09 10:01
Nitrobenzene-d5		% Rec.	72.39	12-120	WG423529	05/27/09 10:01
Phenol-d5		% Rec.	24.48	10-67	WG423529	05/27/09 10:01
p-Terphenyl-d14		% Rec.	107.8	34-149	WG423529	05/27/09 10:01
1-Methylnaphthalene	< .01	ppm			WG423352	05/27/09 13:07
2-Chloronaphthalene	< .01	ppm			WG423352	05/27/09 13:07
2-Methylnaphthalene	< .01	ppm			WG423352	05/27/09 13:07
Acenaphthene	< .01	ppm			WG423352	05/27/09 13:07
Acenaphthylene	< .01	ppm			WG423352	05/27/09 13:07
Anthracene	< .01	ppm			WG423352	05/27/09 13:07
Benzo(a)anthracene	< .01	ppm			WG423352	05/27/09 13:07
Benzo(a)pyrene	< .01	ppm			WG423352	05/27/09 13:07
Benzo(b)fluoranthene	< .01	ppm			WG423352	05/27/09 13:07
Benzo(g,h,i)perylene	< .01	ppm			WG423352	05/27/09 13:07
Benzo(k)fluoranthene	< .01	ppm			WG423352	05/27/09 13:07
Chrysene	< .01	ppm			WG423352	05/27/09 13:07
Dibenz(a,h)anthracene	< .01	ppm			WG423352	05/27/09 13:07
Fluoranthene	< .01	ppm			WG423352	05/27/09 13:07
Fluorene	< .01	ppm			WG423352	05/27/09 13:07
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG423352	05/27/09 13:07
Naphthalene	< .01	ppm			WG423352	05/27/09 13:07
Phenanthrene	< .01	ppm			WG423352	05/27/09 13:07
Pyrene	< .01	ppm			WG423352	05/27/09 13:07
2-Fluorobiphenyl		% Rec.	80.17	26-122	WG423352	05/27/09 13:07
Nitrobenzene-d5		% Rec.	71.51	12-120	WG423352	05/27/09 13:07
p-Terphenyl-d14		% Rec.	92.43	34-149	WG423352	05/27/09 13:07
1,1,1-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2,2-Tetrachloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2-Trichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1,2-Trichloro-1,2,2-trifluoroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,1-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,3-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2,4-Trichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dibromo-3-Chloropropane	< .001	mg/l			WG423629	05/29/09 01:20
1,2-Dibromoethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
1,2-Dichloropropane	< .0005	mg/l			WG423629	05/29/09 01:20
1,3-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
1,4-Dichlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
2-Butanone (MEK)	< .0025	mg/l			WG423629	05/29/09 01:20
2-Hexanone	< .0025	mg/l			WG423629	05/29/09 01:20
4-Methyl-2-pentanone (MIBK)	< .0025	mg/l			WG423629	05/29/09 01:20
Acetone	< .025	mg/l			WG423629	05/29/09 01:20
Benzene	< .0005	mg/l			WG423629	05/29/09 01:20
Bromochloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromodichloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Bromoform	< .0005	mg/l			WG423629	05/29/09 01:20
Bromomethane	< .0005	mg/l			WG423629	05/29/09 01:20
Carbon disulfide	< .0005	mg/l			WG423629	05/29/09 01:20

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Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Carbon tetrachloride	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorobenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Chlorodibromomethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroethane	< .0005	mg/l			WG423629	05/29/09 01:20
Chloroform	< .0005	mg/l			WG423629	05/29/09 01:20
Chloromethane	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
cis-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Dichlorodifluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Ethylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Isopropylbenzene	< .0005	mg/l			WG423629	05/29/09 01:20
Methyl tert-butyl ether	< .0005	mg/l			WG423629	05/29/09 01:20
Methylene Chloride	< .0025	mg/l			WG423629	05/29/09 01:20
Styrene	< .0005	mg/l			WG423629	05/29/09 01:20
Tetrachloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Toluene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,2-Dichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
trans-1,3-Dichloropropene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichloroethene	< .0005	mg/l			WG423629	05/29/09 01:20
Trichlorofluoromethane	< .0005	mg/l			WG423629	05/29/09 01:20
Vinyl chloride	< .0005	mg/l			WG423629	05/29/09 01:20
4-Bromofluorobenzene		% Rec.	99.83	75-128	WG423629	05/29/09 01:20
Dibromofluoromethane		% Rec.	99.79	79-125	WG423629	05/29/09 01:20
Toluene-d8		% Rec.	97.36	87-114	WG423629	05/29/09 01:20
Total Solids	< .1	%			WG423815	05/29/09 10:51
1-Methylnaphthalene	< .33	ppm			WG423537	05/28/09 09:40
2-Chloronaphthalene	< .33	ppm			WG423537	05/28/09 09:40
2-Methylnaphthalene	< .33	ppm			WG423537	05/28/09 09:40
Acenaphthene	< .33	ppm			WG423537	05/28/09 09:40
Acenaphthylene	< .33	ppm			WG423537	05/28/09 09:40
Anthracene	< .33	ppm			WG423537	05/28/09 09:40
Benzo(a)anthracene	< .33	ppm			WG423537	05/28/09 09:40
Benzo(a)pyrene	< .33	ppm			WG423537	05/28/09 09:40
Benzo(b)fluoranthene	< .33	ppm			WG423537	05/28/09 09:40
Benzo(g,h,i)perylene	< .33	ppm			WG423537	05/28/09 09:40
Benzo(k)fluoranthene	< .33	ppm			WG423537	05/28/09 09:40
Chrysene	< .33	ppm			WG423537	05/28/09 09:40
Dibenz(a,h)anthracene	< .33	ppm			WG423537	05/28/09 09:40
Fluoranthene	< .33	ppm			WG423537	05/28/09 09:40
Fluorene	< .33	ppm			WG423537	05/28/09 09:40
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG423537	05/28/09 09:40
Naphthalene	< .33	ppm			WG423537	05/28/09 09:40
Phenanthrene	< .33	ppm			WG423537	05/28/09 09:40
Pyrene	< .33	ppm			WG423537	05/28/09 09:40
2-Fluorobiphenyl		% Rec.	66.50	30-120	WG423537	05/28/09 09:40
Nitrobenzene-d5		% Rec.	68.84	18-119	WG423537	05/28/09 09:40
p-Terphenyl-d14		% Rec.	71.74	23-143	WG423537	05/28/09 09:40
1-Methylnaphthalene	< .01	ppm			WG423939	05/29/09 17:50
2-Chloronaphthalene	< .01	ppm			WG423939	05/29/09 17:50
2-Methylnaphthalene	< .01	ppm			WG423939	05/29/09 17:50
Acenaphthene	< .01	ppm			WG423939	05/29/09 17:50
Acenaphthylene	< .01	ppm			WG423939	05/29/09 17:50
Anthracene	< .01	ppm			WG423939	05/29/09 17:50

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Tax I.D. 62-0814289

Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(a)anthracene	< .01	ppm			WG423939	05/29/09 17:50
Benzo(a)pyrene	< .01	ppm			WG423939	05/29/09 17:50
Benzo(b)fluoranthene	< .01	ppm			WG423939	05/29/09 17:50
Benzo(g,h,i)perylene	< .01	ppm			WG423939	05/29/09 17:50
Benzo(k)fluoranthene	< .01	ppm			WG423939	05/29/09 17:50
Chrysene	< .01	ppm			WG423939	05/29/09 17:50
Dibenz(a,h)anthracene	< .01	ppm			WG423939	05/29/09 17:50
Fluoranthene	< .01	ppm			WG423939	05/29/09 17:50
Fluorene	< .01	ppm			WG423939	05/29/09 17:50
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG423939	05/29/09 17:50
Naphthalene	< .01	ppm			WG423939	05/29/09 17:50
Phenanthrene	< .01	ppm			WG423939	05/29/09 17:50
Pyrene	< .01	ppm			WG423939	05/29/09 17:50
2-Fluorobiphenyl		% Rec.	74.97	26-122	WG423939	05/29/09 17:50
Nitrobenzene-d5		% Rec.	72.91	12-120	WG423939	05/29/09 17:50
p-Terphenyl-d14		% Rec.	89.84	34-149	WG423939	05/29/09 17:50
Arsenic	< 1	mg/kg			WG423987	05/30/09 11:49
Beryllium	< .1	mg/kg			WG423987	05/30/09 11:49
Cadmium	< .25	mg/kg			WG423987	05/30/09 11:49
Chromium	< .5	mg/kg			WG423987	05/30/09 11:49
Copper	< 1	mg/kg			WG423987	05/30/09 11:49
Lead	< .25	mg/kg			WG423987	05/30/09 11:49
Nickel	< 1	mg/kg			WG423987	05/30/09 11:49
Selenium	< 1	mg/kg			WG423987	05/30/09 11:49
Silver	< .5	mg/kg			WG423987	05/30/09 11:49
Thallium	< 1	mg/kg			WG423987	05/30/09 11:49
Zinc	< 1.5	mg/kg			WG423987	05/30/09 11:49
Antimony	< 1	mg/kg			WG423987	06/02/09 03:55
Diesel Range Organics (DRO)	< 4	ppm			WG424943	06/04/09 12:22
o-Terphenyl		% Rec.	107.2	50-150	WG424943	06/04/09 12:22
Mercury	< .0002	mg/l			WG426094	06/12/09 23:36
Mercury,Dissolved	< .0002	mg/l			WG426098	06/14/09 14:36
Beryllium	< .002	mg/l			WG426333	06/13/09 20:43
Cadmium	< .005	mg/l			WG426333	06/13/09 20:43
Chromium	< .01	mg/l			WG426333	06/13/09 20:43
Copper	< .02	mg/l			WG426333	06/13/09 20:43
Lead	< .005	mg/l			WG426333	06/13/09 20:43
Nickel	< .02	mg/l			WG426333	06/13/09 20:43
Selenium	< .02	mg/l			WG426333	06/13/09 20:43
Silver	< .01	mg/l			WG426333	06/13/09 20:43
Zinc	< .03	mg/l			WG426333	06/13/09 20:43
Antimony	< .001	mg/l			WG426269	06/14/09 21:35
Arsenic	< .001	mg/l			WG426269	06/14/09 21:35
Thallium	< .001	mg/l			WG426269	06/14/09 21:35
Antimony,Dissolved	< .001	mg/l			WG426484	06/16/09 04:56

* Performance of this Analyte is outside of established criteria.

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Quality Assurance Report Level II

June 25, 2009

L404242

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Arsenic, Dissolved	< .001	mg/l			WG426484	06/16/09 04:56
Thallium, Dissolved	< .001	mg/l			WG426484	06/16/09 04:56
1,4-Dioxane	< .004	mg/l			WG427650	06/20/09 23:00
4-Bromofluorobenzene		% Rec.	88.27	75-128	WG427650	06/20/09 23:00
Dibromofluoromethane		% Rec.	99.45	79-125	WG427650	06/20/09 23:00
Toluene-d8		% Rec.	96.18	87-114	WG427650	06/20/09 23:00
1,4-Dioxane	< .004	mg/l			WG427509	06/20/09 15:24
4-Bromofluorobenzene		% Rec.	107.2	75-128	WG427509	06/20/09 15:24
Dibromofluoromethane		% Rec.	103.7	79-125	WG427509	06/20/09 15:24
Toluene-d8		% Rec.	105.6	87-114	WG427509	06/20/09 15:24

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.0140	0.0130	7.41	20	L403630-03	WG423494
Total Solids	%	84.9	83.8	1.26	5	L404245-03	WG423815
Arsenic	mg/kg	0.00	0.00	0.00	20	L404615-03	WG423987
Beryllium	mg/kg	0.00	0.100	NA	20	L404615-03	WG423987
Cadmium	mg/kg	0.00	0.00	0.00	20	L404615-03	WG423987
Chromium	mg/kg	8.04	9.10	12.4	20	L404615-03	WG423987
Copper	mg/kg	0.00	0.0606	NA	20	L404615-03	WG423987
Lead	mg/kg	2.14	2.80	26.7*	20	L404615-03	WG423987
Nickel	mg/kg	2.72	2.88	5.71	20	L404615-03	WG423987
Selenium	mg/kg	3.58	4.20	15.9	20	L404615-03	WG423987
Silver	mg/kg	0.00	0.00	0.00	20	L404615-03	WG423987
Zinc	mg/kg	22.7	25.8	12.8	20	L404615-03	WG423987
Antimony	mg/kg	0.00	0.00	0.00	20	L404615-03	WG423987
Thallium	mg/kg	0.00	0.00	0.00	20	L404615-03	WG423987
Mercury	mg/l	0.00	0.00	0.00	20	L406775-15	WG426094
Mercury, Dissolved	mg/l	0.00	0.00	0.00	20	L406945-16	WG426098
Beryllium	mg/l	0.000360	0.000230	44.1*	20	L406969-01	WG426333
Cadmium	mg/l	0.00	0.00	0.00	20	L406969-01	WG426333
Chromium	mg/l	0.00	0.00	0.00	20	L406969-01	WG426333
Copper	mg/l	0.00	0.00	0.00	20	L406969-01	WG426333
Lead	mg/l	0.00	0.00	0.00	20	L406969-01	WG426333
Nickel	mg/l	0.00	0.00840	NA	20	L406969-01	WG426333
Selenium	mg/l	0.00	0.00	0.00	20	L406969-01	WG426333
Silver	mg/l	0.00	0.00130	NA	20	L406969-01	WG426333
Zinc	mg/l	0.00	0.0271	NA	20	L406969-01	WG426333
Antimony	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269
Arsenic	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269
Thallium	mg/l	0.00	0.00	0.00	20	L406118-02	WG426269

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Level II

L404242

June 25, 2009

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Antimony, Dissolved	mg/l	0.00	0.00		0.00	20	L407348-02	WG426484
Arsenic, Dissolved	mg/l	0.00321	0.00330		2.76	20	L407348-02	WG426484
Thallium, Dissolved	mg/l	0.00	0.000240		NA	20	L407348-02	WG426484

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Diesel (C7-C26)	mg/kg	30	23.6	78.6	50-150	WG423285
Motor Oil (C16-C40)	mg/kg	30	22.8	75.9	50-150	WG423285
o-Terphenyl				87.53	50-150	WG423285
Mercury	mg/kg	8.77	7.86	89.6	71.6-127.7	WG423494
1,1,1-Trichloroethane	mg/l	.05	0.0390	78.0	67-137	WG423451
1,1,2,2-Tetrachloroethane	mg/l	.05	0.0458	91.6	72-128	WG423451
1,1,2-Trichloroethane	mg/l	.05	0.0477	95.5	79-123	WG423451
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.05	0.0344	68.7	51-149	WG423451
1,1-Dichloroethane	mg/l	.05	0.0415	83.0	67-133	WG423451
1,1-Dichloroethene	mg/l	.05	0.0398	79.7	60-130	WG423451
1,2,3-Trichlorobenzene	mg/l	.05	0.0437	87.5	63-138	WG423451
1,2,4-Trichlorobenzene	mg/l	.05	0.0405	81.1	65-137	WG423451
1,2-Dibromo-3-Chloropropane	mg/l	.05	0.0503	101.	55-134	WG423451
1,2-Dibromoethane	mg/l	.05	0.0463	92.6	75-126	WG423451
1,2-Dichlorobenzene	mg/l	.05	0.0441	88.3	75-122	WG423451
1,2-Dichloroethane	mg/l	.05	0.0418	83.6	63-137	WG423451
1,2-Dichloropropane	mg/l	.05	0.0472	94.5	74-122	WG423451
1,3-Dichlorobenzene	mg/l	.05	0.0435	87.1	73-131	WG423451
1,4-Dichlorobenzene	mg/l	.05	0.0403	80.6	70-121	WG423451
2-Butanone (MEK)	mg/l	.25	0.203	81.1	53-132	WG423451
2-Hexanone	mg/l	.25	0.239	95.4	56-147	WG423451
4-Methyl-2-pentanone (MIBK)	mg/l	.25	0.231	92.6	60-142	WG423451
Acetone	mg/l	.25	0.228	91.1	48-134	WG423451
Benzene	mg/l	.05	0.0417	83.5	67-126	WG423451
Bromochloromethane	mg/l	.05	0.0475	94.9	75-128	WG423451
Bromodichloromethane	mg/l	.05	0.0458	91.5	68-133	WG423451
Bromoform	mg/l	.05	0.0492	98.3	60-139	WG423451
Bromomethane	mg/l	.05	0.0416	83.3	45-175	WG423451
Carbon disulfide	mg/l	.05	0.0293	58.6	41-148	WG423451
Carbon tetrachloride	mg/l	.05	0.0381	76.3	64-141	WG423451
Chlorobenzene	mg/l	.05	0.0444	88.8	77-125	WG423451
Chlorodibromomethane	mg/l	.05	0.0486	97.1	73-138	WG423451
Chloroethane	mg/l	.05	0.0399	79.8	49-155	WG423451
Chloroform	mg/l	.05	0.0414	82.7	66-126	WG423451
Chloromethane	mg/l	.05	0.0405	81.1	45-152	WG423451
cis-1,2-Dichloroethene	mg/l	.05	0.0438	87.5	72-128	WG423451
cis-1,3-Dichloropropene	mg/l	.05	0.0441	88.2	73-131	WG423451
Dichlorodifluoromethane	mg/l	.05	0.0463	92.5	39-189	WG423451
Ethylbenzene	mg/l	.05	0.0427	85.4	76-129	WG423451
Isopropylbenzene	mg/l	.05	0.0432	86.5	73-132	WG423451
Methyl tert-butyl ether	mg/l	.05	0.0429	85.9	51-142	WG423451
Methylene Chloride	mg/l	.05	0.0414	82.8	64-125	WG423451
Styrene	mg/l	.05	0.0446	89.2	78-130	WG423451
Tetrachloroethene	mg/l	.05	0.0410	82.1	67-135	WG423451
Toluene	mg/l	.05	0.0403	80.5	72-122	WG423451
trans-1,2-Dichloroethene	mg/l	.05	0.0420	84.1	67-129	WG423451
trans-1,3-Dichloropropene	mg/l	.05	0.0426	85.1	66-137	WG423451

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Trichloroethene	mg/l	.05	0.0429	85.8	74-126	WG423451
Trichlorofluoromethane	mg/l	.05	0.0403	80.5	54-156	WG423451
Vinyl chloride	mg/l	.05	0.0373	74.6	55-153	WG423451
4-Bromofluorobenzene				99.10	75-128	WG423451
Dibromofluoromethane				97.41	79-125	WG423451
Toluene-d8				98.98	87-114	WG423451
1,1,1-Trichloroethane	mg/kg	.05	0.0587	117.	62-135	WG423541
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0536	107.	74-129	WG423541
1,1,2-Trichloroethane	mg/kg	.05	0.0500	100.	77-124	WG423541
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0450	90.0	49-155	WG423541
1,1-Dichloroethane	mg/kg	.05	0.0525	105.	61-134	WG423541
1,1-Dichloroethene	mg/kg	.05	0.0473	94.7	53-136	WG423541
1,2,3-Trichlorobenzene	mg/kg	.05	0.0494	98.9	62-146	WG423541
1,2,4-Trichlorobenzene	mg/kg	.05	0.0506	101.	61-148	WG423541
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0578	116.	61-134	WG423541
1,2-Dibromoethane	mg/kg	.05	0.0560	112.	76-127	WG423541
1,2-Dichlorobenzene	mg/kg	.05	0.0483	96.7	77-123	WG423541
1,2-Dichloroethane	mg/kg	.05	0.0581	116.	58-141	WG423541
1,2-Dichloropropane	mg/kg	.05	0.0493	98.5	71-128	WG423541
1,3-Dichlorobenzene	mg/kg	.05	0.0515	103.	71-132	WG423541
1,4-Dichlorobenzene	mg/kg	.05	0.0459	91.9	72-123	WG423541
2-Butanone (MEK)	mg/kg	.25	0.292	117.	51-131	WG423541
2-Hexanone	mg/kg	.25	0.305	122.	62-145	WG423541
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.303	121.	61-143	WG423541
Acetone	mg/kg	.25	0.286	114.	44-140	WG423541
Benzene	mg/kg	.05	0.0506	101.	65-128	WG423541
Bromochloromethane	mg/kg	.05	0.0559	112.	73-130	WG423541
Bromodichloromethane	mg/kg	.05	0.0550	110.	66-126	WG423541
Bromoform	mg/kg	.05	0.0596	119.	64-139	WG423541
Bromomethane	mg/kg	.05	0.0799	160.	41-175	WG423541
Carbon disulfide	mg/kg	.05	0.0412	82.4	36-161	WG423541
Carbon tetrachloride	mg/kg	.05	0.0561	112.	60-140	WG423541
Chlorobenzene	mg/kg	.05	0.0509	102.	75-125	WG423541
Chlorodibromomethane	mg/kg	.05	0.0564	113.	72-137	WG423541
Chloroethane	mg/kg	.05	0.0557	111.	44-159	WG423541
Chloroform	mg/kg	.05	0.0522	104.	63-123	WG423541
Chloromethane	mg/kg	.05	0.0530	106.	42-149	WG423541
cis-1,2-Dichloroethene	mg/kg	.05	0.0552	110.	71-129	WG423541
cis-1,3-Dichloropropane	mg/kg	.05	0.0529	106.	73-132	WG423541
Dichlorodifluoromethane	mg/kg	.05	0.0638	128.	26-186	WG423541
Ethylbenzene	mg/kg	.05	0.0541	108.	74-128	WG423541
Isopropylbenzene	mg/kg	.05	0.0571	114.	73-130	WG423541
Methyl tert-butyl ether	mg/kg	.05	0.0530	106.	44-148	WG423541
Methylene Chloride	mg/kg	.05	0.0528	106.	57-129	WG423541
Styrene	mg/kg	.05	0.0575	115.	76-133	WG423541
Tetrachloroethene	mg/kg	.05	0.0516	103.	65-135	WG423541
Toluene	mg/kg	.05	0.0500	99.9	70-120	WG423541
trans-1,2-Dichloroethene	mg/kg	.05	0.0548	110.	61-133	WG423541
trans-1,3-Dichloropropene	mg/kg	.05	0.0548	110.	70-135	WG423541
Trichloroethene	mg/kg	.05	0.0551	110.	71-126	WG423541
Trichlorofluoromethane	mg/kg	.05	0.0594	119.	52-147	WG423541
Vinyl chloride	mg/kg	.05	0.0508	102.	50-151	WG423541
4-Bromofluorobenzene				110.6	59-140	WG423541
Dibromofluoromethane				108.4	63-139	WG423541
Toluene-d8				100.6	84-116	WG423541

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	mg/kg	.05	0.0414	82.8	62-135	WG423576
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0490	97.9	74-129	WG423576
1,1,2-Trichloroethane	mg/kg	.05	0.0460	91.9	77-124	WG423576
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0395	79.0	49-155	WG423576
1,1-Dichloroethane	mg/kg	.05	0.0446	89.2	61-134	WG423576
1,1-Dichloroethene	mg/kg	.05	0.0375	74.9	53-136	WG423576
1,2,3-Trichlorobenzene	mg/kg	.05	0.0517	103.	62-146	WG423576
1,2,4-Trichlorobenzene	mg/kg	.05	0.0541	108.	61-148	WG423576
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0487	97.4	61-134	WG423576
1,2-Dibromoethane	mg/kg	.05	0.0473	94.6	76-127	WG423576
1,2-Dichlorobenzene	mg/kg	.05	0.0479	95.7	77-123	WG423576
1,2-Dichloroethane	mg/kg	.05	0.0421	84.1	58-141	WG423576
1,2-Dichloropropane	mg/kg	.05	0.0476	95.1	71-128	WG423576
1,3-Dichlorobenzene	mg/kg	.05	0.0501	100.	71-132	WG423576
1,4-Dichlorobenzene	mg/kg	.05	0.0464	92.9	72-123	WG423576
2-Butanone (MEK)	mg/kg	.25	0.229	91.5	51-131	WG423576
2-Hexanone	mg/kg	.25	0.250	99.8	62-145	WG423576
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.244	97.6	61-143	WG423576
Acetone	mg/kg	.25	0.216	86.5	44-140	WG423576
Benzene	mg/kg	.05	0.0429	85.9	65-128	WG423576
Bromochloromethane	mg/kg	.05	0.0478	95.7	73-130	WG423576
Bromodichloromethane	mg/kg	.05	0.0415	83.1	66-126	WG423576
Bromoform	mg/kg	.05	0.0488	97.7	64-139	WG423576
Bromomethane	mg/kg	.05	0.0349	69.9	41-175	WG423576
Carbon disulfide	mg/kg	.05	0.0310	62.1	36-161	WG423576
Carbon tetrachloride	mg/kg	.05	0.0367	73.3	60-140	WG423576
Chlorobenzene	mg/kg	.05	0.0450	90.1	75-125	WG423576
Chlorodibromomethane	mg/kg	.05	0.0434	86.7	72-137	WG423576
Chloroethane	mg/kg	.05	0.0365	72.9	44-159	WG423576
Chloroform	mg/kg	.05	0.0457	91.4	63-123	WG423576
Chloromethane	mg/kg	.05	0.0356	71.3	42-149	WG423576
cis-1,2-Dichloroethene	mg/kg	.05	0.0443	88.7	71-129	WG423576
cis-1,3-Dichloropropene	mg/kg	.05	0.0476	95.2	73-132	WG423576
Dichlorodifluoromethane	mg/kg	.05	0.0310	61.9	26-186	WG423576
Ethylbenzene	mg/kg	.05	0.0453	90.5	74-128	WG423576
Isopropylbenzene	mg/kg	.05	0.0458	91.6	73-130	WG423576
Methyl tert-butyl ether	mg/kg	.05	0.0421	84.2	44-148	WG423576
Methylene Chloride	mg/kg	.05	0.0394	78.8	57-129	WG423576
Styrene	mg/kg	.05	0.0486	97.1	76-133	WG423576
Tetrachloroethene	mg/kg	.05	0.0419	83.8	65-135	WG423576
Toluene	mg/kg	.05	0.0441	88.2	70-120	WG423576
trans-1,2-Dichloroethene	mg/kg	.05	0.0400	80.0	61-133	WG423576
trans-1,3-Dichloropropene	mg/kg	.05	0.0453	90.7	70-135	WG423576
Trichloroethene	mg/kg	.05	0.0448	89.7	71-126	WG423576
Trichlorofluoromethane	mg/kg	.05	0.0352	70.4	52-147	WG423576
Vinyl chloride	mg/kg	.05	0.0385	77.0	50-151	WG423576
4-Bromofluorobenzene				98.35	59-140	WG423576
Dibromofluoromethane				92.27	63-139	WG423576
Toluene-d8				102.3	84-116	WG423576
Pentachlorophenol	ppm	.333	0.261	78.4	37-118	WG423526
2,4,6-Tribromophenol				77.09	25-137	WG423526
2-Fluorobiphenyl				71.07	30-120	WG423526
2-Fluorophenol				77.89	26-130	WG423526
Nitrobenzene-d5				75.87	18-119	WG423526
Phenol-d5				78.27	37-141	WG423526
p-Terphenyl-d14				86.70	23-143	WG423526

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Quality Assurance Report
Level II

L404242

June 25, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4,5-Tetrachlorobenzene	ppm	.01	0.00779	77.9	39-116	WG423529
2,4,5-Trichlorophenol	ppm	.01	0.00729	72.9	48-120	WG423529
2,4,6-Trichlorophenol	ppm	.01	0.00689	68.9	49-118	WG423529
2,4-Dichlorophenol	ppm	.01	0.00737	73.7	46-115	WG423529
2,4-Dimethylphenol	ppm	.01	0.0113	113.	40-124	WG423529
2,4-Dinitrophenol	ppm	.01	0.00548	54.8	10-125	WG423529
2,4-Dinitrotoluene	ppm	.01	0.00828	82.8	56-128	WG423529
2,6-Dinitrotoluene	ppm	.01	0.00802	80.2	56-121	WG423529
2-Chloronaphthalene	ppm	.01	0.00726	72.6	44-110	WG423529
2-Chlorophenol	ppm	.01	0.00649	64.9	38-114	WG423529
2-Methylnaphthalene	ppm	.01	0.00755	75.5	28-122	WG423529
2-Methylphenol	ppm	.01	0.00594	59.4	42-99	WG423529
2-Nitroaniline	ppm	.01	0.00751	75.1	55-124	WG423529
2-Nitrophenol	ppm	.01	0.00769	76.9	35-118	WG423529
3&4-methyl phenol	ppm	.01	0.00609	60.9	36-102	WG423529
3,3-Dichlorobenzidine	ppm	.01	0.00886	88.6	46-145	WG423529
3-Nitroaniline	ppm	.01	0.00817	81.7	39-141	WG423529
4,6-Dinitro-2-methylphenol	ppm	.01	0.00593	59.3	24-119	WG423529
4-Bromophenyl-phenylether	ppm	.01	0.00653	65.3	45-105	WG423529
4-Chloro-3-methylphenol	ppm	.01	0.00660	66.0	47-116	WG423529
4-Chloroaniline	ppm	.01	0.00775	77.5	21-151	WG423529
4-Chlorophenyl-phenylether	ppm	.01	0.00762	76.2	49-116	WG423529
4-Nitroaniline	ppm	.01	0.00938	93.8	43-144	WG423529
4-Nitrophenol	ppm	.01	0.00254	25.4	10-66	WG423529
Acenaphthene	ppm	.01	0.00776	77.6	48-110	WG423529
Acenaphthylene	ppm	.01	0.00790	79.0	48-113	WG423529
Acetophenone	ppm	.01	0.00705	70.5	35-98	WG423529
Anthracene	ppm	.01	0.00862	86.2	55-127	WG423529
Atrazine	ppm	.01	0.00961	96.1	43-159	WG423529
Benzaldehyde	ppm	.01	0.00273	27.3	1-78	WG423529
Benzo(a)anthracene	ppm	.01	0.00839	83.9	57-115	WG423529
Benzo(a)pyrene	ppm	.01	0.00851	85.1	63-125	WG423529
Benzo(b)fluoranthene	ppm	.01	0.00858	85.8	50-123	WG423529
Benzo(g,h,i)perylene	ppm	.01	0.00867	86.7	39-143	WG423529
Benzo(k)fluoranthene	ppm	.01	0.00805	80.5	45-126	WG423529
Benzylbutyl phthalate	ppm	.01	0.00478	47.8	22-154	WG423529
Biphenyl	ppm	.01	0.00707	70.7	45-111	WG423529
Bis(2-chlorethoxy)methane	ppm	.01	0.00763	76.3	42-116	WG423529
Bis(2-chloroethyl)ether	ppm	.01	0.00623	62.3	26-115	WG423529
Bis(2-chloroisopropyl)ether	ppm	.01	0.00705	70.5	32-115	WG423529
Bis(2-ethylhexyl)phthalate	ppm	.01	0.00913	91.3	47-143	WG423529
Caprolactam	ppm	.01	0.00205	20.5	11-33	WG423529
Carbazole	ppm	.01	0.00801	80.1	49-133	WG423529
Chrysene	ppm	.01	0.00891	89.1	58-113	WG423529
Di-n-butyl phthalate	ppm	.01	0.00686	68.6	51-131	WG423529
Di-n-octyl phthalate	ppm	.01	0.00841	84.1	51-138	WG423529
Dibenz(a,h)anthracene	ppm	.01	0.00833	83.3	39-144	WG423529
Dibenzofuran	ppm	.01	0.00766	76.6	50-121	WG423529
Diethyl phthalate	ppm	.01	0.00513	51.3	36-128	WG423529
Dimethyl phthalate	ppm	.01	0.00254	25.5	10-135	WG423529
Fluoranthene	ppm	.01	0.00850	85.0	53-119	WG423529
Fluorene	ppm	.01	0.00844	84.4	49-116	WG423529
Hexachloro-1,3-butadiene	ppm	.01	0.00735	73.5	21-116	WG423529
Hexachlorobenzene	ppm	.01	0.00728	72.8	51-121	WG423529
Hexachlorocyclopentadiene	ppm	.01	0.00678	67.8	4-126	WG423529
Hexachloroethane	ppm	.01	0.00584	58.4	15-109	WG423529
Indeno(1,2,3-cd)pyrene	ppm	.01	0.00841	84.1	40-143	WG423529
Isophorone	ppm	.01	0.00756	75.6	48-126	WG423529

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Quality Assurance Report
Level II

L404242

June 25, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
n-Nitrosodi-n-propylamine	ppm	.01	0.00704	70.4	47-122	WG423529
n-Nitrosodiphenylamine	ppm	.01	0.00732	73.2	59-143	WG423529
Naphthalene	ppm	.01	0.00696	69.6	29-103	WG423529
Nitrobenzene	ppm	.01	0.00705	70.5	31-105	WG423529
Pentachlorophenol	ppm	.01	0.00678	67.8	20-122	WG423529
Phenanthrene	ppm	.01	0.00808	80.8	54-112	WG423529
Phenol	ppm	.01	0.00294	29.4	17-52	WG423529
Pyrene	ppm	.01	0.00837	83.7	46-130	WG423529
2,4,6-Tribromophenol				72.33	10-148	WG423529
2-Fluorobiphenyl				69.29	26-122	WG423529
2-Fluorophenol				38.22	10-87	WG423529
Nitrobenzene-d5				68.01	12-120	WG423529
Phenol-d5				23.07	10-67	WG423529
p-Terphenyl-d14				86.05	34-149	WG423529
1-Methylnaphthalene	ppm	.001	0.000843	84.3	30-123	WG423352
2-Chloronaphthalene	ppm	.001	0.000859	85.9	34-120	WG423352
2-Methylnaphthalene	ppm	.001	0.000829	82.9	29-116	WG423352
Acenaphthene	ppm	.001	0.000901	90.1	40-113	WG423352
Acenaphthylene	ppm	.001	0.000937	93.7	36-115	WG423352
Anthracene	ppm	.001	0.000936	93.6	45-118	WG423352
Benzo(a)anthracene	ppm	.001	0.000904	90.4	36-129	WG423352
Benzo(a)pyrene	ppm	.001	0.000957	95.7	44-124	WG423352
Benzo(b)fluoranthene	ppm	.001	0.000915	91.5	43-126	WG423352
Benzo(g,h,i)perylene	ppm	.001	0.000997	99.7	39-128	WG423352
Benzo(k)fluoranthene	ppm	.001	0.00100	100.	44-127	WG423352
Chrysene	ppm	.001	0.000867	86.7	36-137	WG423352
Dibenz(a,h)anthracene	ppm	.001	0.000985	98.5	39-129	WG423352
Fluoranthene	ppm	.001	0.000922	92.2	45-123	WG423352
Fluorene	ppm	.001	0.000938	93.8	41-118	WG423352
Indeno(1,2,3-cd)pyrene	ppm	.001	0.00100	100.	39-129	WG423352
Naphthalene	ppm	.001	0.000815	81.5	26-111	WG423352
Phenanthrene	ppm	.001	0.000945	94.5	41-116	WG423352
Pyrene	ppm	.001	0.000872	87.2	32-136	WG423352
2-Fluorobiphenyl				86.96	26-122	WG423352
Nitrobenzene-d5				78.69	12-120	WG423352
p-Terphenyl-d14				97.16	34-149	WG423352
1,1,1-Trichloroethane	mg/l	.025	0.0236	94.2	67-137	WG423629
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0184	73.7	72-128	WG423629
1,1,2-Trichloroethane	mg/l	.025	0.0199	79.7	79-123	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.025	0.0206	82.3	51-149	WG423629
1,1-Dichloroethane	mg/l	.025	0.0238	95.4	67-133	WG423629
1,1-Dichloroethene	mg/l	.025	0.0241	96.4	60-130	WG423629
1,2,3-Trichlorobenzene	mg/l	.025	0.0207	82.8	63-138	WG423629
1,2,4-Trichlorobenzene	mg/l	.025	0.0218	87.3	65-137	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0189	75.7	55-134	WG423629
1,2-Dibromoethane	mg/l	.025	0.0187	74.7*	75-126	WG423629
1,2-Dichlorobenzene	mg/l	.025	0.0231	92.2	75-122	WG423629
1,2-Dichloroethane	mg/l	.025	0.0204	81.7	63-137	WG423629
1,2-Dichloropropane	mg/l	.025	0.0220	87.9	74-122	WG423629
1,3-Dichlorobenzene	mg/l	.025	0.0228	91.2	73-131	WG423629
1,4-Dichlorobenzene	mg/l	.025	0.0234	93.7	70-121	WG423629
2-Butanone (MEK)	mg/l	.125	0.0913	73.0	53-132	WG423629
2-Hexanone	mg/l	.125	0.0916	73.3	56-147	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.0967	77.4	60-142	WG423629
Acetone	mg/l	.125	0.106	84.9	48-134	WG423629

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Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.025	0.0235	93.9	67-126	WG423629
Bromochloromethane	mg/l	.025	0.0216	86.5	75-128	WG423629
Bromodichloromethane	mg/l	.025	0.0224	89.5	68-133	WG423629
Bromoform	mg/l	.025	0.0207	82.9	60-139	WG423629
Bromomethane	mg/l	.025	0.0246	98.5	45-175	WG423629
Carbon disulfide	mg/l	.025	0.0242	96.9	41-148	WG423629
Carbon tetrachloride	mg/l	.025	0.0234	93.5	64-141	WG423629
Chlorobenzene	mg/l	.025	0.0230	91.9	77-125	WG423629
Chlorodibromomethane	mg/l	.025	0.0218	87.2	73-138	WG423629
Chloroethane	mg/l	.025	0.0247	98.7	49-155	WG423629
Chloroform	mg/l	.025	0.0216	86.4	66-126	WG423629
Chloromethane	mg/l	.025	0.0243	97.4	45-152	WG423629
cis-1,2-Dichloroethene	mg/l	.025	0.0237	94.7	72-128	WG423629
cis-1,3-Dichloropropene	mg/l	.025	0.0215	86.0	73-131	WG423629
Dichlorodifluoromethane	mg/l	.025	0.0246	98.3	39-189	WG423629
Ethylbenzene	mg/l	.025	0.0240	96.1	76-129	WG423629
Isopropylbenzene	mg/l	.025	0.0243	97.4	73-132	WG423629
Methyl tert-butyl ether	mg/l	.025	0.0211	84.3	51-142	WG423629
Methylene Chloride	mg/l	.025	0.0228	91.2	64-125	WG423629
Styrene	mg/l	.025	0.0229	91.4	78-130	WG423629
Tetrachloroethene	mg/l	.025	0.0243	97.4	67-135	WG423629
Toluene	mg/l	.025	0.0228	91.1	72-122	WG423629
trans-1,2-Dichloroethene	mg/l	.025	0.0241	96.5	67-129	WG423629
trans-1,3-Dichloropropene	mg/l	.025	0.0196	78.3	66-137	WG423629
Trichloroethene	mg/l	.025	0.0237	94.9	74-126	WG423629
Trichlorofluoromethane	mg/l	.025	0.0244	97.5	54-156	WG423629
Vinyl chloride	mg/l	.025	0.0239	95.5	55-153	WG423629
4-Bromofluorobenzene				92.07	75-128	WG423629
Dibromofluoromethane				100.3	79-125	WG423629
Toluene-d8				99.01	87-114	WG423629
Total Solids	%	50	50.0	100.	85-115	WG423815
1-Methylnaphthalene	ppm	.033	0.0221	67.0	41-110	WG423537
2-Chloronaphthalene	ppm	.033	0.0215	65.2	43-109	WG423537
2-Methylnaphthalene	ppm	.033	0.0204	61.9	38-104	WG423537
Acenaphthene	ppm	.033	0.0223	67.4	48-103	WG423537
Acenaphthylene	ppm	.033	0.0223	67.6	43-106	WG423537
Anthracene	ppm	.033	0.0242	73.3	51-110	WG423537
Benzo(a)anthracene	ppm	.033	0.0240	72.7	38-126	WG423537
Benzo(a)pyrene	ppm	.033	0.0245	74.3	47-118	WG423537
Benzo(b)fluoranthene	ppm	.033	0.0250	75.8	47-118	WG423537
Benzo(g,h,i)perylene	ppm	.033	0.0240	72.8	40-125	WG423537
Benzo(k)fluoranthene	ppm	.033	0.0249	75.4	45-121	WG423537
Chrysene	ppm	.033	0.0222	67.1	35-135	WG423537
Dibenz(a,h)anthracene	ppm	.033	0.0240	72.7	41-124	WG423537
Fluoranthene	ppm	.033	0.0237	71.9	50-114	WG423537
Fluorene	ppm	.033	0.0233	70.5	49-109	WG423537
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0244	73.9	40-126	WG423537
Naphthalene	ppm	.033	0.0198	60.0	36-100	WG423537
Phenanthrene	ppm	.033	0.0231	69.9	46-108	WG423537
Pyrene	ppm	.033	0.0227	68.9	30-136	WG423537
2-Fluorobiphenyl				60.82	30-120	WG423537
Nitrobenzene-d5				57.85	18-119	WG423537
p-Terphenyl-d14				68.60	23-143	WG423537

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Quality Assurance Report
Level II

L404242

June 25, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	ppm	.001	0.000946	94.6	30-123	WG423939
2-Chloronaphthalene	ppm	.001	0.000933	93.3	34-120	WG423939
2-Methylnaphthalene	ppm	.001	0.000860	86.0	29-116	WG423939
Acenaphthene	ppm	.001	0.000948	94.8	40-113	WG423939
Acenaphthylene	ppm	.001	0.000951	95.1	36-115	WG423939
Anthracene	ppm	.001	0.000966	96.6	45-118	WG423939
Benzo(a)anthracene	ppm	.001	0.000858	85.8	36-129	WG423939
Benzo(a)pyrene	ppm	.001	0.00100	100.	44-124	WG423939
Benzo(b)fluoranthene	ppm	.001	0.000855	85.5	43-126	WG423939
Benzo(g,h,i)perylene	ppm	.001	0.000978	97.8	39-128	WG423939
Benzo(k)fluoranthene	ppm	.001	0.00106	106.	44-127	WG423939
Chrysene	ppm	.001	0.000929	92.9	36-137	WG423939
Dibenz(a,h)anthracene	ppm	.001	0.000996	99.6	39-129	WG423939
Fluoranthene	ppm	.001	0.000969	96.9	45-123	WG423939
Fluorene	ppm	.001	0.000960	96.0	41-118	WG423939
Indeno(1,2,3-cd)pyrene	ppm	.001	0.000994	99.4	39-129	WG423939
Naphthalene	ppm	.001	0.000880	88.0	26-111	WG423939
Phenanthrene	ppm	.001	0.000876	87.6	41-116	WG423939
Pyrene	ppm	.001	0.000863	86.3	32-136	WG423939
2-Fluorobiphenyl				92.86	26-122	WG423939
Nitrobenzene-d5				86.77	12-120	WG423939
p-Terphenyl-d14				97.61	34-149	WG423939
Arsenic	mg/kg	192	182.	94.8	78.6-120.8	WG423987
Beryllium	mg/kg	69.3	66.6	96.1	79.8-120.1	WG423987
Cadmium	mg/kg	70.1	67.1	95.7	78.5-121.5	WG423987
Chromium	mg/kg	168	166.	98.8	80.4-120.2	WG423987
Copper	mg/kg	122	122.	100.	81.6-119.7	WG423987
Lead	mg/kg	113	108.	95.6	77.3-122.1	WG423987
Nickel	mg/kg	74.1	78.2	106.	78.8-121.2	WG423987
Selenium	mg/kg	176	173.	98.3	75.6-125.0	WG423987
Silver	mg/kg	115	109.	94.8	66-133.9	WG423987
Thallium	mg/kg	111	108.	97.3	77.6-122.5	WG423987
Zinc	mg/kg	437	426.	97.5	78.5-121.7	WG423987
Antimony	mg/kg	85.1	38.7	45.5	1.2-242.1	WG423987
Diesel Range Organics (DRO)	mg/kg	30	25.5	85.0	60-140	WG424943
Residual Range Organics (RRO)	mg/kg	30	24.9	82.9*	0-0	WG424943
o-Terphenyl				86.82	50-150	WG424943
Mercury	mg/l	.003	0.00311	104.	85-115	WG426094
Mercury,Dissolved	mg/l	.003	0.00291	97.0	85-115	WG426098
Beryllium	mg/l	1.13	1.07	94.7	85-115	WG426333
Cadmium	mg/l	1.13	1.13	100.	85-115	WG426333
Chromium	mg/l	1.13	1.11	98.2	85-115	WG426333
Copper	mg/l	1.13	1.07	94.7	85-115	WG426333
Lead	mg/l	1.13	1.15	102.	85-115	WG426333
Nickel	mg/l	1.13	1.10	97.3	85-115	WG426333
Selenium	mg/l	1.13	1.05	92.9	85-115	WG426333
Silver	mg/l	1.13	1.06	93.8	85-115	WG426333
Zinc	mg/l	1.13	1.07	94.7	85-115	WG426333

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Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Antimony	mg/l	.0567	0.0577	102.	85-115	WG426269
Arsenic	mg/l	.0567	0.0547	96.5	85-115	WG426269
Thallium	mg/l	.0567	0.0573	101.	85-115	WG426269
Antimony, Dissolved	mg/l	.0567	0.0577	102.	85-115	WG426484
Arsenic, Dissolved	mg/l	.0567	0.0555	97.9	85-115	WG426484
Thallium, Dissolved	mg/l	.0567	0.0619	109.	85-115	WG426484
1,4-Dioxane	mg/l	.05	0.00	0.00*	70-130	WG427650
4-Bromofluorobenzene				93.21	75-128	WG427650
Dibromofluoromethane				97.00	79-125	WG427650
Toluene-d8				98.46	87-114	WG427650
1,4-Dioxane	mg/l	.05	0.0228	45.5*	70-130	WG427509
4-Bromofluorobenzene				105.5	75-128	WG427509
Dibromofluoromethane				107.9	79-125	WG427509
Toluene-d8				104.6	87-114	WG427509

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diesel (C7-C26)	mg/kg	24.8	23.6	83.0	50-150	5.02	20	WG423285
Motor Oil (C16-C40)	mg/kg	23.1	22.8	77.0	50-150	1.24	25	WG423285
o-Terphenyl				90.89	50-150			WG423285
1,1,1-Trichloroethane	mg/l	0.0406	0.0390	81.0	67-137	3.90	20	WG423451
1,1,2,2-Tetrachloroethane	mg/l	0.0463	0.0458	93.0	72-128	1.09	20	WG423451
1,1,2-Trichloroethane	mg/l	0.0497	0.0477	99.0	79-123	4.03	20	WG423451
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0365	0.0344	73.0	51-149	6.03	20	WG423451
1,1-Dichloroethane	mg/l	0.0415	0.0415	83.0	67-133	0.0516	20	WG423451
1,1-Dichloroethene	mg/l	0.0405	0.0398	81.0	60-130	1.62	20	WG423451
1,2,3-Trichlorobenzene	mg/l	0.0452	0.0437	90.0	63-138	3.31	20	WG423451
1,2,4-Trichlorobenzene	mg/l	0.0424	0.0405	85.0	65-137	4.58	20	WG423451
1,2-Dibromo-3-Chloropropane	mg/l	0.0507	0.0503	101.	55-134	0.826	20	WG423451
1,2-Dibromoethane	mg/l	0.0483	0.0463	97.0	75-126	4.33	20	WG423451
1,2-Dichlorobenzene	mg/l	0.0458	0.0441	92.0	75-122	3.67	20	WG423451
1,2-Dichloroethane	mg/l	0.0426	0.0418	85.0	63-137	1.87	20	WG423451
1,2-Dichloropropane	mg/l	0.0478	0.0472	96.0	74-122	1.12	20	WG423451
1,3-Dichlorobenzene	mg/l	0.0453	0.0435	91.0	73-131	4.02	20	WG423451
1,4-Dichlorobenzene	mg/l	0.0427	0.0403	85.0	70-121	5.73	20	WG423451
2-Butanone (MEK)	mg/l	0.195	0.203	78.0	53-132	3.81	20	WG423451
2-Hexanone	mg/l	0.240	0.239	96.0	56-147	0.483	20	WG423451
4-Methyl-2-pentanone (MIBK)	mg/l	0.236	0.231	94.0	60-142	1.78	20	WG423451
Acetone	mg/l	0.223	0.228	89.0	48-134	2.29	20	WG423451
Benzene	mg/l	0.0417	0.0417	83.0	67-126	0.0869	20	WG423451
Bromochloromethane	mg/l	0.0474	0.0475	95.0	75-128	0.105	20	WG423451
Bromodichloromethane	mg/l	0.0476	0.0458	95.0	68-133	4.03	20	WG423451
Bromoform	mg/l	0.0527	0.0492	105.	60-139	6.95	20	WG423451
Bromomethane	mg/l	0.0446	0.0416	89.0	45-175	6.87	20	WG423451
Carbon disulfide	mg/l	0.0302	0.0293	60.0	41-148	3.13	20	WG423451
Carbon tetrachloride	mg/l	0.0397	0.0381	79.0	64-141	3.92	20	WG423451
Chlorobenzene	mg/l	0.0469	0.0444	94.0	77-125	5.44	20	WG423451
Chlorodibromomethane	mg/l	0.0508	0.0486	102.	73-138	4.44	20	WG423451
Chloroethane	mg/l	0.0444	0.0399	89.0	49-155	10.8	20	WG423451

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L404242

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Chloroform	mg/l	0.0411	0.0414	82.0	66-126	0.714	20	WG423451
Chloromethane	mg/l	0.0417	0.0405	83.0	45-152	2.90	20	WG423451
cis-1,2-Dichloroethene	mg/l	0.0445	0.0438	89.0	72-128	1.75	20	WG423451
cis-1,3-Dichloropropene	mg/l	0.0452	0.0441	90.0	73-131	2.50	20	WG423451
Dichlorodifluoromethane	mg/l	0.0491	0.0463	98.0	39-189	5.95	24	WG423451
Ethylbenzene	mg/l	0.0453	0.0427	91.0	76-129	5.97	20	WG423451
Isopropylbenzene	mg/l	0.0459	0.0432	92.0	73-132	6.01	20	WG423451
Methyl tert-butyl ether	mg/l	0.0423	0.0429	85.0	51-142	1.41	20	WG423451
Methylene Chloride	mg/l	0.0422	0.0414	84.0	64-125	1.93	20	WG423451
Styrene	mg/l	0.0473	0.0446	95.0	78-130	5.84	20	WG423451
Tetrachloroethene	mg/l	0.0451	0.0410	90.0	67-135	9.53	20	WG423451
Toluene	mg/l	0.0431	0.0403	86.0	72-122	6.86	20	WG423451
trans-1,2-Dichloroethene	mg/l	0.0422	0.0420	84.0	67-129	0.416	20	WG423451
trans-1,3-Dichloropropene	mg/l	0.0454	0.0426	91.0	66-137	6.39	20	WG423451
Trichloroethene	mg/l	0.0455	0.0429	91.0	74-126	5.87	20	WG423451
Trichlorofluoromethane	mg/l	0.0431	0.0403	86.0	54-156	6.73	20	WG423451
Vinyl chloride	mg/l	0.0401	0.0373	80.0	55-153	7.28	20	WG423451
4-Bromofluorobenzene				100.0	75-128			WG423451
Dibromofluoromethane				94.57	79-125			WG423451
Toluene-d8				100.1	87-114			WG423451
1,1,1-Trichloroethane	mg/kg	0.0609	0.0587	122.	62-135	3.68	20	WG423541
1,1,2,2-Tetrachloroethane	mg/kg	0.0534	0.0536	107.	74-129	0.282	20	WG423541
1,1,2-Trichloroethane	mg/kg	0.0512	0.0500	102.	77-124	2.38	20	WG423541
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0480	0.0450	96.0	49-155	6.37	20	WG423541
1,1-Dichloroethane	mg/kg	0.0532	0.0525	106.	61-134	1.37	20	WG423541
1,1-Dichloroethene	mg/kg	0.0477	0.0473	95.0	53-136	0.785	20	WG423541
1,2,3-Trichlorobenzene	mg/kg	0.0506	0.0494	101.	62-146	2.38	20	WG423541
1,2,4-Trichlorobenzene	mg/kg	0.0525	0.0506	105.	61-148	3.73	20	WG423541
1,2-Dibromo-3-Chloropropane	mg/kg	0.0535	0.0578	107.	61-134	7.71	21	WG423541
1,2-Dibromoethane	mg/kg	0.0578	0.0560	116.	76-127	3.12	20	WG423541
1,2-Dichlorobenzene	mg/kg	0.0501	0.0483	100.	77-123	3.59	20	WG423541
1,2-Dichloroethane	mg/kg	0.0582	0.0581	116.	58-141	0.244	20	WG423541
1,2-Dichloropropane	mg/kg	0.0500	0.0493	100.	71-128	1.45	20	WG423541
1,3-Dichlorobenzene	mg/kg	0.0564	0.0515	113.	71-132	9.18	20	WG423541
1,4-Dichlorobenzene	mg/kg	0.0482	0.0459	96.0	72-123	4.79	20	WG423541
2-Butanone (MEK)	mg/kg	0.250	0.292	100.	51-131	15.6	25	WG423541
2-Hexanone	mg/kg	0.279	0.305	112.	62-145	8.84	23	WG423541
4-Methyl-2-pentanone (MIBK)	mg/kg	0.271	0.303	108.	61-143	11.0	23	WG423541
Acetone	mg/kg	0.245	0.286	98.0	44-140	15.6	25	WG423541
Benzene	mg/kg	0.0509	0.0506	102.	65-128	0.606	20	WG423541
Bromochloromethane	mg/kg	0.0555	0.0559	111.	73-130	0.668	20	WG423541
Bromodichloromethane	mg/kg	0.0581	0.0550	116.	66-126	5.50	20	WG423541
Bromoform	mg/kg	0.0614	0.0596	123.	64-139	2.96	20	WG423541
Bromomethane	mg/kg	0.0807	0.0799	161.	41-175	1.00	20	WG423541
Carbon disulfide	mg/kg	0.0471	0.0412	94.0	36-161	13.5	20	WG423541
Carbon tetrachloride	mg/kg	0.0517	0.0561	103.	60-140	8.09	20	WG423541
Chlorobenzene	mg/kg	0.0553	0.0509	111.	75-125	8.21	20	WG423541
Chlorodibromomethane	mg/kg	0.0600	0.0564	120.	72-137	6.25	20	WG423541
Chloroethane	mg/kg	0.0560	0.0557	112.	44-159	0.699	20	WG423541
Chloroform	mg/kg	0.0529	0.0522	106.	63-123	1.27	20	WG423541
Chloromethane	mg/kg	0.0540	0.0530	108.	42-149	1.81	20	WG423541
cis-1,2-Dichloroethene	mg/kg	0.0558	0.0552	112.	71-129	1.05	20	WG423541
cis-1,3-Dichloropropene	mg/kg	0.0559	0.0529	112.	73-132	5.58	20	WG423541
Dichlorodifluoromethane	mg/kg	0.0619	0.0638	124.	26-186	3.12	22	WG423541
Ethylbenzene	mg/kg	0.0596	0.0541	119.	74-128	9.68	20	WG423541
Isopropylbenzene	mg/kg	0.0616	0.0571	123.	73-130	7.51	20	WG423541
Methyl tert-butyl ether	mg/kg	0.0511	0.0530	102.	44-148	3.59	20	WG423541

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Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
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Methylene Chloride	mg/kg	0.0537	0.0528	107.	57-129	1.71	20	WG423541
Styrene	mg/kg	0.0613	0.0575	123.	76-133	6.42	20	WG423541
Tetrachloroethene	mg/kg	0.0560	0.0516	112.	65-135	8.17	20	WG423541
Toluene	mg/kg	0.0529	0.0500	106.	70-120	5.64	20	WG423541
trans-1,2-Dichloroethene	mg/kg	0.0558	0.0548	112.	61-133	1.81	20	WG423541
trans-1,3-Dichloropropene	mg/kg	0.0557	0.0548	111.	70-135	1.58	20	WG423541
Trichloroethene	mg/kg	0.0562	0.0551	112.	71-126	1.96	20	WG423541
Trichlorofluoromethane	mg/kg	0.0592	0.0594	118.	52-147	0.297	20	WG423541
Vinyl chloride	mg/kg	0.0520	0.0508	104.	50-151	2.20	20	WG423541
4-Bromofluorobenzene				114.5	59-140			WG423541
Dibromofluoromethane				107.2	63-139			WG423541
Toluene-d8				101.0	84-116			WG423541
1,1,1-Trichloroethane	mg/kg	0.0413	0.0414	83.0	62-135	0.194	20	WG423576
1,1,2,2-Tetrachloroethane	mg/kg	0.0495	0.0490	99.0	74-129	1.03	20	WG423576
1,1,2-Trichloroethane	mg/kg	0.0464	0.0460	93.0	77-124	0.887	20	WG423576
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0395	0.0395	79.0	49-155	0.144	20	WG423576
1,1-Dichloroethane	mg/kg	0.0451	0.0446	90.0	61-134	1.19	20	WG423576
1,1-Dichloroethene	mg/kg	0.0376	0.0375	75.0	53-136	0.402	20	WG423576
1,2,3-Trichlorobenzene	mg/kg	0.0516	0.0517	103.	62-146	0.278	20	WG423576
1,2,4-Trichlorobenzene	mg/kg	0.0528	0.0541	106.	61-148	2.42	20	WG423576
1,2-Dibromo-3-Chloropropane	mg/kg	0.0497	0.0487	99.0	61-134	1.96	21	WG423576
1,2-Dibromoethane	mg/kg	0.0494	0.0473	99.0	76-127	4.32	20	WG423576
1,2-Dichlorobenzene	mg/kg	0.0473	0.0479	95.0	77-123	1.10	20	WG423576
1,2-Dichloroethane	mg/kg	0.0416	0.0421	83.0	58-141	1.08	20	WG423576
1,2-Dichloropropane	mg/kg	0.0457	0.0476	91.0	71-128	4.11	20	WG423576
1,3-Dichlorobenzene	mg/kg	0.0510	0.0501	102.	71-132	1.79	20	WG423576
1,4-Dichlorobenzene	mg/kg	0.0462	0.0464	92.0	72-123	0.586	20	WG423576
2-Butanone (MEK)	mg/kg	0.228	0.229	91.0	51-131	0.334	25	WG423576
2-Hexanone	mg/kg	0.258	0.250	103.	62-145	3.30	23	WG423576
4-Methyl-2-pentanone (MIBK)	mg/kg	0.247	0.244	99.0	61-143	1.34	23	WG423576
Acetone	mg/kg	0.217	0.216	87.0	44-140	0.169	25	WG423576
Benzene	mg/kg	0.0429	0.0429	86.0	65-128	0.0430	20	WG423576
Bromochloromethane	mg/kg	0.0481	0.0478	96.0	73-130	0.629	20	WG423576
Bromodichloromethane	mg/kg	0.0413	0.0415	83.0	66-126	0.551	20	WG423576
Bromoform	mg/kg	0.0496	0.0488	99.0	64-139	1.52	20	WG423576
Bromomethane	mg/kg	0.0344	0.0349	69.0	41-175	1.54	20	WG423576
Carbon disulfide	mg/kg	0.0311	0.0310	62.0	36-161	0.134	20	WG423576
Carbon tetrachloride	mg/kg	0.0375	0.0367	75.0	60-140	2.22	20	WG423576
Chlorobenzene	mg/kg	0.0467	0.0450	93.0	75-125	3.64	20	WG423576
Chlorodibromomethane	mg/kg	0.0453	0.0434	91.0	72-137	4.30	20	WG423576
Chloroethane	mg/kg	0.0369	0.0365	74.0	44-159	1.20	20	WG423576
Chloroform	mg/kg	0.0459	0.0457	92.0	63-123	0.343	20	WG423576
Chloromethane	mg/kg	0.0357	0.0356	71.0	42-149	0.187	20	WG423576
cis-1,2-Dichloroethene	mg/kg	0.0440	0.0443	88.0	71-129	0.816	20	WG423576
cis-1,3-Dichloropropene	mg/kg	0.0468	0.0476	94.0	73-132	1.71	20	WG423576
Dichlorodifluoromethane	mg/kg	0.0312	0.0310	62.0	26-186	0.678	22	WG423576
Ethylbenzene	mg/kg	0.0471	0.0453	94.0	74-128	4.08	20	WG423576
Isopropylbenzene	mg/kg	0.0467	0.0458	93.0	73-130	1.91	20	WG423576
Methyl tert-butyl ether	mg/kg	0.0420	0.0421	84.0	44-148	0.359	20	WG423576
Methylene Chloride	mg/kg	0.0405	0.0394	81.0	57-129	2.71	20	WG423576
Styrene	mg/kg	0.0490	0.0486	98.0	76-133	0.790	20	WG423576
Tetrachloroethene	mg/kg	0.0439	0.0419	88.0	65-135	4.72	20	WG423576
Toluene	mg/kg	0.0434	0.0441	87.0	70-120	1.67	20	WG423576
trans-1,2-Dichloroethene	mg/kg	0.0393	0.0400	79.0	61-133	1.75	20	WG423576
trans-1,3-Dichloropropene	mg/kg	0.0453	0.0453	91.0	70-135	0.0508	20	WG423576
Trichloroethene	mg/kg	0.0452	0.0448	90.0	71-126	0.719	20	WG423576
Trichlorofluoromethane	mg/kg	0.0355	0.0352	71.0	52-147	0.753	20	WG423576

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Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Vinyl chloride	mg/kg	0.0394	0.0385	79.0	50-151	2.20	20	WG423576
4-Bromofluorobenzene				99.21	59-140			WG423576
Dibromofluoromethane				89.56	63-139			WG423576
Toluene-d8				100.8	84-116			WG423576
Pentachlorophenol	ppm	0.239	0.261	72.0	37-118	8.65	28	WG423526
2,4,6-Tribromophenol				70.50	25-137			WG423526
2-Fluorobiphenyl				65.47	30-120			WG423526
2-Fluorophenol				76.25	26-130			WG423526
Nitrobenzene-d5				70.18	18-119			WG423526
Phenol-d5				73.17	37-141			WG423526
p-Terphenyl-d14				79.39	23-143			WG423526
1,2,4,5-Tetrachlorobenzene	ppm	0.00648	0.00779	65.0	39-116	18.3	33	WG423529
2,4,5-Trichlorophenol	ppm	0.00602	0.00729	60.0	48-120	19.2	29	WG423529
2,4,6-Trichlorophenol	ppm	0.00526	0.00689	53.0	49-118	26.7	28	WG423529
2,4-Dichlorophenol	ppm	0.00622	0.00737	62.0	46-115	17.1	28	WG423529
2,4-Dimethylphenol	ppm	0.00995	0.0113	99.0	40-124	12.5	36	WG423529
2,4-Dinitrophenol	ppm	0.00376	0.00548	38.0	10-125	37.3	50	WG423529
2,4-Dinitrotoluene	ppm	0.00706	0.00828	71.0	56-128	15.9	24	WG423529
2,6-Dinitrotoluene	ppm	0.00684	0.00802	68.0	56-121	15.9	23	WG423529
2-Chloronaphthalene	ppm	0.00577	0.00726	58.0	44-110	22.8	30	WG423529
2-Chlorophenol	ppm	0.00514	0.00649	51.0	38-114	23.2	36	WG423529
2-Methylnaphthalene	ppm	0.00593	0.00755	59.0	28-122	24.1	36	WG423529
2-Methylphenol	ppm	0.00563	0.00594	56.0	42-99	5.44	26	WG423529
2-Nitroaniline	ppm	0.00698	0.00751	70.0	55-124	7.31	22	WG423529
2-Nitrophenol	ppm	0.00625	0.00769	62.0	35-118	20.7	35	WG423529
3&4-methyl phenol	ppm	0.00544	0.00609	54.0	36-102	11.2	31	WG423529
3,3-Dichlorobenzidine	ppm	0.00769	0.00886	77.0	46-145	14.0	31	WG423529
3-Nitroaniline	ppm	0.00692	0.00817	69.0	39-141	16.6	32	WG423529
4,6-Dinitro-2-methylphenol	ppm	0.00396	0.00593	40.0	24-119	39.7	50	WG423529
4-Bromophenyl-phenylether	ppm	0.00621	0.00653	62.0	45-105	4.97	26	WG423529
4-Chloro-3-methylphenol	ppm	0.00606	0.00660	61.0	47-116	8.45	22	WG423529
4-Chloroaniline	ppm	0.00694	0.00775	69.0	21-151	11.1	36	WG423529
4-Chlorophenyl-phenylether	ppm	0.00652	0.00762	65.0	49-116	15.6	26	WG423529
4-Nitroaniline	ppm	0.00786	0.00938	79.0	43-144	17.7	34	WG423529
4-Nitrophenol	ppm	0.00191	0.00254	19.0	10-66	28.3	37	WG423529
Acenaphthene	ppm	0.00647	0.00776	65.0	48-110	18.2	26	WG423529
Acenaphthylene	ppm	0.00681	0.00790	68.0	48-113	14.7	28	WG423529
Acetophenone	ppm	0.00569	0.00705	57.0	35-98	21.5	38	WG423529
Anthracene	ppm	0.00758	0.00862	76.0	55-127	12.8	24	WG423529
Atrazine	ppm	0.00812	0.00961	81.0	43-159	16.7	26	WG423529
Benzaldehyde	ppm	0.00206	0.00273	21.0	1-78	27.8	49	WG423529
Benzo(a)anthracene	ppm	0.00793	0.00839	79.0	57-115	5.61	20	WG423529
Benzo(a)pyrene	ppm	0.00819	0.00851	82.0	63-125	3.78	22	WG423529
Benzo(b)fluoranthene	ppm	0.00788	0.00858	79.0	50-123	8.52	32	WG423529
Benzo(g,h,i)perylene	ppm	0.00775	0.00867	78.0	39-143	11.2	31	WG423529
Benzo(k)fluoranthene	ppm	0.00805	0.00805	80.0	45-126	0.0502	37	WG423529
Benzylbutyl phthalate	ppm	0.00610	0.00478	61.0	22-154	24.2	29	WG423529
Biphenyl	ppm	0.00581	0.00707	58.0	45-111	19.6	30	WG423529
Bis(2-chlorethoxy)methane	ppm	0.00596	0.00763	60.0	42-116	24.6	38	WG423529
Bis(2-chloroethyl)ether	ppm	0.00504	0.00623	50.0	26-115	21.0	50	WG423529
Bis(2-chloroisopropyl)ether	ppm	0.00551	0.00705	55.0	32-115	24.5	47	WG423529
Bis(2-ethylhexyl)phthalate	ppm	0.00870	0.00913	87.0	47-143	4.85	24	WG423529
Caprolactam	ppm	0.00214	0.00205	21.0	11-33	4.37	37	WG423529
Carbazole	ppm	0.00735	0.00801	73.0	49-133	8.67	29	WG423529
Chrysene	ppm	0.00824	0.00891	82.0	58-113	7.81	21	WG423529

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Quality Assurance Report
Level II

West Linn, OR 97068

June 25, 2009

L404242

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Di-n-butyl phthalate	ppm	0.00708	0.00686	71.0		51-131	3.15	22	WG423529
Di-n-octyl phthalate	ppm	0.00812	0.00841	81.0		51-138	3.43	22	WG423529
Dibenz(a,h)anthracene	ppm	0.00758	0.00833	76.0		39-144	9.52	30	WG423529
Dibenzofuran	ppm	0.00663	0.00766	66.0		50-121	14.4	26	WG423529
Diethyl phthalate	ppm	0.00604	0.00513	60.0		36-128	16.2	27	WG423529
Dimethyl phthalate	ppm	0.00404	0.00254	40.0		10-135	45.4*	33	WG423529
Fluoranthene	ppm	0.00742	0.00850	74.0		53-119	13.5	28	WG423529
Fluorene	ppm	0.00714	0.00844	71.0		49-116	16.7	25	WG423529
Hexachloro-1,3-butadiene	ppm	0.00529	0.00735	53.0		21-116	32.6	50	WG423529
Hexachlorobenzene	ppm	0.00686	0.00728	69.0		51-121	5.88	23	WG423529
Hexachlorocyclopentadiene	ppm	0.00526	0.00678	53.0		4-126	25.3	50	WG423529
Hexachloroethane	ppm	0.00464	0.00584	46.0		15-109	22.8	50	WG423529
Indeno(1,2,3-cd)pyrene	ppm	0.00745	0.00841	75.0		40-143	12.1	30	WG423529
Isophorone	ppm	0.00640	0.00756	64.0		48-126	16.6	31	WG423529
n-Nitrosodi-n-propylamine	ppm	0.00597	0.00704	60.0		47-122	16.5	33	WG423529
n-Nitrosodiphenylamine	ppm	0.00682	0.00732	68.0		59-143	7.08	23	WG423529
Naphthalene	ppm	0.00554	0.00696	55.0		29-103	22.7	45	WG423529
Nitrobenzene	ppm	0.00554	0.00705	55.0		31-105	24.0	43	WG423529
Pentachlorophenol	ppm	0.00454	0.00678	45.0		20-122	39.5	50	WG423529
Phenanthrene	ppm	0.00713	0.00808	71.0		54-112	12.5	22	WG423529
Phenol	ppm	0.00260	0.00294	26.0		17-52	12.1	33	WG423529
Pyrene	ppm	0.00762	0.00837	76.0		46-130	9.45	28	WG423529
2,4,6-Tribromophenol				55.38		10-148			WG423529
2-Fluorobiphenyl				55.73		26-122			WG423529
2-Fluorophenol				29.49		10-87			WG423529
Nitrobenzene-d5				51.08		12-120			WG423529
Phenol-d5				20.56		10-67			WG423529
p-Terphenyl-d14				78.07		34-149			WG423529
1-Methylnaphthalene	ppm	0.000796	0.000843	80.0		30-123	5.77	32	WG423352
2-Chloronaphthalene	ppm	0.000811	0.000859	81.0		34-120	5.67	30	WG423352
2-Methylnaphthalene	ppm	0.000795	0.000829	79.0		29-116	4.16	31	WG423352
Acenaphthene	ppm	0.000835	0.000901	83.0		40-113	7.64	25	WG423352
Acenaphthylene	ppm	0.000846	0.000937	85.0		36-115	10.2	25	WG423352
Anthracene	ppm	0.000874	0.000936	87.0		45-118	6.86	26	WG423352
Benzo(a)anthracene	ppm	0.000853	0.000904	85.0		36-129	5.86	26	WG423352
Benzo(a)pyrene	ppm	0.000902	0.000957	90.0		44-124	5.91	21	WG423352
Benzo(b)fluoranthene	ppm	0.000831	0.000915	83.0		43-126	9.65	38	WG423352
Benzo(g,h,i)perylene	ppm	0.000924	0.000997	92.0		39-128	7.61	20	WG423352
Benzo(k)fluoranthene	ppm	0.000982	0.00100	98.0		44-127	2.10	39	WG423352
Chrysene	ppm	0.000835	0.000867	84.0		36-137	3.68	22	WG423352
Dibenz(a,h)anthracene	ppm	0.000917	0.000985	92.0		39-129	7.17	20	WG423352
Fluoranthene	ppm	0.000866	0.000922	87.0		45-123	6.26	25	WG423352
Fluorene	ppm	0.000883	0.000938	88.0		41-118	6.06	26	WG423352
Indeno(1,2,3-cd)pyrene	ppm	0.000933	0.00100	93.0		39-129	6.88	20	WG423352
Naphthalene	ppm	0.000764	0.000815	76.0		26-111	6.42	32	WG423352
Phenanthrene	ppm	0.000876	0.000945	88.0		41-116	7.58	25	WG423352
Pyrene	ppm	0.000830	0.000872	83.0		32-136	4.92	22	WG423352
2-Fluorobiphenyl				78.40		26-122			WG423352
Nitrobenzene-d5				74.08		12-120			WG423352
p-Terphenyl-d14				105.7		34-149			WG423352
1,1,1-Trichloroethane	mg/l	0.0241	0.0236	97.0		67-137	2.43	20	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.0223	0.0184	89.0		72-128	19.2	20	WG423629
1,1,2-Trichloroethane	mg/l	0.0233	0.0199	93.0		79-123	15.8	20	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0213	0.0206	85.0		51-149	3.26	20	WG423629
1,1-Dichloroethane	mg/l	0.0244	0.0238	98.0		67-133	2.28	20	WG423629

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Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1-Dichloroethene	mg/l	0.0235	0.0241	94.0	60-130	2.69	20	WG423629
1,2,3-Trichlorobenzene	mg/l	0.0256	0.0207	102.	63-138	21.1*	20	WG423629
1,2,4-Trichlorobenzene	mg/l	0.0255	0.0218	102.	65-137	15.6	20	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.0204	0.0189	81.0	55-134	7.37	20	WG423629
1,2-Dibromoethane	mg/l	0.0230	0.0187	92.0	75-126	20.6*	20	WG423629
1,2-Dichlorobenzene	mg/l	0.0242	0.0231	97.0	75-122	4.83	20	WG423629
1,2-Dichloroethane	mg/l	0.0242	0.0204	97.0	63-137	16.8	20	WG423629
1,2-Dichloropropane	mg/l	0.0239	0.0220	96.0	74-122	8.53	20	WG423629
1,3-Dichlorobenzene	mg/l	0.0244	0.0228	98.0	73-131	6.71	20	WG423629
1,4-Dichlorobenzene	mg/l	0.0239	0.0234	96.0	70-121	2.12	20	WG423629
2-Butanone (MEK)	mg/l	0.104	0.0913	83.0	53-132	13.1	20	WG423629
2-Hexanone	mg/l	0.111	0.0916	89.0	56-147	19.4	20	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	0.118	0.0967	94.0	60-142	19.5	20	WG423629
Acetone	mg/l	0.0996	0.106	80.0	48-134	6.28	20	WG423629
Benzene	mg/l	0.0244	0.0235	97.0	67-126	3.70	20	WG423629
Bromochloromethane	mg/l	0.0240	0.0216	96.0	75-128	10.4	20	WG423629
Bromodichloromethane	mg/l	0.0249	0.0224	100.	68-133	10.6	20	WG423629
Bromoform	mg/l	0.0246	0.0207	98.0	60-139	17.1	20	WG423629
Bromomethane	mg/l	0.0253	0.0246	101.	45-175	2.61	20	WG423629
Carbon disulfide	mg/l	0.0225	0.0242	90.0	41-148	7.43	20	WG423629
Carbon tetrachloride	mg/l	0.0228	0.0234	91.0	64-141	2.44	20	WG423629
Chlorobenzene	mg/l	0.0239	0.0230	96.0	77-125	4.05	20	WG423629
Chlorodibromomethane	mg/l	0.0249	0.0218	99.0	73-138	13.2	20	WG423629
Chloroethane	mg/l	0.0252	0.0247	101.	49-155	1.98	20	WG423629
Chloroform	mg/l	0.0226	0.0216	91.0	66-126	4.69	20	WG423629
Chloromethane	mg/l	0.0249	0.0243	100.	45-152	2.23	20	WG423629
cis-1,2-Dichloroethene	mg/l	0.0241	0.0237	97.0	72-128	1.95	20	WG423629
cis-1,3-Dichloropropene	mg/l	0.0253	0.0215	101.	73-131	16.0	20	WG423629
Dichlorodifluoromethane	mg/l	0.0245	0.0246	98.0	39-189	0.338	24	WG423629
Ethylbenzene	mg/l	0.0241	0.0240	96.0	76-129	0.179	20	WG423629
Isopropylbenzene	mg/l	0.0250	0.0243	100.	73-132	2.82	20	WG423629
Methyl tert-butyl ether	mg/l	0.0241	0.0211	96.0	51-142	13.4	20	WG423629
Methylene Chloride	mg/l	0.0241	0.0228	96.0	64-125	5.49	20	WG423629
Styrene	mg/l	0.0246	0.0229	98.0	78-130	7.14	20	WG423629
Tetrachloroethene	mg/l	0.0242	0.0243	97.0	67-135	0.713	20	WG423629
Toluene	mg/l	0.0240	0.0228	96.0	72-122	5.50	20	WG423629
trans-1,2-Dichloroethene	mg/l	0.0237	0.0241	95.0	67-129	1.63	20	WG423629
trans-1,3-Dichloropropene	mg/l	0.0247	0.0196	99.0	66-137	23.1*	20	WG423629
Trichloroethene	mg/l	0.0241	0.0237	97.0	74-126	1.69	20	WG423629
Trichlorofluoromethane	mg/l	0.0251	0.0244	101.	54-156	3.08	20	WG423629
Vinyl chloride	mg/l	0.0239	0.0239	96.0	55-153	0.189	20	WG423629
4-Bromofluorobenzene				98.20	75-128			WG423629
Dibromofluoromethane				103.1	79-125			WG423629
Toluene-d8				100.4	87-114			WG423629
1-Methylnaphthalene	ppm	0.0208	0.0221	63.0	41-110	6.12	24	WG423537
2-Chloronaphthalene	ppm	0.0216	0.0215	65.0	43-109	0.423	21	WG423537
2-Methylnaphthalene	ppm	0.0202	0.0204	61.0	38-104	1.05	24	WG423537
Acenaphthene	ppm	0.0224	0.0223	68.0	48-103	0.741	20	WG423537
Acenaphthylene	ppm	0.0231	0.0223	70.0	43-106	3.44	20	WG423537
Anthracene	ppm	0.0230	0.0242	70.0	51-110	5.11	22	WG423537
Benzo(a)anthracene	ppm	0.0228	0.0240	69.0	38-126	5.34	20	WG423537
Benzo(a)pyrene	ppm	0.0242	0.0245	73.0	47-118	1.31	20	WG423537
Benzo(b)fluoranthene	ppm	0.0219	0.0250	66.0	47-118	13.4	29	WG423537
Benzo(g,h,i)perylene	ppm	0.0237	0.0240	72.0	40-125	1.47	20	WG423537
Benzo(k)fluoranthene	ppm	0.0277	0.0249	84.0	45-121	10.7	31	WG423537
Chrysene	ppm	0.0223	0.0222	68.0	35-135	0.691	20	WG423537
Dibenz(a,h)anthracene	ppm	0.0239	0.0240	72.0	41-124	0.569	20	WG423537

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**Quality Assurance Report
Level II**

June 25, 2009

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Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Fluoranthene	ppm	0.0235	0.0237	71.0	50-114	1.08	20	WG423537
Fluorene	ppm	0.0236	0.0233	72.0	49-109	1.46	19	WG423537
Indeno(1,2,3-cd)pyrene	ppm	0.0241	0.0244	73.0	40-126	1.16	20	WG423537
Naphthalene	ppm	0.0199	0.0198	60.0	36-100	0.359	24	WG423537
Phenanthrene	ppm	0.0229	0.0231	70.0	46-108	0.552	21	WG423537
Pyrene	ppm	0.0223	0.0227	68.0	30-136	1.81	20	WG423537
2-Fluorobiphenyl				59.39	30-120			WG423537
Nitrobenzene-d5				57.88	18-119			WG423537
p-Terphenyl-d14				65.45	23-143			WG423537
1-Methylnaphthalene	ppm	0.000755	0.000946	76.0	30-123	22.4	32	WG423939
2-Chloronaphthalene	ppm	0.000751	0.000933	75.0	34-120	21.6	30	WG423939
2-Methylnaphthalene	ppm	0.000683	0.000860	68.0	29-116	23.0	31	WG423939
Acenaphthene	ppm	0.000726	0.000948	73.0	40-113	26.6*	25	WG423939
Acenaphthylene	ppm	0.000758	0.000951	76.0	36-115	22.5	25	WG423939
Anthracene	ppm	0.000784	0.000966	78.0	45-118	20.8	26	WG423939
Benzo(a)anthracene	ppm	0.000724	0.000858	72.0	36-129	16.9	26	WG423939
Benzo(a)pyrene	ppm	0.000803	0.00100	80.0	44-124	22.3*	21	WG423939
Benzo(b)fluoranthene	ppm	0.000631	0.000855	63.0	43-126	30.3	38	WG423939
Benzo(g,h,i)perylene	ppm	0.000767	0.000978	77.0	39-128	24.2*	20	WG423939
Benzo(k)fluoranthene	ppm	0.000786	0.00106	79.0	44-127	29.7	39	WG423939
Chrysene	ppm	0.000691	0.000929	69.0	36-137	29.3*	22	WG423939
Dibenz(a,h)anthracene	ppm	0.000784	0.000996	78.0	39-129	23.8*	20	WG423939
Fluoranthene	ppm	0.000799	0.000969	80.0	45-123	19.2	25	WG423939
Fluorene	ppm	0.000762	0.000960	76.0	41-118	23.0	26	WG423939
Indeno(1,2,3-cd)pyrene	ppm	0.000786	0.000994	79.0	39-129	23.4*	20	WG423939
Naphthalene	ppm	0.000701	0.000880	70.0	26-111	22.7	32	WG423939
Phenanthrene	ppm	0.000683	0.000876	68.0	41-116	24.7	25	WG423939
Pyrene	ppm	0.000665	0.000863	67.0	32-136	25.9*	22	WG423939
2-Fluorobiphenyl				70.02	26-122			WG423939
Nitrobenzene-d5				70.70	12-120			WG423939
p-Terphenyl-d14				74.71	34-149			WG423939
Diesel Range Organics (DRO)	mg/kg	25.7	25.5	86.0	60-140	0.914	20	WG424943
Residual Range Organics (RRO)	mg/kg	24.8	24.9	83*	-	0.108*	0	WG424943
o-Terphenyl				84.27	50-150			WG424943
1,4-Dioxane	mg/l	0.00	0.00	0*	70-130	0.00	25	WG427650
4-Bromofluorobenzene				97.12	75-128			WG427650
Dibromofluoromethane				96.59	79-125			WG427650
Toluene-d8				99.16	87-114			WG427650
1,4-Dioxane	mg/l	0.0174	0.0228	35*	70-130	26.7*	25	WG427509
4-Bromofluorobenzene				98.77	75-128			WG427509
Dibromofluoromethane				102.7	79-125			WG427509
Toluene-d8				106.8	87-114			WG427509

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Mercury	mg/kg	0.250	0.0130	.25	94.8	70-130	L403630-03	WG423494
1,1,1-Trichloroethane	mg/l	0.0454	0.00	.05	90.8	31-161	L403729-01	WG423451
1,1,2,2-Tetrachloroethane	mg/l	0.0520	0.00	.05	104.	49-149	L403729-01	WG423451

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Quality Assurance Report
Level II

June 25, 2009

L404242

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
1,1,2-Trichloroethane	mg/l	0.0539	0.00	.05	108.	46-145	L403729-01	WG423451	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0510	0.00	.05	102.	14-168	L403729-01	WG423451	
1,1-Dichloroethane	mg/l	0.0498	0.00	.05	99.5	30-159	L403729-01	WG423451	
1,1-Dichloroethene	mg/l	0.0485	0.00	.05	97.0	10-162	L403729-01	WG423451	
1,2,3-Trichlorobenzene	mg/l	0.0471	0.00	.05	94.2	32-143	L403729-01	WG423451	
1,2,4-Trichlorobenzene	mg/l	0.0443	0.00	.05	88.7	27-142	L403729-01	WG423451	
1,2-Dibromo-3-Chloropropane	mg/l	0.0584	0.00	.05	117.	37-148	L403729-01	WG423451	
1,2-Dibromoethane	mg/l	0.0518	0.00	.05	104.	41-149	L403729-01	WG423451	
1,2-Dichlorobenzene	mg/l	0.0494	0.00	.05	98.9	40-139	L403729-01	WG423451	
1,2-Dichloroethane	mg/l	0.0490	0.00	.05	97.9	29-167	L403729-01	WG423451	
1,2-Dichloropropane	mg/l	0.0528	0.00	.05	106.	39-148	L403729-01	WG423451	
1,3-Dichlorobenzene	mg/l	0.0466	0.00	.05	93.3	32-148	L403729-01	WG423451	
1,4-Dichlorobenzene	mg/l	0.0449	0.00	.05	89.8	32-136	L403729-01	WG423451	
2-Butanone (MEK)	mg/l	0.244	0.00	.25	97.4	32-151	L403729-01	WG423451	
2-Hexanone	mg/l	0.276	0.00	.25	110.	41-155	L403729-01	WG423451	
4-Methyl-2-pentanone (MIBK)	mg/l	0.271	0.00	.25	108.	40-160	L403729-01	WG423451	
Acetone	mg/l	0.281	0.00	.25	112.	25-157	L403729-01	WG423451	
Benzene	mg/l	0.0486	0.00	.05	97.2	16-158	L403729-01	WG423451	
Bromochloromethane	mg/l	0.0542	0.00	.05	108.	36-154	L403729-01	WG423451	
Bromodichloromethane	mg/l	0.0514	0.00	.05	103.	45-147	L403729-01	WG423451	
Bromoform	mg/l	0.0565	0.00	.05	113.	38-152	L403729-01	WG423451	
Bromomethane	mg/l	0.0461	0.00	.05	92.1	0-191	L403729-01	WG423451	
Carbon disulfide	mg/l	0.0442	0.00	.05	88.5	10-166	L403729-01	WG423451	
Carbon tetrachloride	mg/l	0.0441	0.00	.05	88.1	22-168	L403729-01	WG423451	
Chlorobenzene	mg/l	0.0492	0.00	.05	98.3	33-148	L403729-01	WG423451	
Chlorodibromomethane	mg/l	0.0538	0.00	.05	108.	48-151	L403729-01	WG423451	
Chloroethane	mg/l	0.0506	0.00	.05	101.	4-176	L403729-01	WG423451	
Chloroform	mg/l	0.0480	0.00	.05	96.0	37-147	L403729-01	WG423451	
Chloromethane	mg/l	0.0451	0.00	.05	90.3	10-174	L403729-01	WG423451	
cis-1,2-Dichloroethene	mg/l	0.0515	0.00057	.05	102.	29-156	L403729-01	WG423451	
cis-1,3-Dichloropropene	mg/l	0.0489	0.00	.05	97.8	35-148	L403729-01	WG423451	
Dichlorodifluoromethane	mg/l	0.0582	0.00	.05	116.	0-200	L403729-01	WG423451	
Ethylbenzene	mg/l	0.0465	0.00	.05	93.1	29-150	L403729-01	WG423451	
Isopropylbenzene	mg/l	0.0475	0.00	.05	95.0	35-147	L403729-01	WG423451	
Methyl tert-butyl ether	mg/l	0.0523	0.00	.05	105.	24-167	L403729-01	WG423451	
Methylene Chloride	mg/l	0.0488	0.00	.05	97.5	23-151	L403729-01	WG423451	
Styrene	mg/l	0.0480	0.00	.05	96.1	38-149	L403729-01	WG423451	
Tetrachloroethene	mg/l	0.0447	0.00	.05	89.4	13-157	L403729-01	WG423451	
Toluene	mg/l	0.0451	0.00	.05	90.3	22-152	L403729-01	WG423451	
trans-1,2-Dichloroethene	mg/l	0.0493	0.00	.05	98.6	11-160	L403729-01	WG423451	
trans-1,3-Dichloropropene	mg/l	0.0481	0.00	.05	96.1	33-153	L403729-01	WG423451	
Trichloroethene	mg/l	0.0483	0.00	.05	96.5	18-163	L403729-01	WG423451	
Trichlorofluoromethane	mg/l	0.0466	0.00	.05	93.2	10-177	L403729-01	WG423451	
Vinyl chloride	mg/l	0.0470	0.00	.05	94.0	0-179	L403729-01	WG423451	
4-Bromofluorobenzene					98.65	75-128		WG423451	
Dibromofluoromethane					97.35	79-125		WG423451	
Toluene-d8					98.44	87-114		WG423451	
1,1,1-Trichloroethane	mg/kg	0.226	0.00	.05	90.3	23-147	L404220-01	WG423541	
1,1,2,2-Tetrachloroethane	mg/kg	0.204	0.00	.05	81.6	18-150	L404220-01	WG423541	
1,1,2-Trichloroethane	mg/kg	0.199	0.00	.05	79.7	35-140	L404220-01	WG423541	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.182	0.00	.05	72.7	10-145	L404220-01	WG423541	
1,1-Dichloroethane	mg/kg	0.195	0.00	.05	77.9	24-148	L404220-01	WG423541	
1,1-Dichloroethene	mg/kg	0.167	0.00	.05	66.8	10-149	L404220-01	WG423541	
1,2,3-Trichlorobenzene	mg/kg	0.189	0.00	.05	75.8	10-129	L404220-01	WG423541	
1,2,4-Trichlorobenzene	mg/kg	0.196	0.00038	.05	78.4	10-119	L404220-01	WG423541	
1,2-Dibromo-3-Chloropropane	mg/kg	0.219	0.00	.05	87.5	19-145	L404220-01	WG423541	
1,2-Dibromoethane	mg/kg	0.216	0.00	.05	86.4	24-145	L404220-01	WG423541	

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			Ref Res	TV					
1,2-Dichlorobenzene	mg/kg	0.193	0.00	.05	77.3	12-130	L404220-01	WG423541	
1,2-Dichloroethane	mg/kg	0.214	0.00	.05	85.5	21-155	L404220-01	WG423541	
1,2-Dichloropropane	mg/kg	0.191	0.00	.05	76.5	28-144	L404220-01	WG423541	
1,3-Dichlorobenzene	mg/kg	0.201	0.00	.05	80.6	10-129	L404220-01	WG423541	
1,4-Dichlorobenzene	mg/kg	0.182	0.00	.05	72.8	10-121	L404220-01	WG423541	
2-Butanone (MEK)	mg/kg	1.12	0.00	.25	89.9	21-143	L404220-01	WG423541	
2-Hexanone	mg/kg	1.10	0.00	.25	87.8	22-151	L404220-01	WG423541	
4-Methyl-2-pentanone (MIBK)	mg/kg	1.11	0.00	.25	88.9	31-151	L404220-01	WG423541	
Acetone	mg/kg	1.09	0.0270	.25	84.7	13-158	L404220-01	WG423541	
Benzene	mg/kg	0.183	0.00	.05	73.0	16-143	L404220-01	WG423541	
Bromochloromethane	mg/kg	0.209	0.00	.05	83.4	25-152	L404220-01	WG423541	
Bromodichloromethane	mg/kg	0.218	0.00	.05	87.0	27-139	L404220-01	WG423541	
Bromoform	mg/kg	0.237	0.00	.05	94.8	21-144	L404220-01	WG423541	
Bromomethane	mg/kg	0.215	0.00	.05	86.0	0-180	L404220-01	WG423541	
Carbon disulfide	mg/kg	0.147	0.00	.05	58.7	10-156	L404220-01	WG423541	
Carbon tetrachloride	mg/kg	0.214	0.00069	.05	85.4	12-149	L404220-01	WG423541	
Chlorobenzene	mg/kg	0.199	0.00	.05	79.7	17-134	L404220-01	WG423541	
Chlorodibromomethane	mg/kg	0.225	0.00	.05	90.1	28-147	L404220-01	WG423541	
Chloroethane	mg/kg	0.179	0.00	.05	71.4	0-172	L404220-01	WG423541	
Chloroform	mg/kg	0.200	0.00075	.05	79.7	28-138	L404220-01	WG423541	
Chloromethane	mg/kg	0.161	0.00	.05	64.4	10-158	L404220-01	WG423541	
cis-1,2-Dichloroethene	mg/kg	0.202	0.00	.05	80.6	21-147	L404220-01	WG423541	
cis-1,3-Dichloropropene	mg/kg	0.207	0.00	.05	82.7	17-145	L404220-01	WG423541	
Dichlorodifluoromethane	mg/kg	0.208	0.00	.05	83.4	0-192	L404220-01	WG423541	
Ethylbenzene	mg/kg	0.210	0.00	.05	83.9	12-137	L404220-01	WG423541	
Isopropylbenzene	mg/kg	0.221	0.00	.05	88.5	14-134	L404220-01	WG423541	
Methyl tert-butyl ether	mg/kg	0.208	0.00	.05	83.2	21-157	L404220-01	WG423541	
Methylene Chloride	mg/kg	0.191	0.00	.05	76.5	12-149	L404220-01	WG423541	
Styrene	mg/kg	0.222	0.00	.05	88.8	10-140	L404220-01	WG423541	
Tetrachloroethene	mg/kg	0.190	0.00	.05	75.9	10-131	L404220-01	WG423541	
Toluene	mg/kg	0.187	0.00	.05	74.8	12-136	L404220-01	WG423541	
trans-1,2-Dichloroethene	mg/kg	0.187	0.00	.05	74.6	10-143	L404220-01	WG423541	
trans-1,3-Dichloropropene	mg/kg	0.212	0.00442	.05	83.2	16-147	L404220-01	WG423541	
Trichloroethene	mg/kg	0.199	0.00	.05	79.8	10-155	L404220-01	WG423541	
Trichlorofluoromethane	mg/kg	0.202	0.00	.05	80.7	10-154	L404220-01	WG423541	
Vinyl chloride	mg/kg	0.159	0.00	.05	63.6	10-159	L404220-01	WG423541	
4-Bromofluorobenzene					113.4	59-140		WG423541	
Dibromofluoromethane					106.3	63-139		WG423541	
Toluene-d8					101.0	84-116		WG423541	
1,1,1-Trichloroethane	mg/kg	0.174	0.00	.05	69.7	23-147	L404274-01	WG423576	
1,1,2,2-Tetrachloroethane	mg/kg	0.188	0.00	.05	75.3	18-150	L404274-01	WG423576	
1,1,2-Trichloroethane	mg/kg	0.190	0.00	.05	75.9	35-140	L404274-01	WG423576	
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.164	0.00	.05	65.5	10-145	L404274-01	WG423576	
1,1-Dichloroethane	mg/kg	0.189	0.00	.05	75.4	24-148	L404274-01	WG423576	
1,1-Dichloroethene	mg/kg	0.157	0.00	.05	62.8	10-149	L404274-01	WG423576	
1,2,3-Trichlorobenzene	mg/kg	0.205	0.00	.05	82.2	10-129	L404274-01	WG423576	
1,2,4-Trichlorobenzene	mg/kg	0.222	0.00	.05	88.8	10-119	L404274-01	WG423576	
1,2-Dibromo-3-Chloropropane	mg/kg	0.195	0.00	.05	77.8	19-145	L404274-01	WG423576	
1,2-Dibromoethane	mg/kg	0.195	0.00	.05	77.8	24-145	L404274-01	WG423576	
1,2-Dichlorobenzene	mg/kg	0.203	0.00	.05	81.1	12-130	L404274-01	WG423576	
1,2-Dichloroethane	mg/kg	0.172	0.00	.05	68.9	21-155	L404274-01	WG423576	
1,2-Dichloropropane	mg/kg	0.201	0.00	.05	80.6	28-144	L404274-01	WG423576	
1,3-Dichlorobenzene	mg/kg	0.208	0.00	.05	83.0	10-129	L404274-01	WG423576	
1,4-Dichlorobenzene	mg/kg	0.195	0.00	.05	77.9	10-121	L404274-01	WG423576	
2-Butanone (MEK)	mg/kg	0.858	0.00	.25	68.6	21-143	L404274-01	WG423576	
2-Hexanone	mg/kg	0.924	0.00	.25	73.9	22-151	L404274-01	WG423576	
4-Methyl-2-pentanone (MIBK)	mg/kg	0.922	0.00	.25	73.8	31-151	L404274-01	WG423576	

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
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Acetone	mg/kg	0.820	0.0710	.25	59.9	13-158	L404274-01	WG423576
Benzene	mg/kg	0.175	0.00	.05	70.1	16-143	L404274-01	WG423576
Bromochloromethane	mg/kg	0.195	0.00	.05	77.9	25-152	L404274-01	WG423576
Bromodichloromethane	mg/kg	0.171	0.00	.05	68.2	27-139	L404274-01	WG423576
Bromoform	mg/kg	0.197	0.00	.05	79.0	21-144	L404274-01	WG423576
Bromomethane	mg/kg	0.140	0.00	.05	56.0	0-180	L404274-01	WG423576
Carbon disulfide	mg/kg	0.121	0.00	.05	48.3	10-156	L404274-01	WG423576
Carbon tetrachloride	mg/kg	0.175	0.00	.05	69.9	12-149	L404274-01	WG423576
Chlorobenzene	mg/kg	0.192	0.00	.05	76.6	17-134	L404274-01	WG423576
Chlorodibromomethane	mg/kg	0.182	0.00	.05	72.9	28-147	L404274-01	WG423576
Chloroethane	mg/kg	0.156	0.00	.05	62.5	0-172	L404274-01	WG423576
Chloroform	mg/kg	0.193	0.00	.05	77.1	28-138	L404274-01	WG423576
Chloromethane	mg/kg	0.153	0.00	.05	61.1	10-158	L404274-01	WG423576
cis-1,2-Dichloroethene	mg/kg	0.184	0.00	.05	73.6	21-147	L404274-01	WG423576
cis-1,3-Dichloropropene	mg/kg	0.193	0.00	.05	77.3	17-145	L404274-01	WG423576
Dichlorodifluoromethane	mg/kg	0.131	0.00	.05	52.3	0-192	L404274-01	WG423576
Ethylbenzene	mg/kg	0.190	0.00	.05	75.9	12-137	L404274-01	WG423576
Isopropylbenzene	mg/kg	0.193	0.00	.05	77.2	14-134	L404274-01	WG423576
Methyl tert-butyl ether	mg/kg	0.172	0.00	.05	68.7	21-157	L404274-01	WG423576
Methylene Chloride	mg/kg	0.166	0.00	.05	66.3	12-149	L404274-01	WG423576
Styrene	mg/kg	0.200	0.00	.05	79.8	10-140	L404274-01	WG423576
Tetrachloroethene	mg/kg	0.175	0.00	.05	69.8	10-131	L404274-01	WG423576
Toluene	mg/kg	0.180	0.00	.05	72.0	12-136	L404274-01	WG423576
trans-1,2-Dichloroethene	mg/kg	0.163	0.00	.05	65.2	10-143	L404274-01	WG423576
trans-1,3-Dichloropropene	mg/kg	0.187	0.00	.05	74.6	16-147	L404274-01	WG423576
Trichloroethene	mg/kg	0.186	0.00	.05	74.5	10-155	L404274-01	WG423576
Trichlorofluoromethane	mg/kg	0.145	0.00	.05	57.9	10-154	L404274-01	WG423576
Vinyl chloride	mg/kg	0.158	0.00	.05	63.3	10-159	L404274-01	WG423576
4-Bromofluorobenzene					95.82	59-140		WG423576
Dibromofluoromethane					90.56	63-139		WG423576
Toluene-d8					100.5	84-116		WG423576
Diesel (C7-C26)	mg/kg	23.7	0.00	30	79.0	50-150	L404242-05	WG423285
Motor Oil (C16-C40)	mg/kg	30.2	3.80	30	88.0	50-150	L404242-05	WG423285
o-Terphenyl					76.66	50-150		WG423285
Pentachlorophenol	ppm	0.289	0.00	.333	86.8	10-146	L404242-05	WG423526
2,4,6-Tribromophenol					85.13	25-137		WG423526
2-Fluorobiphenyl					72.75	30-120		WG423526
2-Fluorophenol					76.59	26-130		WG423526
Nitrobenzene-d5					70.28	18-119		WG423526
Phenol-d5					72.13	37-141		WG423526
p-Terphenyl-d14					86.42	23-143		WG423526
1,1,1-Trichloroethane	mg/l	0.558	0.00	.025	89.3	31-161	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.510	0.00	.025	81.6	49-149	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.511	0.00	.025	81.7	46-145	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.601	0.320	.025	44.9	14-168	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.563	0.00	.025	90.1	30-159	L403957-01	WG423629
1,1-Dichloroethene	mg/l	0.567	0.0210	.025	87.4	10-162	L403957-01	WG423629
1,2,3-Trichlorobenzene	mg/l	0.529	0.00	.025	84.6	32-143	L403957-01	WG423629
1,2,4-Trichlorobenzene	mg/l	0.547	0.00	.025	87.5	27-142	L403957-01	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.489	0.00	.025	78.3	37-148	L403957-01	WG423629
1,2-Dibromoethane	mg/l	0.491	0.00	.025	78.6	41-149	L403957-01	WG423629
1,2-Dichlorobenzene	mg/l	0.580	0.00	.025	92.7	40-139	L403957-01	WG423629
1,2-Dichloroethane	mg/l	0.523	0.00	.025	83.6	29-167	L403957-01	WG423629

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Quality Assurance Report
Level II

West Linn, OR 97068

June 25, 2009

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Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
1,2-Dichloropropane	mg/l	0.539	0.00	.025	86.3	39-148	L403957-01	WG423629	
1,3-Dichlorobenzene	mg/l	0.574	0.00	.025	91.9	32-148	L403957-01	WG423629	
1,4-Dichlorobenzene	mg/l	0.568	0.00	.025	90.8	32-136	L403957-01	WG423629	
2-Butanone (MEK)	mg/l	2.47	0.00	.125	79.0	32-151	L403957-01	WG423629	
2-Hexanone	mg/l	2.53	0.00	.125	80.9	41-155	L403957-01	WG423629	
4-Methyl-2-pentanone (MIBK)	mg/l	2.62	0.00	.125	84.0	40-160	L403957-01	WG423629	
Acetone	mg/l	2.84	0.00	.125	90.9	25-157	L403957-01	WG423629	
Benzene	mg/l	0.553	0.00	.025	88.4	16-158	L403957-01	WG423629	
Bromochloromethane	mg/l	0.548	0.00	.025	87.6	36-154	L403957-01	WG423629	
Bromodichloromethane	mg/l	0.564	0.00	.025	90.2	45-147	L403957-01	WG423629	
Bromoform	mg/l	0.548	0.00	.025	87.7	38-152	L403957-01	WG423629	
Bromomethane	mg/l	0.613	0.00	.025	98.1	0-191	L403957-01	WG423629	
Carbon disulfide	mg/l	0.541	0.00	.025	86.5	10-166	L403957-01	WG423629	
Carbon tetrachloride	mg/l	0.508	0.00	.025	81.2	22-168	L403957-01	WG423629	
Chlorobenzene	mg/l	0.556	0.00	.025	88.9	33-148	L403957-01	WG423629	
Chlorodibromomethane	mg/l	0.563	0.00	.025	90.1	48-151	L403957-01	WG423629	
Chloroethane	mg/l	0.577	0.00	.025	92.3	4-176	L403957-01	WG423629	
Chloroform	mg/l	0.526	0.00	.025	84.1	37-147	L403957-01	WG423629	
Chloromethane	mg/l	0.582	0.00	.025	93.1	10-174	L403957-01	WG423629	
cis-1,2-Dichloroethene	mg/l	0.766	0.180	.025	93.7	29-156	L403957-01	WG423629	
cis-1,3-Dichloropropene	mg/l	0.535	0.00	.025	85.5	35-148	L403957-01	WG423629	
Dichlorodifluoromethane	mg/l	0.562	0.00	.025	89.9	0-200	L403957-01	WG423629	
Ethylbenzene	mg/l	0.569	0.00	.025	91.1	29-150	L403957-01	WG423629	
Isopropylbenzene	mg/l	0.580	0.00	.025	92.8	35-147	L403957-01	WG423629	
Methyl tert-butyl ether	mg/l	0.560	0.00	.025	89.6	24-167	L403957-01	WG423629	
Methylene Chloride	mg/l	0.575	0.00	.025	92.0	23-151	L403957-01	WG423629	
Styrene	mg/l	0.562	0.00	.025	89.9	38-149	L403957-01	WG423629	
Tetrachloroethene	mg/l	3.09	2.40	.025	110.	13-157	L403957-01	WG423629	
Toluene	mg/l	0.536	0.0140	.025	83.6	22-152	L403957-01	WG423629	
trans-1,2-Dichloroethene	mg/l	0.568	0.00	.025	90.8	11-160	L403957-01	WG423629	
trans-1,3-Dichloropropene	mg/l	0.484	0.00	.025	77.5	33-153	L403957-01	WG423629	
Trichloroethene	mg/l	0.841	0.270	.025	91.3	18-163	L403957-01	WG423629	
Trichlorofluoromethane	mg/l	0.566	0.00	.025	90.6	10-177	L403957-01	WG423629	
Vinyl chloride	mg/l	0.558	0.00	.025	89.2	0-179	L403957-01	WG423629	
4-Bromofluorobenzene					94.44	75-128		WG423629	
Dibromofluoromethane					100.9	79-125		WG423629	
Toluene-d8					99.74	87-114		WG423629	
1-Methylnaphthalene	ppm	0.0226	0.00	.033	68.5	19-131	L404176-05	WG423537	
2-Chloronaphthalene	ppm	0.0239	0.00	.033	72.5	38-117	L404176-05	WG423537	
2-Methylnaphthalene	ppm	0.0244	0.00	.033	73.9	18-125	L404176-05	WG423537	
Acenaphthene	ppm	0.0243	0.00	.033	73.7	31-120	L404176-05	WG423537	
Acenaphthylene	ppm	0.0244	0.00	.033	73.8	34-116	L404176-05	WG423537	
Anthracene	ppm	0.0245	0.00	.033	74.3	32-131	L404176-05	WG423537	
Benzo(a)anthracene	ppm	0.0248	0.00	.033	75.1	32-131	L404176-05	WG423537	
Benzo(a)pyrene	ppm	0.0249	0.00	.033	75.5	28-130	L404176-05	WG423537	
Benzo(b)fluoranthene	ppm	0.0252	0.00	.033	76.4	37-130	L404176-05	WG423537	
Benzo(g,h,i)perylene	ppm	0.0294	0.00	.033	89.0	10-134	L404176-05	WG423537	
Benzo(k)fluoranthene	ppm	0.0272	0.00	.033	82.4	31-129	L404176-05	WG423537	
Chrysene	ppm	0.0218	0.00	.033	66.2	25-137	L404176-05	WG423537	
Dibenz(a,h)anthracene	ppm	0.0280	0.00	.033	84.7	20-134	L404176-05	WG423537	
Fluoranthene	ppm	0.0255	0.00	.033	77.3	27-138	L404176-05	WG423537	
Fluorene	ppm	0.0261	0.00	.033	79.2	26-136	L404176-05	WG423537	
Indeno(1,2,3-cd)pyrene	ppm	0.0283	0.00	.033	85.7	16-135	L404176-05	WG423537	
Naphthalene	ppm	0.0228	0.00	.033	69.1	22-121	L404176-05	WG423537	
Phenanthrene	ppm	0.0249	0.00	.033	75.4	27-133	L404176-05	WG423537	
Pyrene	ppm	0.0239	0.00	.033	72.4	22-133	L404176-05	WG423537	
2-Fluorobiphenyl					63.88	30-120		WG423537	

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Nitrobenzene-d5					70.81	18-119		
p-Terphenyl-d14					69.08	23-143		
Arsenic	mg/kg	46.3	0.00	50	92.6	75-125	L404615-03	WG423987
Beryllium	mg/kg	50.1	0.100	50	100.	75-125	L404615-03	WG423987
Cadmium	mg/kg	48.7	0.00	50	97.4	75-125	L404615-03	WG423987
Chromium	mg/kg	59.0	9.10	50	99.8	75-125	L404615-03	WG423987
Copper	mg/kg	50.2	0.0606	50	100.	75-125	L404615-03	WG423987
Lead	mg/kg	50.6	2.80	50	95.6	75-125	L404615-03	WG423987
Nickel	mg/kg	51.5	2.88	50	97.2	75-125	L404615-03	WG423987
Selenium	mg/kg	50.1	4.20	50	91.8	75-125	L404615-03	WG423987
Silver	mg/kg	49.5	0.00	50	99.0	75-125	L404615-03	WG423987
Zinc	mg/kg	85.2	25.8	50	119.	75-125	L404615-03	WG423987
Antimony	mg/kg	12.6	0.00	50	25.2*	75-125	L404615-03	WG423987
Thallium	mg/kg	32.1	0.00	50	64.2*	75-125	L404615-03	WG423987
Mercury	mg/l	0.00314	0.00	.003	105.	70-130	L406775-15	WG426094
Mercury,Dissolved	mg/l	0.00330	0.00	.003	110.	70-130	L406945-16	WG426098
Beryllium	mg/l	1.06	0.00023	1.13	93.8	75-125	L406969-01	WG426333
Cadmium	mg/l	1.11	0.00	1.13	98.2	75-125	L406969-01	WG426333
Chromium	mg/l	1.08	0.00	1.13	95.6	75-125	L406969-01	WG426333
Copper	mg/l	1.07	0.00	1.13	94.7	75-125	L406969-01	WG426333
Lead	mg/l	1.11	0.00	1.13	98.2	75-125	L406969-01	WG426333
Nickel	mg/l	1.08	0.00840	1.13	94.8	75-125	L406969-01	WG426333
Selenium	mg/l	1.03	0.00	1.13	91.2	75-125	L406969-01	WG426333
Silver	mg/l	0.142	0.00130	1.13	12.5*	75-125	L406969-01	WG426333
Zinc	mg/l	1.10	0.0271	1.13	94.9	75-125	L406969-01	WG426333
Antimony	mg/l	0.0638	0.00	.0567	113.	75-125	L406118-02	WG426269
Arsenic	mg/l	0.0570	0.00	.0567	101.	75-125	L406118-02	WG426269
Thallium	mg/l	0.0648	0.00	.0567	114.	75-125	L406118-02	WG426269
Antimony,Dissolved	mg/l	0.0582	0.00	.0567	103.	75-125	L407348-02	WG426484
Arsenic,Dissolved	mg/l	0.0593	0.00330	.0567	98.8	75-125	L407348-02	WG426484
Thallium,Dissolved	mg/l	0.0607	0.00024	.0567	107.	75-125	L407348-02	WG426484
1,4-Dioxane	mg/l	0.0160	0.106	.05	0.00*	0-200	L407952-19	WG427509
4-Bromofluorobenzene					106.6	75-128		WG427509
Dibromofluoromethane					105.6	79-125		WG427509
Toluene-d8					102.7	87-114		WG427509
1,4-Dioxane	mg/l	0.00	0.00	.05	0.00	0-200	L408146-01	WG427650

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/kg	0.239	0.250	90.4	70-130	4.50	20	L403630-03	WG423494
1,1,1-Trichloroethane	mg/l	0.0387	0.0454	77.3	31-161	16.1	23	L403729-01	WG423451
1,1,2,2-Tetrachloroethane	mg/l	0.0454	0.0520	90.7	49-149	13.6	22	L403729-01	WG423451

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
1,1,2-Trichloroethane	mg/l	0.0473	0.0539	94.6	46-145	13.0	20	L403729-01	WG423451
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0405	0.0510	81.1	14-168	22.8	24	L403729-01	WG423451
1,1-Dichloroethane	mg/l	0.0405	0.0498	81.0	30-159	20.5	21	L403729-01	WG423451
1,1-Dichloroethene	mg/l	0.0399	0.0485	79.9	10-162	19.4	23	L403729-01	WG423451
1,2,3-Trichlorobenzene	mg/l	0.0406	0.0471	81.3	32-143	14.8	33	L403729-01	WG423451
1,2,4-Trichlorobenzene	mg/l	0.0375	0.0443	75.0	27-142	16.7	30	L403729-01	WG423451
1,2-Dibromo-3-Chloropropane	mg/l	0.0505	0.0584	101.	37-148	14.5	27	L403729-01	WG423451
1,2-Dibromoethane	mg/l	0.0463	0.0518	92.5	41-149	11.3	21	L403729-01	WG423451
1,2-Dichlorobenzene	mg/l	0.0421	0.0494	84.2	40-139	16.0	23	L403729-01	WG423451
1,2-Dichloroethane	mg/l	0.0413	0.0490	82.7	29-167	16.9	21	L403729-01	WG423451
1,2-Dichloropropane	mg/l	0.0443	0.0528	88.6	39-148	17.6	20	L403729-01	WG423451
1,3-Dichlorobenzene	mg/l	0.0424	0.0466	84.8	32-148	9.53	24	L403729-01	WG423451
1,4-Dichlorobenzene	mg/l	0.0390	0.0449	78.1	32-136	14.0	23	L403729-01	WG423451
2-Butanone (MEK)	mg/l	0.200	0.244	80.0	32-151	19.6	26	L403729-01	WG423451
2-Hexanone	mg/l	0.234	0.276	93.7	41-155	16.4	28	L403729-01	WG423451
4-Methyl-2-pentanone (MIBK)	mg/l	0.228	0.271	91.3	40-160	16.9	28	L403729-01	WG423451
Acetone	mg/l	0.226	0.281	90.4	25-157	21.7	26	L403729-01	WG423451
Benzene	mg/l	0.0404	0.0486	80.9	16-158	18.3	21	L403729-01	WG423451
Bromochloromethane	mg/l	0.0464	0.0542	92.7	36-154	15.6	21	L403729-01	WG423451
Bromodichloromethane	mg/l	0.0440	0.0514	88.1	45-147	15.5	20	L403729-01	WG423451
Bromoform	mg/l	0.0513	0.0565	103.	38-152	9.69	20	L403729-01	WG423451
Bromomethane	mg/l	0.0397	0.0461	79.4	0-191	14.9	35	L403729-01	WG423451
Carbon disulfide	mg/l	0.0363	0.0442	72.6	10-166	19.8	25	L403729-01	WG423451
Carbon tetrachloride	mg/l	0.0378	0.0441	75.6	22-168	15.2	24	L403729-01	WG423451
Chlorobenzene	mg/l	0.0437	0.0492	87.5	33-148	11.7	22	L403729-01	WG423451
Chlorodibromomethane	mg/l	0.0483	0.0538	96.6	48-151	10.7	21	L403729-01	WG423451
Chloroethane	mg/l	0.0425	0.0506	84.9	4-176	17.5	27	L403729-01	WG423451
Chloroform	mg/l	0.0401	0.0480	80.2	37-147	18.0	21	L403729-01	WG423451
Chloromethane	mg/l	0.0373	0.0451	74.5	10-174	19.1	28	L403729-01	WG423451
cis-1,2-Dichloroethene	mg/l	0.0431	0.0515	85.1	29-156	17.7	22	L403729-01	WG423451
cis-1,3-Dichloropropene	mg/l	0.0418	0.0489	83.6	35-148	15.7	21	L403729-01	WG423451
Dichlorodifluoromethane	mg/l	0.0473	0.0582	94.5	0-200	20.8	26	L403729-01	WG423451
Ethylbenzene	mg/l	0.0421	0.0465	84.2	29-150	10.0	24	L403729-01	WG423451
Isopropylbenzene	mg/l	0.0424	0.0475	84.8	35-147	11.4	25	L403729-01	WG423451
Methyl tert-butyl ether	mg/l	0.0432	0.0523	86.4	24-167	19.1	22	L403729-01	WG423451
Methylene Chloride	mg/l	0.0411	0.0488	82.2	23-151	17.1	21	L403729-01	WG423451
Styrene	mg/l	0.0441	0.0480	88.3	38-149	8.50	23	L403729-01	WG423451
Tetrachloroethene	mg/l	0.0395	0.0447	79.0	13-157	12.4	24	L403729-01	WG423451
Toluene	mg/l	0.0397	0.0451	79.3	22-152	12.9	22	L403729-01	WG423451
trans-1,2-Dichloroethene	mg/l	0.0415	0.0493	82.9	11-160	17.3	23	L403729-01	WG423451
trans-1,3-Dichloropropene	mg/l	0.0421	0.0481	84.2	33-153	13.3	22	L403729-01	WG423451
Trichloroethene	mg/l	0.0420	0.0483	84.1	18-163	13.8	21	L403729-01	WG423451
Trichlorofluoromethane	mg/l	0.0398	0.0466	79.7	10-177	15.7	24	L403729-01	WG423451
Vinyl chloride	mg/l	0.0385	0.0470	76.9	0-179	19.9	26	L403729-01	WG423451
4-Bromofluorobenzene				103.1	75-128				WG423451
Dibromofluoromethane				97.08	79-125				WG423451
Toluene-d8				100.0	87-114				WG423451
1,1,1-Trichloroethane	mg/kg	0.252	0.226	101.	23-147	11.0	32	L404220-01	WG423541
1,1,2,2-Tetrachloroethane	mg/kg	0.214	0.204	85.6	18-150	4.78	33	L404220-01	WG423541
1,1,2-Trichloroethane	mg/kg	0.207	0.199	82.7	35-140	3.79	29	L404220-01	WG423541
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.209	0.182	83.8	10-145	14.1	35	L404220-01	WG423541
1,1-Dichloroethane	mg/kg	0.217	0.195	86.8	24-148	10.9	31	L404220-01	WG423541
1,1-Dichloroethene	mg/kg	0.177	0.167	70.7	10-149	5.72	34	L404220-01	WG423541
1,2,3-Trichlorobenzene	mg/kg	0.197	0.189	78.6	10-129	3.69	43	L404220-01	WG423541
1,2,4-Trichlorobenzene	mg/kg	0.209	0.196	83.4	10-119	6.24	44	L404220-01	WG423541
1,2-Dibromo-3-Chloropropane	mg/kg	0.227	0.219	90.9	19-145	3.81	35	L404220-01	WG423541
1,2-Dibromoethane	mg/kg	0.221	0.216	88.4	24-145	2.20	31	L404220-01	WG423541

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
1,2-Dichlorobenzene	mg/kg	0.206	0.193	82.4	12-130	6.41	35	L404220-01	WG423541
1,2-Dichloroethane	mg/kg	0.234	0.214	93.4	21-155	8.92	29	L404220-01	WG423541
1,2-Dichloropropane	mg/kg	0.209	0.191	83.4	28-144	8.71	30	L404220-01	WG423541
1,3-Dichlorobenzene	mg/kg	0.210	0.201	84.0	10-129	4.24	38	L404220-01	WG423541
1,4-Dichlorobenzene	mg/kg	0.193	0.182	77.2	10-121	5.85	36	L404220-01	WG423541
2-Butanone (MEK)	mg/kg	0.994	1.12	79.5	21-143	12.3	37	L404220-01	WG423541
2-Hexanone	mg/kg	1.12	1.10	89.3	22-151	1.74	38	L404220-01	WG423541
4-Methyl-2-pentanone (MIBK)	mg/kg	1.14	1.11	91.2	31-151	2.58	36	L404220-01	WG423541
Acetone	mg/kg	1.11	1.09	86.9	13-158	2.51	34	L404220-01	WG423541
Benzene	mg/kg	0.202	0.183	80.9	16-143	10.2	31	L404220-01	WG423541
Bromochloromethane	mg/kg	0.223	0.209	89.2	25-152	6.72	29	L404220-01	WG423541
Bromodichloromethane	mg/kg	0.235	0.218	93.9	27-139	7.55	30	L404220-01	WG423541
Bromoform	mg/kg	0.243	0.237	97.2	21-144	2.58	34	L404220-01	WG423541
Bromomethane	mg/kg	0.233	0.215	93.1	0-180	7.93	41	L404220-01	WG423541
Carbon disulfide	mg/kg	0.169	0.147	67.5	10-156	13.9	38	L404220-01	WG423541
Carbon tetrachloride	mg/kg	0.237	0.214	94.4	12-149	9.95	34	L404220-01	WG423541
Chlorobenzene	mg/kg	0.213	0.199	85.3	17-134	6.80	34	L404220-01	WG423541
Chlorodibromomethane	mg/kg	0.236	0.225	94.5	28-147	4.83	32	L404220-01	WG423541
Chloroethane	mg/kg	0.199	0.179	79.4	0-172	10.6	38	L404220-01	WG423541
Chloroform	mg/kg	0.218	0.200	86.8	28-138	8.54	30	L404220-01	WG423541
Chloromethane	mg/kg	0.177	0.161	71.0	10-158	9.70	35	L404220-01	WG423541
cis-1,2-Dichloroethene	mg/kg	0.223	0.202	89.2	21-147	10.1	31	L404220-01	WG423541
cis-1,3-Dichloropropene	mg/kg	0.222	0.207	88.9	17-145	7.25	32	L404220-01	WG423541
Dichlorodifluoromethane	mg/kg	0.226	0.208	90.3	0-192	7.93	38	L404220-01	WG423541
Ethylbenzene	mg/kg	0.221	0.210	88.3	12-137	5.15	36	L404220-01	WG423541
Isopropylbenzene	mg/kg	0.237	0.221	94.7	14-134	6.79	37	L404220-01	WG423541
Methyl tert-butyl ether	mg/kg	0.220	0.208	87.9	21-157	5.49	31	L404220-01	WG423541
Methylene Chloride	mg/kg	0.206	0.191	82.2	12-149	7.27	31	L404220-01	WG423541
Styrene	mg/kg	0.232	0.222	92.9	10-140	4.57	35	L404220-01	WG423541
Tetrachloroethene	mg/kg	0.198	0.190	79.4	10-131	4.53	35	L404220-01	WG423541
Toluene	mg/kg	0.205	0.187	82.0	12-136	9.17	32	L404220-01	WG423541
trans-1,2-Dichloroethene	mg/kg	0.208	0.187	83.3	10-143	10.9	33	L404220-01	WG423541
trans-1,3-Dichloropropene	mg/kg	0.225	0.212	88.4	16-147	5.94	32	L404220-01	WG423541
Trichloroethene	mg/kg	0.220	0.199	87.9	10-155	9.73	33	L404220-01	WG423541
Trichlorofluoromethane	mg/kg	0.210	0.202	84.1	10-154	4.14	32	L404220-01	WG423541
Vinyl chloride	mg/kg	0.174	0.159	69.8	10-159	9.25	36	L404220-01	WG423541
4-Bromofluorobenzene				110.4	59-140				WG423541
Dibromofluoromethane				106.7	63-139				WG423541
Toluene-d8				102.5	84-116				WG423541
1,1,1-Trichloroethane	mg/kg	0.176	0.174	70.5	23-147	1.16	32	L404274-01	WG423576
1,1,2,2-Tetrachloroethane	mg/kg	0.215	0.188	86.0	18-150	13.3	33	L404274-01	WG423576
1,1,2-Trichloroethane	mg/kg	0.199	0.190	79.8	35-140	5.01	29	L404274-01	WG423576
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.166	0.164	66.3	10-145	1.23	35	L404274-01	WG423576
1,1-Dichloroethane	mg/kg	0.190	0.189	76.0	24-148	0.759	31	L404274-01	WG423576
1,1-Dichloroethene	mg/kg	0.157	0.157	62.6	10-149	0.330	34	L404274-01	WG423576
1,2,3-Trichlorobenzene	mg/kg	0.212	0.205	85.0	10-129	3.31	43	L404274-01	WG423576
1,2,4-Trichlorobenzene	mg/kg	0.221	0.222	88.2	10-119	0.631	44	L404274-01	WG423576
1,2-Dibromo-3-Chloropropane	mg/kg	0.221	0.195	88.5	19-145	12.8	35	L404274-01	WG423576
1,2-Dibromoethane	mg/kg	0.214	0.195	85.4	24-145	9.30	31	L404274-01	WG423576
1,2-Dichlorobenzene	mg/kg	0.199	0.203	79.4	12-130	2.04	35	L404274-01	WG423576
1,2-Dichloroethane	mg/kg	0.179	0.172	71.6	21-155	3.82	29	L404274-01	WG423576
1,2-Dichloropropane	mg/kg	0.201	0.201	80.5	28-144	0.167	30	L404274-01	WG423576
1,3-Dichlorobenzene	mg/kg	0.213	0.208	85.2	10-129	2.55	38	L404274-01	WG423576
1,4-Dichlorobenzene	mg/kg	0.193	0.195	77.1	10-121	1.00	36	L404274-01	WG423576
2-Butanone (MEK)	mg/kg	1.03	0.858	82.2	21-143	18.0	37	L404274-01	WG423576
2-Hexanone	mg/kg	1.14	0.924	91.3	22-151	21.0	38	L404274-01	WG423576
4-Methyl-2-pentanone (MIBK)	mg/kg	1.11	0.922	89.2	31-151	18.9	36	L404274-01	WG423576

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Quality Assurance Report
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June 25, 2009

L404242

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Acetone	mg/kg	0.992	0.820	73.7	13-158	19.1	34	L404274-01	WG423576
Benzene	mg/kg	0.179	0.175	71.6	16-143	2.08	31	L404274-01	WG423576
Bromochloromethane	mg/kg	0.204	0.195	81.7	25-152	4.78	29	L404274-01	WG423576
Bromodichloromethane	mg/kg	0.177	0.171	70.7	27-139	3.56	30	L404274-01	WG423576
Bromoform	mg/kg	0.219	0.197	87.5	21-144	10.3	34	L404274-01	WG423576
Bromomethane	mg/kg	0.143	0.140	57.3	0-180	2.29	41	L404274-01	WG423576
Carbon disulfide	mg/kg	0.120	0.121	48.0	10-156	0.661	38	L404274-01	WG423576
Carbon tetrachloride	mg/kg	0.176	0.175	70.3	12-149	0.455	34	L404274-01	WG423576
Chlorobenzene	mg/kg	0.192	0.192	76.6	17-134	0.014	34	L404274-01	WG423576
Chlorodibromomethane	mg/kg	0.194	0.182	77.4	28-147	6.03	32	L404274-01	WG423576
Chloroethane	mg/kg	0.154	0.156	61.7	0-172	1.28	38	L404274-01	WG423576
Chloroform	mg/kg	0.198	0.193	79.3	28-138	2.89	30	L404274-01	WG423576
Chloromethane	mg/kg	0.148	0.153	59.3	10-158	2.99	35	L404274-01	WG423576
cis-1,2-Dichloroethene	mg/kg	0.186	0.184	74.4	21-147	1.04	31	L404274-01	WG423576
cis-1,3-Dichloropropene	mg/kg	0.201	0.193	80.3	17-145	3.84	32	L404274-01	WG423576
Dichlorodifluoromethane	mg/kg	0.131	0.131	52.2	0-192	0.193	38	L404274-01	WG423576
Ethylbenzene	mg/kg	0.191	0.190	76.5	12-137	0.779	36	L404274-01	WG423576
Isopropylbenzene	mg/kg	0.192	0.193	76.8	14-134	0.530	37	L404274-01	WG423576
Methyl tert-butyl ether	mg/kg	0.186	0.172	74.5	21-157	7.99	31	L404274-01	WG423576
Methylene Chloride	mg/kg	0.167	0.166	66.7	12-149	0.602	31	L404274-01	WG423576
Styrene	mg/kg	0.204	0.200	81.5	10-140	2.09	35	L404274-01	WG423576
Tetrachloroethene	mg/kg	0.175	0.175	69.9	10-131	0.177	35	L404274-01	WG423576
Toluene	mg/kg	0.179	0.180	71.7	12-136	0.410	32	L404274-01	WG423576
trans-1,2-Dichloroethene	mg/kg	0.163	0.163	65.3	10-143	0.179	33	L404274-01	WG423576
trans-1,3-Dichloropropene	mg/kg	0.197	0.187	78.7	16-147	5.33	32	L404274-01	WG423576
Trichloroethene	mg/kg	0.183	0.186	73.3	10-155	1.53	33	L404274-01	WG423576
Trichlorofluoromethane	mg/kg	0.146	0.145	58.6	10-154	1.16	32	L404274-01	WG423576
Vinyl chloride	mg/kg	0.158	0.158	63.3	10-159	0.116	36	L404274-01	WG423576
4-Bromofluorobenzene				96.53	59-140				WG423576
Dibromofluoromethane				91.24	63-139				WG423576
Toluene-d8				102.6	84-116				WG423576
Diesel (C7-C26)	mg/kg	27.2	23.7	90.6	50-150	13.7	20	L404242-05	WG423285
Motor Oil (C16-C40)	mg/kg	34.7	30.2	103.	50-150	13.9	25	L404242-05	WG423285
o-Terphenyl				90.92	50-150				WG423285
Pentachlorophenol	ppm	0.319	0.289	95.9	10-146	9.88	35	L404242-05	WG423526
2,4,6-Tribromophenol				94.49	25-137				WG423526
2-Fluorobiphenyl				80.03	30-120				WG423526
2-Fluorophenol				88.83	26-130				WG423526
Nitrobenzene-d5				81.00	18-119				WG423526
Phenol-d5				85.23	37-141				WG423526
p-Terphenyl-d14				98.95	23-143				WG423526
1,1,1-Trichloroethane	mg/l	0.535	0.558	85.7	31-161	4.19	23	L403957-01	WG423629
1,1,2,2-Tetrachloroethane	mg/l	0.583	0.510	93.3	49-149	13.4	22	L403957-01	WG423629
1,1,2-Trichloroethane	mg/l	0.575	0.511	91.9	46-145	11.8	20	L403957-01	WG423629
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.574	0.601	40.7	14-168	4.46	24	L403957-01	WG423629
1,1-Dichloroethane	mg/l	0.546	0.563	87.3	30-159	3.10	21	L403957-01	WG423629
1,1-Dichloroethene	mg/l	0.526	0.567	80.8	10-162	7.63	23	L403957-01	WG423629
1,2,3-Trichlorobenzene	mg/l	0.631	0.529	101.	32-143	17.6	33	L403957-01	WG423629
1,2,4-Trichlorobenzene	mg/l	0.615	0.547	98.4	27-142	11.7	30	L403957-01	WG423629
1,2-Dibromo-3-Chloropropane	mg/l	0.511	0.489	81.7	37-148	4.23	27	L403957-01	WG423629
1,2-Dibromoethane	mg/l	0.568	0.491	90.8	41-149	14.4	21	L403957-01	WG423629
1,2-Dichlorobenzene	mg/l	0.579	0.580	92.7	40-139	0.024	23	L403957-01	WG423629
1,2-Dichloroethane	mg/l	0.584	0.523	93.4	29-167	11.1	21	L403957-01	WG423629

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
1,2-Dichloropropane	mg/l	0.551	0.539	88.1	39-148	2.03	20	L403957-01	WG423629
1,3-Dichlorobenzene	mg/l	0.576	0.574	92.1	32-148	0.223	24	L403957-01	WG423629
1,4-Dichlorobenzene	mg/l	0.561	0.568	89.7	32-136	1.23	23	L403957-01	WG423629
2-Butanone (MEK)	mg/l	2.80	2.47	89.4	32-151	12.4	26	L403957-01	WG423629
2-Hexanone	mg/l	3.05	2.53	97.5	41-155	18.6	28	L403957-01	WG423629
4-Methyl-2-pentanone (MIBK)	mg/l	3.05	2.62	97.7	40-160	15.0	28	L403957-01	WG423629
Acetone	mg/l	2.49	2.84	79.6	25-157	13.3	26	L403957-01	WG423629
Benzene	mg/l	0.544	0.553	87.1	16-158	1.50	21	L403957-01	WG423629
Bromochloromethane	mg/l	0.580	0.548	92.8	36-154	5.74	21	L403957-01	WG423629
Bromodichloromethane	mg/l	0.578	0.564	92.5	45-147	2.49	20	L403957-01	WG423629
Bromoform	mg/l	0.640	0.548	102.	38-152	15.4	20	L403957-01	WG423629
Bromomethane	mg/l	0.578	0.613	92.5	0-191	5.85	35	L403957-01	WG423629
Carbon disulfide	mg/l	0.475	0.541	75.9	10-166	13.0	25	L403957-01	WG423629
Carbon tetrachloride	mg/l	0.484	0.508	77.4	22-168	4.83	24	L403957-01	WG423629
Chlorobenzene	mg/l	0.544	0.556	87.0	33-148	2.10	22	L403957-01	WG423629
Chlorodibromomethane	mg/l	0.609	0.563	97.4	48-151	7.78	21	L403957-01	WG423629
Chloroethane	mg/l	0.543	0.577	86.9	4-176	5.98	27	L403957-01	WG423629
Chloroform	mg/l	0.514	0.526	82.2	37-147	2.32	21	L403957-01	WG423629
Chloromethane	mg/l	0.542	0.582	86.7	10-174	7.14	28	L403957-01	WG423629
cis-1,2-Dichloroethene	mg/l	0.742	0.766	89.9	29-156	3.13	22	L403957-01	WG423629
cis-1,3-Dichloropropene	mg/l	0.583	0.535	93.3	35-148	8.66	21	L403957-01	WG423629
Dichlorodifluoromethane	mg/l	0.528	0.562	84.5	0-200	6.18	26	L403957-01	WG423629
Ethylbenzene	mg/l	0.535	0.569	85.5	29-150	6.25	24	L403957-01	WG423629
Isopropylbenzene	mg/l	0.552	0.580	88.3	35-147	4.97	25	L403957-01	WG423629
Methyl tert-butyl ether	mg/l	0.604	0.560	96.7	24-167	7.60	22	L403957-01	WG423629
Methylene Chloride	mg/l	0.570	0.575	91.1	23-151	0.930	21	L403957-01	WG423629
Styrene	mg/l	0.572	0.562	91.5	38-149	1.74	23	L403957-01	WG423629
Tetrachloroethene	mg/l	2.85	3.09	72.3	13-157	8.02	24	L403957-01	WG423629
Toluene	mg/l	0.532	0.536	82.8	22-152	0.894	22	L403957-01	WG423629
trans-1,2-Dichloroethene	mg/l	0.514	0.568	82.2	11-160	10.0	23	L403957-01	WG423629
trans-1,3-Dichloropropene	mg/l	0.570	0.484	91.1	33-153	16.2	22	L403957-01	WG423629
Trichloroethene	mg/l	0.799	0.841	84.6	18-163	5.11	21	L403957-01	WG423629
Trichlorofluoromethane	mg/l	0.539	0.566	86.3	10-177	4.83	24	L403957-01	WG423629
Vinyl chloride	mg/l	0.516	0.558	82.6	0-179	7.71	26	L403957-01	WG423629
4-Bromofluorobenzene				99.84	75-128				WG423629
Dibromofluoromethane				103.3	79-125				WG423629
Toluene-d8				101.7	87-114				WG423629
1-Methylnaphthalene	ppm	0.0236	0.0226	71.5	19-131	4.30	30	L404176-05	WG423537
2-Chloronaphthalene	ppm	0.0246	0.0239	74.6	38-117	2.75	26	L404176-05	WG423537
2-Methylnaphthalene	ppm	0.0257	0.0244	78.0	18-125	5.35	29	L404176-05	WG423537
Acenaphthene	ppm	0.0256	0.0243	77.5	31-120	5.00	30	L404176-05	WG423537
Acenaphthylene	ppm	0.0262	0.0244	79.2	34-116	7.07	29	L404176-05	WG423537
Anthracene	ppm	0.0261	0.0245	79.2	32-131	6.40	26	L404176-05	WG423537
Benzo(a)anthracene	ppm	0.0263	0.0248	79.8	32-131	6.18	31	L404176-05	WG423537
Benzo(a)pyrene	ppm	0.0267	0.0249	80.8	28-130	6.77	28	L404176-05	WG423537
Benzo(b)fluoranthene	ppm	0.0283	0.0252	85.8	37-130	11.6	41	L404176-05	WG423537
Benzo(g,h,i)perylene	ppm	0.0313	0.0294	94.8	10-134	6.35	26	L404176-05	WG423537
Benzo(k)fluoranthene	ppm	0.0269	0.0272	81.6	31-129	0.948	42	L404176-05	WG423537
Chrysene	ppm	0.0234	0.0218	70.9	25-137	6.80	22	L404176-05	WG423537
Dibenz(a,h)anthracene	ppm	0.0292	0.0280	88.6	20-134	4.50	25	L404176-05	WG423537
Fluoranthene	ppm	0.0288	0.0255	87.3	27-138	12.1	35	L404176-05	WG423537
Fluorene	ppm	0.0271	0.0261	82.2	26-136	3.71	30	L404176-05	WG423537
Indeno(1,2,3-cd)pyrene	ppm	0.0302	0.0283	91.4	16-135	6.43	26	L404176-05	WG423537
Naphthalene	ppm	0.0246	0.0228	74.6	22-121	7.63	30	L404176-05	WG423537
Phenanthrene	ppm	0.0278	0.0249	84.4	27-133	11.3	36	L404176-05	WG423537
Pyrene	ppm	0.0257	0.0239	77.9	22-133	7.37	33	L404176-05	WG423537
2-Fluorobiphenyl				65.82	30-120				WG423537

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Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Nitrobenzene-d5				72.95	18-119				
p-Terphenyl-d14				71.45	23-143				
Arsenic	mg/kg	47.4	46.3	94.8	75-125	2.35	20	L404615-03	WG423987
Beryllium	mg/kg	50.7	50.1	101.	75-125	1.19	20	L404615-03	WG423987
Cadmium	mg/kg	48.8	48.7	97.6	75-125	0.205	20	L404615-03	WG423987
Chromium	mg/kg	58.3	59.0	98.4	75-125	1.19	20	L404615-03	WG423987
Copper	mg/kg	50.5	50.2	101.	75-125	0.596	20	L404615-03	WG423987
Lead	mg/kg	51.5	50.6	97.4	75-125	1.76	20	L404615-03	WG423987
Nickel	mg/kg	52.0	51.5	98.2	75-125	0.966	20	L404615-03	WG423987
Selenium	mg/kg	51.6	50.1	94.8	75-125	2.95	20	L404615-03	WG423987
Silver	mg/kg	49.9	49.5	99.8	75-125	0.805	20	L404615-03	WG423987
Zinc	mg/kg	69.4	85.2	87.2	75-125	20.4*	20	L404615-03	WG423987
Antimony	mg/kg	24.5	12.6	49*	75-125	64.2*	20	L404615-03	WG423987
Thallium	mg/kg	53.2	32.1	106.	75-125	49.5*	20	L404615-03	WG423987
Mercury	mg/l	0.0031	0.0031	105.	70-130	0.318	20	L406775-15	WG426094
Mercury,Dissolved	mg/l	0.0033	0.0033	112.	70-130	2.10	20	L406945-16	WG426098
Beryllium	mg/l	1.07	1.06	94.7	75-125	0.939	20	L406969-01	WG426333
Cadmium	mg/l	1.12	1.11	99.1	75-125	0.897	20	L406969-01	WG426333
Chromium	mg/l	1.08	1.08	95.6	75-125	0.00	20	L406969-01	WG426333
Copper	mg/l	1.07	1.07	94.7	75-125	0.00	20	L406969-01	WG426333
Lead	mg/l	1.10	1.11	97.3	75-125	0.905	20	L406969-01	WG426333
Nickel	mg/l	1.08	1.08	94.8	75-125	0.00	20	L406969-01	WG426333
Selenium	mg/l	1.02	1.03	90.3	75-125	0.976	20	L406969-01	WG426333
Silver	mg/l	0.158	0.142	13.867*	75-125	10.7	20	L406969-01	WG426333
Zinc	mg/l	1.10	1.10	94.9	75-125	0.00	20	L406969-01	WG426333
Antimony	mg/l	0.0615	0.0638	108.	75-125	3.67	20	L406118-02	WG426269
Arsenic	mg/l	0.0579	0.0570	102.	75-125	1.57	20	L406118-02	WG426269
Thallium	mg/l	0.0581	0.0648	102.	75-125	10.9	20	L406118-02	WG426269
Antimony,Dissolved	mg/l	0.0594	0.0582	105.	75-125	2.04	20	L407348-02	WG426484
Arsenic,Dissolved	mg/l	0.0612	0.0593	102.	75-125	3.15	20	L407348-02	WG426484
Thallium,Dissolved	mg/l	0.0614	0.0607	108.	75-125	1.15	20	L407348-02	WG426484
1,4-Dioxane	mg/l	0.0199	0.0160	0.00	0-200	21.7	42	L407952-19	WG427509
4-Bromofluorobenzene				102.3	75-128				WG427509
Dibromofluoromethane				102.8	79-125				WG427509
Toluene-d8				106.1	87-114				WG427509
1,4-Dioxane	mg/l	0.00	0.00	0.00	0-200	0.00	42	L408146-01	WG427650

Batch number /Run number / Sample number cross reference

WG423285: R754330: L404242-01 03 05
 WG423494: R754746: L404242-01 03
 WG423451: R755907: L404242-02
 WG423541: R756107: L404242-01 03
 WG423529: R756806: L404242-06

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Chris Kramer
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Quality Assurance Report
Level II

West Linn, OR 97068

June 25, 2009

L404242

WG423576: R757627: L404242-05
WG423526: R759406: L404242-05
WG423352: R759666: L404242-02
WG423629: R759806: L404242-04
WG423815: R761468: L404242-01 03 05
WG423537: R762466: L404242-01 03
WG423939: R762766: L404242-04
WG423987: R763507: L404242-01 03
WG424943: R771826: L404242-01
WG426094: R781586: L404242-02 04
WG426098: R781732: L404242-02 04
WG426333: R781860: L404242-02 04
WG426483: R782806: L404242-02 04
WG426269: R782827: L404242-02 04
WG426484: R783346: L404242-02 04
WG427442: R788346: L404242-01 03 05
WG427650: R788347: L404242-04
WG427509: R788627: L404242-02

* * Calculations are performed prior to rounding of reported values .

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

West Linn, OR 97068

L404242

June 25, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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West Linn, OR 97068

Report Summary

Wednesday June 24, 2009

Report Number: L404262

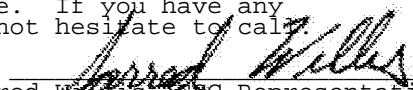
Samples Received: 05/23/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

Chris Kramer
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1800 Blankenship Road, Suite 440
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June 24, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1B-GW
Collected By :
Collection Date : 05/21/09 14:30

ESC Sample # : L404262-01
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	76.	33.	100	ug/l	J	NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	98.1			% Rec.		NWTPH-H	05/27/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/22/09 18:22 Revised: 06/24/09 09:47



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REPORT OF ANALYSIS

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June 24, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-1A-GW
Collected By :
Collection Date : 05/21/09 15:25

ESC Sample # : L404262-02
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	05/27/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	05/27/09	1
Surrogate recovery(%) o-Terphenyl	105.			% Rec.		NWTPH-H	05/27/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

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Reported: 06/22/09 18:22 Revised: 06/24/09 09:47

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L404262-01	WG423353	SAMP	Diesel (C7-C26)	R756846	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/09 at 09:47:17

TSR Signing Reports: 358
R3 - Rush: Two Day

Log all arsenic gw samples as ASG.

Sample: L404262-01 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 18:22
Moved from L404242-02; Added EDD per JW WO 9623 (WA EIM)-cb 5/29/09. UNI 477683 dor 6/16/09.
Sample: L404262-02 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 18:22
Moved from L404242-04



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Quality Assurance Report
Level II

L404262

June 24, 2009

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
#6 Fuel Oil (C10-C32)	< .1	mg/l			WG423353	05/27/09 17:06
Diesel (C7-C26)	< .1	mg/l			WG423353	05/27/09 17:06
Hydraulic Fluid (C12-C33)	< .1	mg/l			WG423353	05/27/09 17:06
Kerosene (C9-C16)	< .1	mg/l			WG423353	05/27/09 17:06
Mineral Spirits	< .1	mg/l			WG423353	05/27/09 17:06
Motor Oil (C16-C40)	< .25	mg/l			WG423353	05/27/09 17:06
o-Terphenyl		% Rec.	103.1	50-150	WG423353	05/27/09 17:06

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Diesel (C7-C26)	mg/l	.75	0.522	69.6	50-150	WG423353
Motor Oil (C16-C40)	mg/l	.75	0.779	104.	50-150	WG423353
o-Terphenyl				90.93	50-150	WG423353

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diesel (C7-C26)	mg/l	0.479	0.522	64.0	50-150	8.61	20	WG423353
Motor Oil (C16-C40)	mg/l	0.758	0.779	101.	50-150	2.65	25	WG423353
o-Terphenyl				87.87	50-150			WG423353

Batch number /Run number / Sample number cross reference

WG423353: R756846: L404262-01 02

* * Calculations are performed prior to rounding of reported values .
 * Performance of this Analyte is outside of established criteria.
 For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Level II

West Linn, OR 97068

L404262

June 24, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

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Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Report Summary

Wednesday June 24, 2009

Report Number: L405232

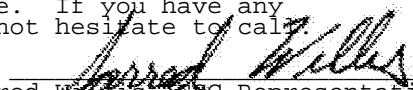
Samples Received: 06/02/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B-GW-2
Collected By : C. Kramer
Collection Date : 06/01/09 08:00

ESC Sample # : L405232-01
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Diesel (C7-C26)	47.	33.	100	ug/l	J	NWTPH-H	06/03/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	06/03/09	1
Surrogate recovery(%) o-Terphenyl	94.1			% Rec.		NWTPH-H	06/03/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)

Note:
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Reported: 06/23/09 13:09 Revised: 06/24/09 15:15



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REPORT OF ANALYSIS

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West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-2A-GW
Collected By : C. Kramer
Collection Date : 06/01/09 09:15

ESC Sample # : L405232-03
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Diesel (C7-C26)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	06/03/09	1
Surrogate recovery(%) o-Terphenyl	98.9			% Rec.		NWTPH-H	06/03/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-GW
Collected By : C. Kramer
Collection Date : 06/01/09 09:55

ESC Sample # : L405232-05
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Gasoline Range (C7-C10)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Mineral Spirits	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Kerosene (C9-C16)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Diesel (C7-C26)	100	33.	100	ug/l		NWTPH-H	06/03/09	1
#6 Fuel Oil (C10-C32)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Hydraulic Fluid (C12-C33)	U	33.	100	ug/l		NWTPH-H	06/03/09	1
Motor Oil (C16-C40)	U	160	500	ug/l		NWTPH-H	06/03/09	1
Surrogate recovery(%) o-Terphenyl	84.1			% Rec.		NWTPH-H	06/03/09	1

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Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B-GW-2
Collected By : C. Kramer
Collection Date : 06/01/09 08:00

ESC Sample # : L405232-06

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Volatile Organics								
Acetone	U	8.9	50.	ug/l		8260B	06/02/09	1
Benzene	U	0.29	1.0	ug/l		8260B	06/02/09	1
Bromochloromethane	U	0.44	1.0	ug/l		8260B	06/02/09	1
Bromodichloromethane	U	0.37	1.0	ug/l		8260B	06/02/09	1
Bromoform	U	0.51	1.0	ug/l		8260B	06/02/09	1
Bromomethane	U	0.89	5.0	ug/l		8260B	06/02/09	1
2-Butanone (MEK)	U	4.5	10.	ug/l		8260B	06/02/09	1
Carbon disulfide	U	0.32	1.0	ug/l	J4	8260B	06/02/09	1
Carbon tetrachloride	U	0.31	1.0	ug/l		8260B	06/02/09	1
Chlorobenzene	U	0.26	1.0	ug/l		8260B	06/02/09	1
Chloroethane	U	0.86	5.0	ug/l		8260B	06/02/09	1
Chloroform	U	0.33	5.0	ug/l		8260B	06/02/09	1
Chloromethane	U	0.25	2.5	ug/l		8260B	06/02/09	1
1,2-Dibromo-3-Chloropropane	U	0.48	5.0	ug/l		8260B	06/02/09	1
Chlorodibromomethane	U	0.42	5.0	ug/l		8260B	06/02/09	1
1,2-Dibromoethane	U	0.48	1.0	ug/l		8260B	06/02/09	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/02/09	1
1,3-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	06/02/09	1
1,4-Dichlorobenzene	U	0.30	1.0	ug/l		8260B	06/02/09	1
Dichlorodifluoromethane	U	0.54	5.0	ug/l		8260B	06/02/09	1
1,1-Dichloroethane	U	0.31	1.0	ug/l		8260B	06/02/09	1
1,2-Dichloroethane	U	0.27	1.0	ug/l		8260B	06/02/09	1
1,1-Dichloroethene	U	0.50	1.0	ug/l		8260B	06/02/09	1
cis-1,2-Dichloroethene	U	0.38	1.0	ug/l		8260B	06/02/09	1
trans-1,2-Dichloroethene	U	0.30	1.0	ug/l	J4	8260B	06/02/09	1
1,2-Dichloropropane	U	0.52	1.0	ug/l		8260B	06/02/09	1
cis-1,3-Dichloropropene	U	0.26	1.0	ug/l		8260B	06/02/09	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/02/09	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/02/09	1
2-Hexanone	U	1.6	10.	ug/l		8260B	06/02/09	1
Isopropylbenzene	U	0.19	1.0	ug/l		8260B	06/02/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	10.	ug/l		8260B	06/02/09	1
Methyl tert-butyl ether	U	0.19	1.0	ug/l		8260B	06/02/09	1
Methylene Chloride	U	0.30	5.0	ug/l		8260B	06/02/09	1
Styrene	U	0.38	1.0	ug/l		8260B	06/02/09	1
1,1,2,2-Tetrachloroethane	U	0.22	1.0	ug/l		8260B	06/02/09	1
Tetrachloroethene	U	0.29	1.0	ug/l		8260B	06/02/09	1
Toluene	U	0.27	5.0	ug/l		8260B	06/02/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	1.0	ug/l		8260B	06/02/09	1
1,2,3-Trichlorobenzene	U	0.24	1.0	ug/l		8260B	06/02/09	1
1,2,4-Trichlorobenzene	U	0.26	1.0	ug/l		8260B	06/02/09	1
1,1,1-Trichloroethane	U	0.27	1.0	ug/l		8260B	06/02/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B-GW-2
Collected By : C. Kramer
Collection Date : 06/01/09 08:00

ESC Sample # : L405232-06

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,1,2-Trichloroethane	U	0.45	1.0	ug/l		8260B	06/02/09	1
Trichloroethene	U	0.37	1.0	ug/l		8260B	06/02/09	1
Trichlorofluoromethane	U	0.29	5.0	ug/l		8260B	06/02/09	1
Vinyl chloride	U	0.27	1.0	ug/l		8260B	06/02/09	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/02/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/23/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/23/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/23/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/23/09	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/02/09	1
Dibromofluoromethane	98.2			% Rec.		8260B	06/02/09	1
4-Bromofluorobenzene	105.			% Rec.		8260B	06/02/09	1
Base/Neutral Extractables								
Acenaphthylene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Acetophenone	U	16.	50.	ug/l		8270C	06/04/09	1
Atrazine	U	3.3	10.	ug/l		8270C	06/04/09	1
Benzaldehyde	U	3.3	10.	ug/l		8270C	06/04/09	1
Biphenyl	U	3.3	10.	ug/l		8270C	06/04/09	1
Bis(2-chlorethoxy)methane	U	3.3	10.	ug/l		8270C	06/04/09	1
Bis(2-chloroethyl)ether	U	3.3	10.	ug/l		8270C	06/04/09	1
Bis(2-chloroisopropyl)ether	U	3.3	10.	ug/l		8270C	06/04/09	1
4-Bromophenyl-phenylether	U	3.3	10.	ug/l		8270C	06/04/09	1
2-Chloronaphthalene	U	3.3	10.	ug/l		8270C	06/04/09	1
4-Chlorophenyl-phenylether	U	3.3	10.	ug/l		8270C	06/04/09	1
3,3-Dichlorobenzidine	U	3.3	10.	ug/l		8270C	06/04/09	1
2,4-Dinitrotoluene	U	3.3	10.	ug/l		8270C	06/04/09	1
2,6-Dinitrotoluene	U	3.3	10.	ug/l		8270C	06/04/09	1
Hexachlorobenzene	U	3.3	10.	ug/l		8270C	06/04/09	1
Hexachloro-1,3-butadiene	U	3.3	10.	ug/l		8270C	06/04/09	1
Hexachlorocyclopentadiene	U	3.3	10.	ug/l		8270C	06/04/09	1
Hexachloroethane	U	3.3	10.	ug/l		8270C	06/04/09	1
Isophorone	U	3.3	10.	ug/l		8270C	06/04/09	1
2-Methylnaphthalene	U	3.3	10.	ug/l		8270C	06/04/09	1
2-Methylphenol	U	1.3	10.	ug/l		8270C	06/04/09	1
3&4-methyl phenol	U	1.1	10.	ug/l		8270C	06/04/09	1
2-Nitroaniline	U	1.5	10.	ug/l		8270C	06/04/09	1
3-Nitroaniline	U	1.2	10.	ug/l		8270C	06/04/09	1
4-Nitroaniline	U	1.6	10.	ug/l		8270C	06/04/09	1
Nitrobenzene	U	3.3	10.	ug/l		8270C	06/04/09	1
n-Nitrosodiphenylamine	U	3.3	10.	ug/l		8270C	06/04/09	1
n-Nitrosodi-n-propylamine	U	3.3	10.	ug/l		8270C	06/04/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B-GW-2
Collected By : C. Kramer
Collection Date : 06/01/09 08:00

ESC Sample # : L405232-06

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Benzylbutyl phthalate	U	3.3	10.	ug/l		8270C	06/04/09	1
Caprolactam	U	3.3	10.	ug/l		8270C	06/04/09	1
Carbazole	U	0.95	10.	ug/l		8270C	06/04/09	1
Bis(2-ethylhexyl)phthalate	U	2.0	6.0	ug/l		8270C	06/04/09	1
4-Chloroaniline	U	2.6	10.	ug/l		8270C	06/04/09	1
Di-n-butyl phthalate	U	3.3	10.	ug/l		8270C	06/04/09	1
Dibenzofuran	U	1.5	10.	ug/l		8270C	06/04/09	1
Diethyl phthalate	U	3.3	10.	ug/l		8270C	06/04/09	1
Dimethyl phthalate	U	3.3	10.	ug/l		8270C	06/04/09	1
Di-n-octyl phthalate	U	3.3	10.	ug/l		8270C	06/04/09	1
Acid Extractables								
4-Chloro-3-methylphenol	U	1.8	10.	ug/l		8270C	06/04/09	1
2-Chlorophenol	U	1.3	10.	ug/l		8270C	06/04/09	1
2,4-Dichlorophenol	U	2.0	10.	ug/l		8270C	06/04/09	1
2,4-Dimethylphenol	U	2.1	10.	ug/l		8270C	06/04/09	1
4,6-Dinitro-2-methylphenol	U	2.2	10.	ug/l		8270C	06/04/09	1
2,4-Dinitrophenol	U	1.2	10.	ug/l		8270C	06/04/09	1
2-Nitrophenol	U	2.1	10.	ug/l		8270C	06/04/09	1
4-Nitrophenol	U	0.76	10.	ug/l		8270C	06/04/09	1
Phenol	U	0.59	10.	ug/l		8270C	06/04/09	1
Pentachlorophenol	U	0.33	1.0	ug/l		8270C	06/04/09	1
1,2,4,5-Tetrachlorobenzene	U	16.	50.	ug/l		8270C	06/04/09	1
2,4,5-Trichlorophenol	U	1.7	50.	ug/l		8270C	06/04/09	1
2,4,6-Trichlorophenol	U	2.0	10.	ug/l		8270C	06/04/09	1
2,3,4,6-Tetrachlorophenol	U	16.	50.	ug/l		8270C	06/16/09	1
Benzo(a)anthracene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Benzo(a)pyrene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Benzo(b)fluoranthene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Benzo(k)fluoranthene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Chrysene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Dibenz(a,h)anthracene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Indeno(1,2,3-cd)pyrene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Acenaphthene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Anthracene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Benzo(g,h,i)perylene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Fluoranthene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Fluorene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Naphthalene	U	1.6	5.0	ug/l		8270C	06/04/09	1
Phenanthrene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Pyrene	U	0.33	1.0	ug/l		8270C	06/04/09	1
Surrogate Recovery								
2-Fluorophenol	28.3			% Rec.		8270C	06/04/09	1
Phenol-d5	17.5			% Rec.		8270C	06/04/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-5B-GW-2
Collected By : C. Kramer
Collection Date : 06/01/09 08:00

ESC Sample # : L405232-06
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Nitrobenzene-d5	55.5			% Rec.		8270C	06/04/09	1
2-Fluorobiphenyl	79.4			% Rec.		8270C	06/04/09	1
2,4,6-Tribromophenol	90.1			% Rec.		8270C	06/04/09	1
p-Terphenyl-d14	83.1			% Rec.		8270C	06/04/09	1

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1800 Blankenship Road, Suite 440
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June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-2A-7.5
Collected By : C. Kramer
Collection Date : 06/01/09 08:45

ESC Sample # : L405232-07
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	88.9			%		2540G	06/04/09	1
Gasoline Range (C7-C10)	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
Mineral Spirits	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
Kerosene (C9-C16)	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
Diesel (C7-C26)	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.5	mg/kg		NWTPH-HC	06/09/09	1
Motor Oil (C16-C40)	U	3.3	11.	mg/kg		NWTPH-HC	06/09/09	1
Surrogate recovery(%) o-Terphenyl	92.8			% Rec.		NWTPH-HC	06/09/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.019	mg/kg		8082	06/03/09	1
PCB 1221	U	0.0049	0.019	mg/kg		8082	06/03/09	1
PCB 1232	U	0.0072	0.019	mg/kg		8082	06/03/09	1
PCB 1242	U	0.0049	0.019	mg/kg		8082	06/03/09	1
PCB 1248	U	0.0027	0.019	mg/kg		8082	06/03/09	1
PCB 1254	U	0.0050	0.019	mg/kg		8082	06/03/09	1
PCB 1260	U	0.0028	0.019	mg/kg		8082	06/03/09	1
PCBs Surrogates								
Decachlorobiphenyl	88.7			% Rec.		8082	06/03/09	1
Tetrachloro-m-xylene	91.8			% Rec.		8082	06/03/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405232-08

Sample ID : PB-4A-9.5

Site ID : EVERETT, WA

Collected By : C. Kramer
Collection Date : 06/01/09 09:15

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	82.7			%		2540G	06/04/09	1
Mercury	0.0042	0.0025	0.024	mg/kg	J	7471	06/04/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	U	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.80	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	06/06/09	1
Chromium	45.	0.098	0.60	mg/kg		6010B	06/06/09	1
Copper	8.3	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	8.2	0.096	0.30	mg/kg		6010B	06/06/09	1
Nickel	82.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.60	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	06/07/09	5
Zinc	54.	0.44	1.8	mg/kg		6010B	06/06/09	1
Volatile Organics								
Acetone	0.050	0.017	0.060	mg/kg	J	8260B	06/08/09	1
Benzene	U	0.00032	0.0012	mg/kg		8260B	06/08/09	1
Bromochloromethane	U	0.00045	0.0012	mg/kg		8260B	06/08/09	1
Bromodichloromethane	U	0.00039	0.0012	mg/kg		8260B	06/08/09	1
Bromoform	U	0.00058	0.0012	mg/kg		8260B	06/08/09	1
Bromomethane	U	0.0013	0.0060	mg/kg		8260B	06/08/09	1
2-Butanone (MEK)	U	0.0027	0.012	mg/kg		8260B	06/08/09	1
Carbon disulfide	0.0039	0.00033	0.0012	mg/kg		8260B	06/08/09	1
Carbon tetrachloride	U	0.00032	0.0012	mg/kg		8260B	06/08/09	1
Chlorobenzene	U	0.00025	0.0012	mg/kg		8260B	06/08/09	1
Chloroethane	U	0.00059	0.0060	mg/kg		8260B	06/08/09	1
Chloroform	U	0.00041	0.0060	mg/kg		8260B	06/08/09	1
Chloromethane	U	0.00056	0.0012	mg/kg		8260B	06/08/09	1
1,2-Dibromo-3-Chloropropane	U	0.0012	0.0060	mg/kg		8260B	06/08/09	1
Chlorodibromomethane	U	0.00023	0.0012	mg/kg		8260B	06/08/09	1
1,2-Dibromoethane	U	0.00032	0.0012	mg/kg		8260B	06/08/09	1
1,2-Dichlorobenzene	U	0.00024	0.0012	mg/kg		8260B	06/08/09	1
1,3-Dichlorobenzene	U	0.00038	0.0012	mg/kg		8260B	06/08/09	1
1,4-Dichlorobenzene	U	0.00022	0.0012	mg/kg		8260B	06/08/09	1
Dichlorodifluoromethane	U	0.00032	0.0060	mg/kg		8260B	06/08/09	1
1,1-Dichloroethane	U	0.00026	0.0012	mg/kg		8260B	06/08/09	1
1,2-Dichloroethane	U	0.00053	0.0012	mg/kg		8260B	06/08/09	1
1,1-Dichloroethene	U	0.00074	0.0012	mg/kg		8260B	06/08/09	1
cis-1,2-Dichloroethene	U	0.00072	0.0012	mg/kg		8260B	06/08/09	1
trans-1,2-Dichloroethene	U	0.00068	0.0012	mg/kg		8260B	06/08/09	1

Results listed are dry weight basis.

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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-9.5
Collected By : C. Kramer
Collection Date : 06/01/09 09:15

ESC Sample # : L405232-08

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dichloropropane	U	0.00075	0.0012	mg/kg		8260B	06/08/09	1
cis-1,3-Dichloropropene	U	0.00026	0.0012	mg/kg		8260B	06/08/09	1
trans-1,3-Dichloropropene	U	0.00036	0.0012	mg/kg		8260B	06/08/09	1
Ethylbenzene	U	0.00023	0.0012	mg/kg		8260B	06/08/09	1
2-Hexanone	U	0.00036	0.0012	mg/kg		8260B	06/08/09	1
Isopropylbenzene	U	0.00021	0.0012	mg/kg		8260B	06/08/09	1
4-Methyl-2-pentanone (MIBK)	U	0.0014	0.012	mg/kg		8260B	06/08/09	1
Methyl tert-butyl ether	U	0.00028	0.0012	mg/kg		8260B	06/08/09	1
Methylene Chloride	U	0.00060	0.0060	mg/kg		8260B	06/08/09	1
Styrene	U	0.00020	0.0012	mg/kg		8260B	06/08/09	1
1,1,2,2-Tetrachloroethane	U	0.00033	0.0012	mg/kg		8260B	06/08/09	1
Tetrachloroethene	U	0.00023	0.0012	mg/kg		8260B	06/08/09	1
Toluene	U	0.0012	0.0060	mg/kg		8260B	06/08/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.00025	0.0012	mg/kg		8260B	06/08/09	1
1,2,3-Trichlorobenzene	U	0.00023	0.0012	mg/kg		8260B	06/08/09	1
1,2,4-Trichlorobenzene	U	0.00025	0.0012	mg/kg		8260B	06/08/09	1
1,1,1-Trichloroethane	U	0.00052	0.0012	mg/kg		8260B	06/08/09	1
1,1,2-Trichloroethane	U	0.00046	0.0012	mg/kg		8260B	06/08/09	1
Trichloroethene	U	0.00034	0.0012	mg/kg		8260B	06/08/09	1
Trichlorofluoromethane	U	0.00027	0.0060	mg/kg		8260B	06/08/09	1
Vinyl chloride	U	0.00029	0.0012	mg/kg		8260B	06/08/09	1
Xylenes, Total	U	0.00046	0.0036	mg/kg		8260B	06/08/09	1
Cyclohexane	U	0.00033	0.0012	mg/kg		8260B	06/08/09	1
1,4-Dioxane	U	0.033	0.12	mg/kg		8260B	06/08/09	1
Methyl Acetate	U	0.0066	0.024	mg/kg		8260B	06/08/09	1
Methyl Cyclohexane	U	0.00033	0.0012	mg/kg		8260B	06/08/09	1
Surrogate Recovery								
Toluene-d8	91.7			% Rec.		8260B	06/08/09	1
Dibromofluoromethane	109.			% Rec.		8260B	06/08/09	1
4-Bromofluorobenzene	51.7			% Rec.	J2	8260B	06/08/09	1
Gasoline Range (C7-C10)	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
Mineral Spirits	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
Kerosene (C9-C16)	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
Diesel (C7-C26)	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
#6 Fuel Oil (C10-C32)	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
Hydraulic Fluid (C12-C33)	U	1.3	4.8	mg/kg		NWTPH-HC	06/10/09	1
Motor Oil (C16-C40)	U	3.3	12.	mg/kg		NWTPH-HC	06/10/09	1
Surrogate recovery(%)								
o-Terphenyl	95.3			% Rec.		NWTPH-HC	06/10/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.0013	0.0072	mg/kg		8270C-SI	06/04/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-9.5
Collected By : C. Kramer
Collection Date : 06/01/09 09:15

ESC Sample # : L405232-08
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthene	U	0.0013	0.0072	mg/kg		8270C-SI	06/04/09	1
Acenaphthylene	U	0.0011	0.0072	mg/kg		8270C-SI	06/04/09	1
Benzo(a)anthracene	U	0.00096	0.0072	mg/kg		8270C-SI	06/04/09	1
Benzo(a)pyrene	0.0010	0.00083	0.0072	mg/kg	J	8270C-SI	06/04/09	1
Benzo(b)fluoranthene	U	0.0014	0.0072	mg/kg		8270C-SI	06/04/09	1
Benzo(g,h,i)perylene	U	0.00098	0.0072	mg/kg		8270C-SI	06/04/09	1
Benzo(k)fluoranthene	U	0.0012	0.0072	mg/kg		8270C-SI	06/04/09	1
Chrysene	0.0013	0.00087	0.0072	mg/kg	J	8270C-SI	06/04/09	1
Dibenz(a,h)anthracene	U	0.00089	0.0072	mg/kg		8270C-SI	06/04/09	1
Fluoranthene	0.0016	0.00081	0.0072	mg/kg	J	8270C-SI	06/04/09	1
Fluorene	U	0.0010	0.0072	mg/kg		8270C-SI	06/04/09	1
Indeno(1,2,3-cd)pyrene	U	0.00088	0.0072	mg/kg		8270C-SI	06/04/09	1
Naphthalene	U	0.0014	0.0072	mg/kg		8270C-SI	06/04/09	1
Phenanthrene	U	0.00098	0.0072	mg/kg		8270C-SI	06/04/09	1
Pyrene	0.0022	0.00096	0.0072	mg/kg	J	8270C-SI	06/04/09	1
1-Methylnaphthalene	U	0.0015	0.0072	mg/kg		8270C-SI	06/04/09	1
2-Methylnaphthalene	U	0.0020	0.0072	mg/kg		8270C-SI	06/04/09	1
2-Chloronaphthalene	U	0.0010	0.0072	mg/kg		8270C-SI	06/04/09	1
Surrogate Recovery								
Nitrobenzene-d5	68.2			% Rec.		8270C-SI	06/04/09	1
2-Fluorobiphenyl	74.5			% Rec.		8270C-SI	06/04/09	1
p-Terphenyl-d14	74.4			% Rec.		8270C-SI	06/04/09	1
Polychlorinated Biphenyls								
PCB 1016	U	0.0020	0.020	mg/kg		8082	06/03/09	1
PCB 1221	U	0.0049	0.020	mg/kg		8082	06/03/09	1
PCB 1232	U	0.0072	0.020	mg/kg		8082	06/03/09	1
PCB 1242	U	0.0049	0.020	mg/kg		8082	06/03/09	1
PCB 1248	U	0.0027	0.020	mg/kg		8082	06/03/09	1
PCB 1254	U	0.0050	0.020	mg/kg		8082	06/03/09	1
PCB 1260	U	0.0028	0.020	mg/kg		8082	06/03/09	1
PCBs Surrogates								
Decachlorobiphenyl	78.8			% Rec.		8082	06/03/09	1
Tetrachloro-m-xylene	83.8			% Rec.		8082	06/03/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-GW
Collected By : C. Kramer
Collection Date : 06/01/09 09:55

ESC Sample # : L405232-09
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Antimony	0.57	0.29	1.0	ug/l	J	6020	06/11/09	1
Antimony,Dissolved	U	0.29	1.0	ug/l		6020	06/09/09	1
Arsenic	5.4	0.22	1.0	ug/l		6020	06/05/09	1
Arsenic,Dissolved	3.2	0.22	1.0	ug/l		6020	06/09/09	1
Thallium	U	0.22	1.0	ug/l		6020	06/05/09	1
Thallium,Dissolved	U	0.22	1.0	ug/l		6020	06/09/09	1
Mercury	U	0.057	0.20	ug/l		7470A	06/03/09	1
Mercury,Dissolved	U	0.044	0.20	ug/l		7470A	06/09/09	1
Beryllium	U	0.75	2.0	ug/l		6010B	06/05/09	1
Beryllium,Dissolved	0.94	0.75	2.0	ug/l	J	6010B	06/08/09	1
Cadmium	U	0.74	5.0	ug/l		6010B	06/05/09	1
Cadmium,Dissolved	U	0.74	5.0	ug/l		6010B	06/08/09	1
Chromium	3.4	2.0	10.	ug/l	J	6010B	06/05/09	1
Chromium,Dissolved	U	2.0	10.	ug/l		6010B	06/08/09	1
Copper	U	6.0	20.	ug/l		6010B	06/05/09	1
Copper,Dissolved	U	6.0	20.	ug/l		6010B	06/08/09	1
Lead	U	1.9	5.0	ug/l		6010B	06/05/09	1
Lead,Dissolved	U	1.9	5.0	ug/l		6010B	06/08/09	1
Nickel	U	9.8	20.	ug/l		6010B	06/05/09	1
Nickel,Dissolved	U	9.8	20.	ug/l		6010B	06/08/09	1
Selenium	6.7	6.5	20.	ug/l	J	6010B	06/05/09	1
Selenium,Dissolved	U	6.5	20.	ug/l		6010B	06/08/09	1
Silver	U	3.2	10.	ug/l		6010B	06/05/09	1
Silver,Dissolved	U	3.2	10.	ug/l		6010B	06/08/09	1
Zinc	35.	8.8	30.	ug/l		6010B	06/05/09	1
Zinc,Dissolved	U	8.8	30.	ug/l		6010B	06/08/09	1
Volatile Organics								
Acetone	U	8.9	50.	ug/l		8260B	06/03/09	1
Benzene	U	0.29	1.0	ug/l		8260B	06/03/09	1
Bromochloromethane	U	0.44	1.0	ug/l		8260B	06/03/09	1
Bromodichloromethane	U	0.37	1.0	ug/l		8260B	06/03/09	1
Bromoform	U	0.51	1.0	ug/l		8260B	06/03/09	1
Bromomethane	U	0.89	5.0	ug/l		8260B	06/03/09	1
2-Butanone (MEK)	U	4.5	10.	ug/l		8260B	06/03/09	1
Carbon disulfide	U	0.32	1.0	ug/l		8260B	06/03/09	1
Carbon tetrachloride	U	0.31	1.0	ug/l		8260B	06/03/09	1
Chlorobenzene	U	0.26	1.0	ug/l		8260B	06/03/09	1
Chloroethane	U	0.86	5.0	ug/l		8260B	06/03/09	1
Chloroform	U	0.33	5.0	ug/l		8260B	06/03/09	1
Chloromethane	U	0.25	2.5	ug/l		8260B	06/03/09	1

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RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
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REPORT OF ANALYSIS

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West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-GW
Collected By : C. Kramer
Collection Date : 06/01/09 09:55

ESC Sample # : L405232-09
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
1,2-Dibromo-3-Chloropropane	U	0.48	5.0	ug/l		8260B	06/03/09	1
Chlorodibromomethane	U	0.42	5.0	ug/l		8260B	06/03/09	1
1,2-Dibromoethane	U	0.48	1.0	ug/l		8260B	06/03/09	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/03/09	1
1,3-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	06/03/09	1
1,4-Dichlorobenzene	U	0.30	1.0	ug/l		8260B	06/03/09	1
Dichlorodifluoromethane	U	0.54	5.0	ug/l		8260B	06/03/09	1
1,1-Dichloroethane	U	0.31	1.0	ug/l		8260B	06/03/09	1
1,2-Dichloroethane	U	0.27	1.0	ug/l		8260B	06/03/09	1
1,1-Dichloroethene	U	0.50	1.0	ug/l		8260B	06/03/09	1
cis-1,2-Dichloroethene	U	0.38	1.0	ug/l		8260B	06/03/09	1
trans-1,2-Dichloroethene	U	0.30	1.0	ug/l		8260B	06/03/09	1
1,2-Dichloropropane	U	0.52	1.0	ug/l		8260B	06/03/09	1
cis-1,3-Dichloropropene	U	0.26	1.0	ug/l		8260B	06/03/09	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/03/09	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/03/09	1
2-Hexanone	U	1.6	10.	ug/l		8260B	06/03/09	1
Isopropylbenzene	U	0.19	1.0	ug/l		8260B	06/03/09	1
4-Methyl-2-pentanone (MIBK)	U	1.4	10.	ug/l		8260B	06/03/09	1
Methyl tert-butyl ether	U	0.19	1.0	ug/l		8260B	06/03/09	1
Methylene Chloride	U	0.30	5.0	ug/l		8260B	06/03/09	1
Styrene	U	0.38	1.0	ug/l		8260B	06/03/09	1
1,1,2,2-Tetrachloroethane	U	0.22	1.0	ug/l		8260B	06/03/09	1
Tetrachloroethene	U	0.29	1.0	ug/l		8260B	06/03/09	1
Toluene	U	0.27	5.0	ug/l		8260B	06/03/09	1
1,1,2-Trichloro-1,2,2-trifluoro	U	0.22	1.0	ug/l		8260B	06/03/09	1
1,2,3-Trichlorobenzene	U	0.24	1.0	ug/l		8260B	06/03/09	1
1,2,4-Trichlorobenzene	U	0.26	1.0	ug/l		8260B	06/03/09	1
1,1,1-Trichloroethane	U	0.27	1.0	ug/l		8260B	06/03/09	1
1,1,2-Trichloroethane	U	0.45	1.0	ug/l		8260B	06/03/09	1
Trichloroethene	U	0.37	1.0	ug/l		8260B	06/03/09	1
Trichlorofluoromethane	U	0.29	5.0	ug/l		8260B	06/03/09	1
Vinyl chloride	U	0.27	1.0	ug/l		8260B	06/03/09	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/03/09	1
Cyclohexane	U	0.30	1.0	ug/l	Q	8260B	06/23/09	1
1,4-Dioxane	U	33.	100	ug/l	Q	8260B	06/23/09	1
Methyl Acetate	U	6.6	20.	ug/l	Q	8260B	06/23/09	1
Methyl Cyclohexane	U	0.33	1.0	ug/l	Q	8260B	06/23/09	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	06/03/09	1
Dibromofluoromethane	100.			% Rec.		8260B	06/03/09	1
4-Bromofluorobenzene	104.			% Rec.		8260B	06/03/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

The reported analytical results relate only to the sample submitted.
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Reported: 06/23/09 13:09 Revised: 06/24/09 15:16



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 02, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : PB-4A-GW
Collected By : C. Kramer
Collection Date : 06/01/09 09:55

ESC Sample # : L405232-09
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Result	MDL	RDL	Units	Q	Method	Date	Dil.
Diesel Range Organics (DRO)	63.	33.	100	ug/l	J	NWTPHDX	06/08/09	1
Residual Range Organics (RRO)	U	82.	250	ug/l		NWTPHDX	06/08/09	1
Surrogate Recovery								
o-Terphenyl	92.5			% Rec.		NWTPHDX	06/08/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	U	0.012	0.050	ug/l		8270C-S	06/02/09	1
Acenaphthene	U	0.013	0.050	ug/l		8270C-S	06/02/09	1
Acenaphthylene	U	0.017	0.050	ug/l		8270C-S	06/02/09	1
Benzo(a)anthracene	U	0.023	0.050	ug/l	J3	8270C-S	06/02/09	1
Benzo(a)pyrene	U	0.013	0.050	ug/l	J3	8270C-S	06/02/09	1
Benzo(b)fluoranthene	U	0.024	0.050	ug/l		8270C-S	06/02/09	1
Benzo(g,h,i)perylene	U	0.018	0.050	ug/l		8270C-S	06/02/09	1
Benzo(k)fluoranthene	U	0.020	0.050	ug/l		8270C-S	06/02/09	1
Chrysene	U	0.018	0.050	ug/l		8270C-S	06/02/09	1
Dibenz(a,h)anthracene	U	0.013	0.050	ug/l		8270C-S	06/02/09	1
Fluoranthene	U	0.020	0.050	ug/l		8270C-S	06/02/09	1
Fluorene	U	0.012	0.050	ug/l		8270C-S	06/02/09	1
Indeno(1,2,3-cd)pyrene	U	0.015	0.050	ug/l	J3	8270C-S	06/02/09	1
Naphthalene	U	0.023	0.25	ug/l		8270C-S	06/02/09	1
Phenanthrene	U	0.018	0.050	ug/l		8270C-S	06/02/09	1
Pyrene	U	0.022	0.050	ug/l		8270C-S	06/02/09	1
1-Methylnaphthalene	U	0.014	0.25	ug/l		8270C-S	06/02/09	1
2-Methylnaphthalene	0.015	0.014	0.25	ug/l	J	8270C-S	06/02/09	1
2-Chloronaphthalene	U	0.014	0.25	ug/l		8270C-S	06/02/09	1
Surrogate Recovery								
Nitrobenzene-d5	66.2			% Rec.		8270C-S	06/02/09	1
2-Fluorobiphenyl	80.7			% Rec.		8270C-S	06/02/09	1
p-Terphenyl-d14	71.1			% Rec.		8270C-S	06/02/09	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:

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Reported: 06/23/09 13:09 Revised: 06/24/09 15:16

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier	
L405232-01	WG424561	SAMP	Diesel (C7-C26)	R771007	J	
L405232-06	WG424513	SAMP	Carbon disulfide	R769006	J4	
	WG424513	SAMP	trans-1,2-Dichloroethene	R769006	J4	
	WG427744	SAMP	Cyclohexane	R789452	Q	
	WG427744	SAMP	1,4-Dioxane	R789452	Q	
	WG427744	SAMP	Methyl Acetate	R789452	Q	
	WG427744	SAMP	Methyl Cyclohexane	R789452	Q	
L405232-08	WG425508	SAMP	Acetone	R777028	J	
	WG425508	SAMP	4-Bromofluorobenzene	R777028	J2	
	WG424546	SAMP	Thallium	R776106	O	
	WG424552	SAMP	Mercury	R772367	J	
	WG424733	SAMP	Benzo(a)pyrene	R772686	J	
	WG424733	SAMP	Chrysene	R772686	J	
	WG424733	SAMP	Fluoranthene	R772686	J	
	WG424733	SAMP	Pyrene	R772686	J	
	L405232-09	WG427744	SAMP	Cyclohexane	R789452	Q
		WG427744	SAMP	1,4-Dioxane	R789452	Q
WG427744		SAMP	Methyl Acetate	R789452	Q	
WG427744		SAMP	Methyl Cyclohexane	R789452	Q	
WG425440		SAMP	Beryllium,Dissolved	R777187	J	
WG425034		SAMP	Chromium	R775071	J	
WG425034		SAMP	Selenium	R775071	J	
WG426003		SAMP	Antimony	R779488	J	
WG425407		SAMP	Diesel Range Organics (DRO)	R775926	J	
WG424509		SAMP	Benzo(a)anthracene	R768708	J3	
WG424509		SAMP	Benzo(a)pyrene	R768708	J3	
WG424509		SAMP	Indeno(1,2,3-cd)pyrene	R768708	J3	
WG424509		SAMP	2-Methylnaphthalene	R768708	J	

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.
Q	(ESC) Sample held beyond the accepted holding time.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/09 at 15:16:05

TSR Signing Reports: 358
R4 - Rush: Three Day

Log all arsenic gw samples as ASG.

Sample: L405232-01 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09
WA EIM EDD needed. UNI 480305 dor 6/16/09

Sample: L405232-03 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09

Sample: L405232-05 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09

Sample: L405232-06 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09
One SVOC container broken after receipt. Container was cracked.

Sample: L405232-07 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09
MISC = 14 terracore kits for Baywood project x \$8 = \$112 jw

Sample: L405232-08 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09
Added V8260 per Megan C. - MB 6/4/09

Sample: L405232-09 Account: SLRWLOR Received: 06/02/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/23/09 13:09
Metals pH adjusted at lab 6/2 at 1040, Added NWTPHDX - MB 6/5/09



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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1-Methylnaphthalene	< .01	ppm			WG424509	06/02/09 18:35
2-Chloronaphthalene	< .01	ppm			WG424509	06/02/09 18:35
2-Methylnaphthalene	< .01	ppm			WG424509	06/02/09 18:35
Acenaphthene	< .01	ppm			WG424509	06/02/09 18:35
Acenaphthylene	< .01	ppm			WG424509	06/02/09 18:35
Anthracene	< .01	ppm			WG424509	06/02/09 18:35
Benzo(a)anthracene	< .01	ppm			WG424509	06/02/09 18:35
Benzo(a)pyrene	< .01	ppm			WG424509	06/02/09 18:35
Benzo(b)fluoranthene	< .01	ppm			WG424509	06/02/09 18:35
Benzo(g,h,i)perylene	< .01	ppm			WG424509	06/02/09 18:35
Benzo(k)fluoranthene	< .01	ppm			WG424509	06/02/09 18:35
Chrysene	< .01	ppm			WG424509	06/02/09 18:35
Dibenz(a,h)anthracene	< .01	ppm			WG424509	06/02/09 18:35
Fluoranthene	< .01	ppm			WG424509	06/02/09 18:35
Fluorene	< .01	ppm			WG424509	06/02/09 18:35
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG424509	06/02/09 18:35
Naphthalene	< .01	ppm			WG424509	06/02/09 18:35
Phenanthrene	< .01	ppm			WG424509	06/02/09 18:35
Pyrene	< .01	ppm			WG424509	06/02/09 18:35
2-Fluorobiphenyl		% Rec.	49.60	26-122	WG424509	06/02/09 18:35
Nitrobenzene-d5		% Rec.	42.07	12-120	WG424509	06/02/09 18:35
p-Terphenyl-d14		% Rec.	59.35	34-149	WG424509	06/02/09 18:35
1,1,1-Trichloroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,1,2-Trichloroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,1-Dichloroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,1-Dichloroethene	< .001	mg/l			WG424513	06/02/09 14:19
1,2,3-Trichlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
1,2,4-Trichlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG424513	06/02/09 14:19
1,2-Dibromoethane	< .001	mg/l			WG424513	06/02/09 14:19
1,2-Dichlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
1,2-Dichloroethane	< .001	mg/l			WG424513	06/02/09 14:19
1,2-Dichloropropane	< .001	mg/l			WG424513	06/02/09 14:19
1,3-Dichlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
1,4-Dichlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
2-Butanone (MEK)	< .01	mg/l			WG424513	06/02/09 14:19
2-Hexanone	< .01	mg/l			WG424513	06/02/09 14:19
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG424513	06/02/09 14:19
Acetone	< .05	mg/l			WG424513	06/02/09 14:19
Benzene	< .001	mg/l			WG424513	06/02/09 14:19
Bromochloromethane	< .001	mg/l			WG424513	06/02/09 14:19
Bromodichloromethane	< .001	mg/l			WG424513	06/02/09 14:19
Bromoform	< .001	mg/l			WG424513	06/02/09 14:19
Bromomethane	< .005	mg/l			WG424513	06/02/09 14:19
Carbon disulfide	< .001	mg/l			WG424513	06/02/09 14:19
Carbon tetrachloride	< .001	mg/l			WG424513	06/02/09 14:19
Chlorobenzene	< .001	mg/l			WG424513	06/02/09 14:19
Chlorodibromomethane	< .001	mg/l			WG424513	06/02/09 14:19
Chloroethane	< .001	mg/l			WG424513	06/02/09 14:19
Chloroform	< .005	mg/l			WG424513	06/02/09 14:19
Chloromethane	< .001	mg/l			WG424513	06/02/09 14:19
cis-1,2-Dichloroethene	< .001	mg/l			WG424513	06/02/09 14:19
cis-1,3-Dichloropropene	< .001	mg/l			WG424513	06/02/09 14:19
Dichlorodifluoromethane	< .005	mg/l			WG424513	06/02/09 14:19
Ethylbenzene	< .001	mg/l			WG424513	06/02/09 14:19

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report Level II

June 24, 2009

L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Isopropylbenzene	< .001	mg/l			WG424513	06/02/09 14:19
Methyl tert-butyl ether	< .001	mg/l			WG424513	06/02/09 14:19
Methylene Chloride	< .005	mg/l			WG424513	06/02/09 14:19
Styrene	< .001	mg/l			WG424513	06/02/09 14:19
Tetrachloroethene	< .001	mg/l			WG424513	06/02/09 14:19
Toluene	< .005	mg/l			WG424513	06/02/09 14:19
trans-1,2-Dichloroethene	< .001	mg/l			WG424513	06/02/09 14:19
trans-1,3-Dichloropropene	< .001	mg/l			WG424513	06/02/09 14:19
Trichloroethene	< .001	mg/l			WG424513	06/02/09 14:19
Trichlorofluoromethane	< .005	mg/l			WG424513	06/02/09 14:19
Vinyl chloride	< .001	mg/l			WG424513	06/02/09 14:19
4-Bromofluorobenzene		% Rec.	103.9	75-128	WG424513	06/02/09 14:19
Dibromofluoromethane		% Rec.	98.79	79-125	WG424513	06/02/09 14:19
Toluene-d8		% Rec.	103.6	87-114	WG424513	06/02/09 14:19
PCB 1016	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1221	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1232	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1242	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1248	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1254	< .017	mg/kg			WG424512	06/03/09 12:52
PCB 1260	< .017	mg/kg			WG424512	06/03/09 12:52
Decachlorobiphenyl		% Rec.	74.10	18.9-115.8	WG424512	06/03/09 12:52
Tetrachloro-m-xylene		% Rec.	88.34	31.8-115.7	WG424512	06/03/09 12:52
1,1,1-Trichloroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,1,2-Trichloroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,1-Dichloroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,1-Dichloroethene	< .001	mg/l			WG424709	06/03/09 14:27
1,2,3-Trichlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
1,2,4-Trichlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG424709	06/03/09 14:27
1,2-Dibromoethane	< .001	mg/l			WG424709	06/03/09 14:27
1,2-Dichlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
1,2-Dichloroethane	< .001	mg/l			WG424709	06/03/09 14:27
1,2-Dichloropropane	< .001	mg/l			WG424709	06/03/09 14:27
1,3-Dichlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
1,4-Dichlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
2-Butanone (MEK)	< .01	mg/l			WG424709	06/03/09 14:27
2-Hexanone	< .01	mg/l			WG424709	06/03/09 14:27
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG424709	06/03/09 14:27
Acetone	< .05	mg/l			WG424709	06/03/09 14:27
Benzene	< .001	mg/l			WG424709	06/03/09 14:27
Bromochloromethane	< .001	mg/l			WG424709	06/03/09 14:27
Bromodichloromethane	< .001	mg/l			WG424709	06/03/09 14:27
Bromoform	< .001	mg/l			WG424709	06/03/09 14:27
Bromomethane	< .005	mg/l			WG424709	06/03/09 14:27
Carbon disulfide	< .001	mg/l			WG424709	06/03/09 14:27
Carbon tetrachloride	< .001	mg/l			WG424709	06/03/09 14:27
Chlorobenzene	< .001	mg/l			WG424709	06/03/09 14:27
Chlorodibromomethane	< .001	mg/l			WG424709	06/03/09 14:27
Chloroethane	< .001	mg/l			WG424709	06/03/09 14:27
Chloroform	< .005	mg/l			WG424709	06/03/09 14:27
Chloromethane	< .001	mg/l			WG424709	06/03/09 14:27
cis-1,2-Dichloroethene	< .001	mg/l			WG424709	06/03/09 14:27

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
cis-1,3-Dichloropropene	< .001	mg/l			WG424709	06/03/09 14:27
Dichlorodifluoromethane	< .005	mg/l			WG424709	06/03/09 14:27
Ethylbenzene	< .001	mg/l			WG424709	06/03/09 14:27
Isopropylbenzene	< .001	mg/l			WG424709	06/03/09 14:27
Methyl tert-butyl ether	< .001	mg/l			WG424709	06/03/09 14:27
Methylene Chloride	< .005	mg/l			WG424709	06/03/09 14:27
Styrene	< .001	mg/l			WG424709	06/03/09 14:27
Tetrachloroethene	< .001	mg/l			WG424709	06/03/09 14:27
Toluene	< .005	mg/l			WG424709	06/03/09 14:27
trans-1,2-Dichloroethene	< .001	mg/l			WG424709	06/03/09 14:27
trans-1,3-Dichloropropene	< .001	mg/l			WG424709	06/03/09 14:27
Trichloroethene	< .001	mg/l			WG424709	06/03/09 14:27
Trichlorofluoromethane	< .005	mg/l			WG424709	06/03/09 14:27
Vinyl chloride	< .001	mg/l			WG424709	06/03/09 14:27
4-Bromofluorobenzene		% Rec.	103.2	75-128	WG424709	06/03/09 14:27
Dibromofluoromethane		% Rec.	100.9	79-125	WG424709	06/03/09 14:27
Toluene-d8		% Rec.	102.5	87-114	WG424709	06/03/09 14:27
#6 Fuel Oil (C10-C32)	< .1	mg/l			WG424561	06/03/09 09:51
Diesel (C7-C26)	< .1	mg/l			WG424561	06/03/09 09:51
Hydraulic Fluid (C12-C33)	< .1	mg/l			WG424561	06/03/09 09:51
Kerosene (C9-C16)	< .1	mg/l			WG424561	06/03/09 09:51
Mineral Spirits	< .1	mg/l			WG424561	06/03/09 09:51
Motor Oil (C16-C40)	< .25	mg/l			WG424561	06/03/09 09:51
o-Terphenyl		% Rec.	102.5	50-150	WG424561	06/03/09 09:51
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG424808	06/04/09 10:47
2,4,5-Trichlorophenol	< .01	ppm			WG424808	06/04/09 10:47
2,4,6-Trichlorophenol	< .01	ppm			WG424808	06/04/09 10:47
2,4-Dichlorophenol	< .01	ppm			WG424808	06/04/09 10:47
2,4-Dimethylphenol	< .01	ppm			WG424808	06/04/09 10:47
2,4-Dinitrophenol	< .01	ppm			WG424808	06/04/09 10:47
2,4-Dinitrotoluene	< .01	ppm			WG424808	06/04/09 10:47
2,6-Dinitrotoluene	< .01	ppm			WG424808	06/04/09 10:47
2-Chloronaphthalene	< .01	ppm			WG424808	06/04/09 10:47
2-Chlorophenol	< .01	ppm			WG424808	06/04/09 10:47
2-Methylnaphthalene	< .01	ppm			WG424808	06/04/09 10:47
2-Methylphenol	< .01	ppm			WG424808	06/04/09 10:47
2-Nitroaniline	< .01	ppm			WG424808	06/04/09 10:47
2-Nitrophenol	< .01	ppm			WG424808	06/04/09 10:47
3&4-methyl phenol	< .01	ppm			WG424808	06/04/09 10:47
3,3-Dichlorobenzidine	< .01	ppm			WG424808	06/04/09 10:47
3-Nitroaniline	< .01	ppm			WG424808	06/04/09 10:47
4,6-Dinitro-2-methylphenol	< .01	ppm			WG424808	06/04/09 10:47
4-Bromophenyl-phenylether	< .01	ppm			WG424808	06/04/09 10:47
4-Chloro-3-methylphenol	< .01	ppm			WG424808	06/04/09 10:47
4-Chloroaniline	< .01	ppm			WG424808	06/04/09 10:47
4-Chlorophenyl-phenylether	< .01	ppm			WG424808	06/04/09 10:47
4-Nitroaniline	< .01	ppm			WG424808	06/04/09 10:47
4-Nitrophenol	< .01	ppm			WG424808	06/04/09 10:47
Acenaphthene	< .01	ppm			WG424808	06/04/09 10:47
Acenaphthylene	< .01	ppm			WG424808	06/04/09 10:47
Acetophenone	< .01	ppm			WG424808	06/04/09 10:47
Anthracene	< .01	ppm			WG424808	06/04/09 10:47
Atrazine	< .01	ppm			WG424808	06/04/09 10:47
Benzaldehyde	< .01	ppm			WG424808	06/04/09 10:47
Benzo(a)anthracene	< .01	ppm			WG424808	06/04/09 10:47

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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(a)pyrene	< .01	ppm			WG424808	06/04/09 10:47
Benzo(b)fluoranthene	< .01	ppm			WG424808	06/04/09 10:47
Benzo(g,h,i)perylene	< .01	ppm			WG424808	06/04/09 10:47
Benzo(k)fluoranthene	< .01	ppm			WG424808	06/04/09 10:47
Benzybutyl phthalate	< .01	ppm			WG424808	06/04/09 10:47
Biphenyl	< .01	ppm			WG424808	06/04/09 10:47
Bis(2-chloroethoxy)methane	< .01	ppm			WG424808	06/04/09 10:47
Bis(2-chloroethyl)ether	< .01	ppm			WG424808	06/04/09 10:47
Bis(2-chloroisopropyl)ether	< .01	ppm			WG424808	06/04/09 10:47
Bis(2-ethylhexyl)phthalate	< .01	ppm			WG424808	06/04/09 10:47
Caprolactam	< .01	ppm			WG424808	06/04/09 10:47
Carbazole	< .01	ppm			WG424808	06/04/09 10:47
Chrysene	< .01	ppm			WG424808	06/04/09 10:47
Di-n-butyl phthalate	< .01	ppm			WG424808	06/04/09 10:47
Di-n-octyl phthalate	< .01	ppm			WG424808	06/04/09 10:47
Dibenz(a,h)anthracene	< .01	ppm			WG424808	06/04/09 10:47
Dibenzofuran	< .01	ppm			WG424808	06/04/09 10:47
Diethyl phthalate	< .01	ppm			WG424808	06/04/09 10:47
Dimethyl phthalate	< .01	ppm			WG424808	06/04/09 10:47
Fluoranthene	< .01	ppm			WG424808	06/04/09 10:47
Fluorene	< .01	ppm			WG424808	06/04/09 10:47
Hexachloro-1,3-butadiene	< .01	ppm			WG424808	06/04/09 10:47
Hexachlorobenzene	< .01	ppm			WG424808	06/04/09 10:47
Hexachlorocyclopentadiene	< .01	ppm			WG424808	06/04/09 10:47
Hexachloroethane	< .01	ppm			WG424808	06/04/09 10:47
Indeno(1,2,3-cd)pyrene	< .01	ppm			WG424808	06/04/09 10:47
Isophorone	< .01	ppm			WG424808	06/04/09 10:47
n-Nitrosodi-n-propylamine	< .01	ppm			WG424808	06/04/09 10:47
n-Nitrosodiphenylamine	< .01	ppm			WG424808	06/04/09 10:47
Naphthalene	< .01	ppm			WG424808	06/04/09 10:47
Nitrobenzene	< .01	ppm			WG424808	06/04/09 10:47
Pentachlorophenol	< .01	ppm			WG424808	06/04/09 10:47
Phenanthrene	< .01	ppm			WG424808	06/04/09 10:47
Phenol	< .01	ppm			WG424808	06/04/09 10:47
Pyrene	< .01	ppm			WG424808	06/04/09 10:47
2,4,6-Tribromophenol		% Rec.	57.08	10-148	WG424808	06/04/09 10:47
2-Fluorobiphenyl		% Rec.	83.35	26-122	WG424808	06/04/09 10:47
2-Fluorophenol		% Rec.	29.56	10-87	WG424808	06/04/09 10:47
Nitrobenzene-d5		% Rec.	51.33	12-120	WG424808	06/04/09 10:47
Phenol-d5		% Rec.	20.82	10-67	WG424808	06/04/09 10:47
p-Terphenyl-d14		% Rec.	99.16	34-149	WG424808	06/04/09 10:47
Total Solids	< .1	%			WG424697	06/04/09 10:31
Mercury	< .0002	mg/l			WG424613	06/03/09 22:41
Mercury	< .02	mg/kg			WG424552	06/04/09 11:51
1-Methylnaphthalene	< .33	ppm			WG424733	06/04/09 13:12
2-Chloronaphthalene	< .33	ppm			WG424733	06/04/09 13:12
2-Methylnaphthalene	< .33	ppm			WG424733	06/04/09 13:12
Acenaphthene	< .33	ppm			WG424733	06/04/09 13:12
Acenaphthylene	< .33	ppm			WG424733	06/04/09 13:12
Anthracene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(a)anthracene	< .33	ppm			WG424733	06/04/09 13:12

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Level II

June 24, 2009

L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Benzo(a)pyrene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(b)fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(g,h,i)perylene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(k)fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Chrysene	< .33	ppm			WG424733	06/04/09 13:12
Dibenz(a,h)anthracene	< .33	ppm			WG424733	06/04/09 13:12
Fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Fluorene	< .33	ppm			WG424733	06/04/09 13:12
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG424733	06/04/09 13:12
Naphthalene	< .33	ppm			WG424733	06/04/09 13:12
Phenanthrene	< .33	ppm			WG424733	06/04/09 13:12
Pyrene	< .33	ppm			WG424733	06/04/09 13:12
2-Fluorobiphenyl		% Rec.	67.88	30-120	WG424733	06/04/09 13:12
Nitrobenzene-d5		% Rec.	58.82	18-119	WG424733	06/04/09 13:12
p-Terphenyl-d14		% Rec.	74.08	23-143	WG424733	06/04/09 13:12
Beryllium	< .002	mg/l			WG425034	06/05/09 16:42
Cadmium	< .005	mg/l			WG425034	06/05/09 16:42
Chromium	< .01	mg/l			WG425034	06/05/09 16:42
Copper	< .02	mg/l			WG425034	06/05/09 16:42
Lead	< .005	mg/l			WG425034	06/05/09 16:42
Nickel	< .02	mg/l			WG425034	06/05/09 16:42
Selenium	< .02	mg/l			WG425034	06/05/09 16:42
Silver	< .01	mg/l			WG425034	06/05/09 16:42
Zinc	< .03	mg/l			WG425034	06/05/09 16:42
Diesel Range Organics (DRO)	< .1	ppm			WG425407	06/08/09 10:23
o-Terphenyl		% Rec.	107.9	50-150	WG425407	06/08/09 10:23
Antimony	< 1	mg/kg			WG424546	06/07/09 09:43
Arsenic	< 1	mg/kg			WG424546	06/07/09 09:43
Beryllium	< .1	mg/kg			WG424546	06/07/09 09:43
Cadmium	< .25	mg/kg			WG424546	06/07/09 09:43
Chromium	< .5	mg/kg			WG424546	06/07/09 09:43
Copper	< 1	mg/kg			WG424546	06/07/09 09:43
Lead	< .25	mg/kg			WG424546	06/07/09 09:43
Nickel	< 1	mg/kg			WG424546	06/07/09 09:43
Selenium	< 1	mg/kg			WG424546	06/07/09 09:43
Silver	< .5	mg/kg			WG424546	06/07/09 09:43
Thallium	< 1	mg/kg			WG424546	06/07/09 09:43
Zinc	< 1.5	mg/kg			WG424546	06/07/09 09:43
Antimony	< 1	mg/kg			WG424546	06/07/09 13:50
Arsenic	< 1	mg/kg			WG424546	06/07/09 13:50
Beryllium	< .1	mg/kg			WG424546	06/07/09 13:50
Cadmium	< .25	mg/kg			WG424546	06/07/09 13:50
Chromium	< .5	mg/kg			WG424546	06/07/09 13:50
Copper	< 1	mg/kg			WG424546	06/07/09 13:50
Lead	< .25	mg/kg			WG424546	06/07/09 13:50
Nickel	< 1	mg/kg			WG424546	06/07/09 13:50
Selenium	< 1	mg/kg			WG424546	06/07/09 13:50
Silver	< .5	mg/kg			WG424546	06/07/09 13:50
Thallium	< 1	mg/kg			WG424546	06/07/09 13:50
Zinc	< 1.5	mg/kg			WG424546	06/07/09 13:50
Arsenic	< .001	mg/l			WG425075	06/05/09 21:01

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L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Thallium	< .001	mg/l			WG425075	06/05/09 21:01
#6 Fuel Oil (C10-C32)	< 4	mg/kg			WG425406	06/08/09 23:38
Diesel (C7-C26)	< 4	mg/kg			WG425406	06/08/09 23:38
Hydraulic Fluid (C12-C33)	< 4	mg/kg			WG425406	06/08/09 23:38
Kerosene (C9-C16)	< 4	mg/kg			WG425406	06/08/09 23:38
Mineral Spirits	< 4	mg/kg			WG425406	06/08/09 23:38
Motor Oil (C16-C40)	< 10	mg/kg			WG425406	06/08/09 23:38
o-Terphenyl		% Rec.	101.9	50-150	WG425406	06/08/09 23:38
1,1,1-Trichloroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,1,2,2-Tetrachloroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,1,2-Trichloroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,1,2-Trichloro-1,2,2-trifluoroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,1-Dichloroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,1-Dichloroethene	< .001	mg/kg			WG425508	06/08/09 14:53
1,2,3-Trichlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
1,2,4-Trichlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
1,2-Dibromo-3-Chloropropane	< .005	mg/kg			WG425508	06/08/09 14:53
1,2-Dibromoethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,2-Dichlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
1,2-Dichloroethane	< .001	mg/kg			WG425508	06/08/09 14:53
1,2-Dichloropropane	< .001	mg/kg			WG425508	06/08/09 14:53
1,3-Dichlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
1,4-Dichlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
2-Butanone (MEK)	< .01	mg/kg			WG425508	06/08/09 14:53
2-Hexanone	< .01	mg/kg			WG425508	06/08/09 14:53
4-Methyl-2-pentanone (MIBK)	< .01	mg/kg			WG425508	06/08/09 14:53
Acetone	< .05	mg/kg			WG425508	06/08/09 14:53
Benzene	< .001	mg/kg			WG425508	06/08/09 14:53
Bromochloromethane	< .001	mg/kg			WG425508	06/08/09 14:53
Bromodichloromethane	< .001	mg/kg			WG425508	06/08/09 14:53
Bromoform	< .001	mg/kg			WG425508	06/08/09 14:53
Bromomethane	< .005	mg/kg			WG425508	06/08/09 14:53
Carbon disulfide	< .001	mg/kg			WG425508	06/08/09 14:53
Carbon tetrachloride	< .001	mg/kg			WG425508	06/08/09 14:53
Chlorobenzene	< .001	mg/kg			WG425508	06/08/09 14:53
Chlorodibromomethane	< .001	mg/kg			WG425508	06/08/09 14:53
Chloroethane	< .005	mg/kg			WG425508	06/08/09 14:53
Chloroform	< .005	mg/kg			WG425508	06/08/09 14:53
Chloromethane	< .001	mg/kg			WG425508	06/08/09 14:53
cis-1,2-Dichloroethene	< .001	mg/kg			WG425508	06/08/09 14:53
cis-1,3-Dichloropropene	< .001	mg/kg			WG425508	06/08/09 14:53
Dichlorodifluoromethane	< .005	mg/kg			WG425508	06/08/09 14:53
Ethylbenzene	< .001	mg/kg			WG425508	06/08/09 14:53
Isopropylbenzene	< .001	mg/kg			WG425508	06/08/09 14:53
Methyl tert-butyl ether	< .001	mg/kg			WG425508	06/08/09 14:53
Methylene Chloride	< .005	mg/kg			WG425508	06/08/09 14:53
Styrene	< .001	mg/kg			WG425508	06/08/09 14:53
Tetrachloroethene	< .001	mg/kg			WG425508	06/08/09 14:53
Toluene	< .005	mg/kg			WG425508	06/08/09 14:53
trans-1,2-Dichloroethene	< .001	mg/kg			WG425508	06/08/09 14:53
trans-1,3-Dichloropropene	< .001	mg/kg			WG425508	06/08/09 14:53
Trichloroethene	< .001	mg/kg			WG425508	06/08/09 14:53
Trichlorofluoromethane	< .005	mg/kg			WG425508	06/08/09 14:53
Vinyl chloride	< .001	mg/kg			WG425508	06/08/09 14:53
4-Bromofluorobenzene		% Rec.	108.8	59-140	WG425508	06/08/09 14:53

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L405232

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Dibromofluoromethane		% Rec.	103.1	63-139		06/08/09 14:53
Toluene-d8		% Rec.	104.8	84-116		06/08/09 14:53
Beryllium,Dissolved	< .002	mg/l			WG425440	06/08/09 16:44
Cadmium,Dissolved	< .005	mg/l			WG425440	06/08/09 16:44
Chromium,Dissolved	< .01	mg/l			WG425440	06/08/09 16:44
Copper,Dissolved	< .02	mg/l			WG425440	06/08/09 16:44
Lead,Dissolved	< .005	mg/l			WG425440	06/08/09 16:44
Nickel,Dissolved	< .02	mg/l			WG425440	06/08/09 16:44
Selenium,Dissolved	< .02	mg/l			WG425440	06/08/09 16:44
Silver,Dissolved	< .01	mg/l			WG425440	06/08/09 16:44
Zinc,Dissolved	< .03	mg/l			WG425440	06/08/09 16:44
Antimony,Dissolved	< .001	mg/l			WG425437	06/09/09 01:37
Arsenic,Dissolved	< .001	mg/l			WG425437	06/09/09 01:37
Thallium,Dissolved	< .001	mg/l			WG425437	06/09/09 01:37
Mercury,Dissolved	< .0002	mg/l			WG425098	06/09/09 14:29
#6 Fuel Oil (C10-C32)	< 4	mg/kg			WG425725	06/10/09 11:08
Diesel (C7-C26)	< 4	mg/kg			WG425725	06/10/09 11:08
Hydraulic Fluid (C12-C33)	< 4	mg/kg			WG425725	06/10/09 11:08
Kerosene (C9-C16)	< 4	mg/kg			WG425725	06/10/09 11:08
Mineral Spirits	< 4	mg/kg			WG425725	06/10/09 11:08
Motor Oil (C16-C40)	< 10	mg/kg			WG425725	06/10/09 11:08
o-Terphenyl		% Rec.	113.1	50-150	WG425725	06/10/09 11:08
Antimony	< .001	mg/l			WG426003	06/11/09 05:44
1,4-Dioxane	< .004	mg/l			WG427744	06/22/09 21:21
4-Bromofluorobenzene		% Rec.	91.74	75-128	WG427744	06/22/09 21:21
Dibromofluoromethane		% Rec.	101.1	79-125	WG427744	06/22/09 21:21
Toluene-d8		% Rec.	95.38	87-114	WG427744	06/22/09 21:21

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate					
Total Solids	%	89.1	88.9		0.173	5	L405232-07	WG424697
Mercury	mg/l	0.00	0.00		0.00	20	L405382-10	WG424613
Mercury	mg/kg	0.00	0.00		0.00	20	L405194-04	WG424552
Beryllium	mg/l	0.00	0.000650	NA		20	L405758-01	WG425034
Cadmium	mg/l	0.00	0.00118	NA		20	L405758-01	WG425034
Chromium	mg/l	0.00	0.000200	NA		20	L405758-01	WG425034
Copper	mg/l	0.00	0.00	0.00		20	L405758-01	WG425034
Lead	mg/l	0.00	0.00	0.00		20	L405758-01	WG425034
Nickel	mg/l	0.00	0.00160	NA		20	L405758-01	WG425034
Selenium	mg/l	0.0341	0.0156	74.4*		20	L405758-01	WG425034
Silver	mg/l	0.00	0.00	0.00		20	L405758-01	WG425034
Zinc	mg/l	0.00	0.0140	NA		20	L405758-01	WG425034

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Tax I.D. 62-0814289

Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

**Quality Assurance Report
Level II**

June 24, 2009

L405232

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Antimony	mg/kg	0.00	0.00	0.00	20	L405194-02	WG424546
Arsenic	mg/kg	2.80	3.10	10.2	20	L405194-02	WG424546
Beryllium	mg/kg	0.798	0.767	3.96	20	L405194-02	WG424546
Cadmium	mg/kg	0.00	0.00	0.00	20	L405194-02	WG424546
Chromium	mg/kg	16.6	17.0	2.38	20	L405194-02	WG424546
Copper	mg/kg	13.0	12.0	8.00	20	L405194-02	WG424546
Lead	mg/kg	5.28	5.00	5.45	20	L405194-02	WG424546
Nickel	mg/kg	16.6	16.0	3.68	20	L405194-02	WG424546
Selenium	mg/kg	0.00	0.00	0.00	20	L405194-02	WG424546
Silver	mg/kg	0.00	0.00	0.00	20	L405194-02	WG424546
Zinc	mg/kg	29.5	28.6	3.10	20	L405194-02	WG424546
Thallium	mg/kg	0.00	0.00	0.00	20	L405194-02	WG424546
Arsenic	mg/l	0.00120	0.00118	1.68	20	L405710-01	WG425075
Thallium	mg/l	0.00	0.0000800	NA	20	L405710-01	WG425075
Beryllium, Dissolved	mg/l	0.00	0.000180	NA	20	L406228-04	WG425440
Cadmium, Dissolved	mg/l	0.00	0.00	0.00	20	L406228-04	WG425440
Chromium, Dissolved	mg/l	0.00	0.00210	NA	20	L406228-04	WG425440
Copper, Dissolved	mg/l	0.00	0.00	0.00	20	L406228-04	WG425440
Lead, Dissolved	mg/l	0.00	0.00	0.00	20	L406228-04	WG425440
Nickel, Dissolved	mg/l	0.00	0.00	0.00	20	L406228-04	WG425440
Selenium, Dissolved	mg/l	0.00	0.00430	NA	20	L406228-04	WG425440
Silver, Dissolved	mg/l	0.00	0.00	0.00	20	L406228-04	WG425440
Zinc, Dissolved	mg/l	0.00	0.00250	NA	20	L406228-04	WG425440
Mercury, Dissolved	mg/l	0.00	0.00	0.00	20	L405337-01	WG425098
Antimony	mg/l	0.00	0.000390	NA	20	L405382-02	WG426003

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	ppm	.001	0.000729	72.9	30-123	WG424509
2-Chloronaphthalene	ppm	.001	0.000735	73.5	34-120	WG424509
2-Methylnaphthalene	ppm	.001	0.000677	67.7	29-116	WG424509
Acenaphthene	ppm	.001	0.000805	80.5	40-113	WG424509
Acenaphthylene	ppm	.001	0.000784	78.4	36-115	WG424509
Anthracene	ppm	.001	0.000908	90.8	45-118	WG424509
Benzo(a)anthracene	ppm	.001	0.000957	95.7	36-129	WG424509
Benzo(a)pyrene	ppm	.001	0.000964	96.4	44-124	WG424509
Benzo(b)fluoranthene	ppm	.001	0.000953	95.3	43-126	WG424509
Benzo(g,h,i)perylene	ppm	.001	0.000936	93.6	39-128	WG424509
Benzo(k)fluoranthene	ppm	.001	0.000972	97.2	44-127	WG424509
Chrysene	ppm	.001	0.000852	85.2	36-137	WG424509
Dibenz(a,h)anthracene	ppm	.001	0.000950	95.0	39-129	WG424509
Fluoranthene	ppm	.001	0.000914	91.4	45-123	WG424509
Fluorene	ppm	.001	0.000850	85.0	41-118	WG424509
Indeno(1,2,3-cd)pyrene	ppm	.001	0.000949	94.9	39-129	WG424509
Naphthalene	ppm	.001	0.000678	67.8	26-111	WG424509
Phenanthrene	ppm	.001	0.000872	87.2	41-116	WG424509
Pyrene	ppm	.001	0.000879	87.9	32-136	WG424509
2-Fluorobiphenyl				73.03	26-122	WG424509
Nitrobenzene-d5				68.24	12-120	WG424509
p-Terphenyl-d14				100.7	34-149	WG424509

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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,1-Trichloroethane	mg/l	.05	0.0405	81.1	67-137	WG424513
1,1,2,2-Tetrachloroethane	mg/l	.05	0.0529	106.	72-128	WG424513
1,1,2-Trichloroethane	mg/l	.05	0.0466	93.2	79-123	WG424513
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.05	0.0381	76.1	51-149	WG424513
1,1-Dichloroethane	mg/l	.05	0.0426	85.1	67-133	WG424513
1,1-Dichloroethene	mg/l	.05	0.0376	75.2	60-130	WG424513
1,2,3-Trichlorobenzene	mg/l	.05	0.0402	80.4	63-138	WG424513
1,2,4-Trichlorobenzene	mg/l	.05	0.0385	76.9	65-137	WG424513
1,2-Dibromo-3-Chloropropane	mg/l	.05	0.0461	92.2	55-134	WG424513
1,2-Dibromoethane	mg/l	.05	0.0455	91.0	75-126	WG424513
1,2-Dichlorobenzene	mg/l	.05	0.0416	83.2	75-122	WG424513
1,2-Dichloroethane	mg/l	.05	0.0408	81.6	63-137	WG424513
1,2-Dichloropropane	mg/l	.05	0.0490	98.0	74-122	WG424513
1,3-Dichlorobenzene	mg/l	.05	0.0511	102.	73-131	WG424513
1,4-Dichlorobenzene	mg/l	.05	0.0383	76.7	70-121	WG424513
2-Butanone (MEK)	mg/l	.25	0.227	90.9	53-132	WG424513
2-Hexanone	mg/l	.25	0.288	115.	56-147	WG424513
4-Methyl-2-pentanone (MIBK)	mg/l	.25	0.287	115.	60-142	WG424513
Acetone	mg/l	.25	0.292	117.	48-134	WG424513
Benzene	mg/l	.05	0.0382	76.5	67-126	WG424513
Bromochloromethane	mg/l	.05	0.0450	89.9	75-128	WG424513
Bromodichloromethane	mg/l	.05	0.0479	95.8	68-133	WG424513
Bromoform	mg/l	.05	0.0569	114.	60-139	WG424513
Bromomethane	mg/l	.05	0.0341	68.2	45-175	WG424513
Carbon disulfide	mg/l	.05	0.0176	35.2*	41-148	WG424513
Carbon tetrachloride	mg/l	.05	0.0389	77.8	64-141	WG424513
Chlorobenzene	mg/l	.05	0.0447	89.3	77-125	WG424513
Chlorodibromomethane	mg/l	.05	0.0487	97.3	73-138	WG424513
Chloroethane	mg/l	.05	0.0371	74.2	49-155	WG424513
Chloroform	mg/l	.05	0.0426	85.3	66-126	WG424513
Chloromethane	mg/l	.05	0.0317	63.4	45-152	WG424513
cis-1,2-Dichloroethene	mg/l	.05	0.0431	86.2	72-128	WG424513
cis-1,3-Dichloropropene	mg/l	.05	0.0446	89.1	73-131	WG424513
Dichlorodifluoromethane	mg/l	.05	0.0380	76.0	39-189	WG424513
Ethylbenzene	mg/l	.05	0.0438	87.7	76-129	WG424513
Isopropylbenzene	mg/l	.05	0.0467	93.5	73-132	WG424513
Methyl tert-butyl ether	mg/l	.05	0.0464	92.8	51-142	WG424513
Methylene Chloride	mg/l	.05	0.0392	78.4	64-125	WG424513
Styrene	mg/l	.05	0.0472	94.5	78-130	WG424513
Tetrachloroethene	mg/l	.05	0.0383	76.6	67-135	WG424513
Toluene	mg/l	.05	0.0389	77.9	72-122	WG424513
trans-1,2-Dichloroethene	mg/l	.05	0.0340	68.1	67-129	WG424513
trans-1,3-Dichloropropene	mg/l	.05	0.0451	90.2	66-137	WG424513
Trichloroethene	mg/l	.05	0.0418	83.6	74-126	WG424513
Trichlorofluoromethane	mg/l	.05	0.0375	75.0	54-156	WG424513
Vinyl chloride	mg/l	.05	0.0315	63.0	55-153	WG424513
4-Bromofluorobenzene				113.0	75-128	WG424513
Dibromofluoromethane				97.96	79-125	WG424513
Toluene-d8				103.0	87-114	WG424513
PCB 1260	mg/kg	.167	0.118	70.8	62-131	WG424512
Decachlorobiphenyl				83.57	18.9-115.8	WG424512
Tetrachloro-m-xylene				90.52	31.8-115.7	WG424512
1,1,1-Trichloroethane	mg/l	.05	0.0499	99.9	67-137	WG424709
1,1,2,2-Tetrachloroethane	mg/l	.05	0.0532	106.	72-128	WG424709
1,1,2-Trichloroethane	mg/l	.05	0.0512	102.	79-123	WG424709

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Quality Assurance Report Level II

L405232

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	.05	0.0422	84.4	51-149	WG424709
1,1-Dichloroethane	mg/l	.05	0.0495	98.9	67-133	WG424709
1,1-Dichloroethene	mg/l	.05	0.0423	84.6	60-130	WG424709
1,2,3-Trichlorobenzene	mg/l	.05	0.0552	110.	63-138	WG424709
1,2,4-Trichlorobenzene	mg/l	.05	0.0578	116.	65-137	WG424709
1,2-Dibromo-3-Chloropropane	mg/l	.05	0.0518	104.	55-134	WG424709
1,2-Dibromoethane	mg/l	.05	0.0534	107.	75-126	WG424709
1,2-Dichlorobenzene	mg/l	.05	0.0498	99.6	75-122	WG424709
1,2-Dichloroethane	mg/l	.05	0.0497	99.4	63-137	WG424709
1,2-Dichloropropane	mg/l	.05	0.0522	104.	74-122	WG424709
1,3-Dichlorobenzene	mg/l	.05	0.0485	97.0	73-131	WG424709
1,4-Dichlorobenzene	mg/l	.05	0.0483	96.7	70-121	WG424709
2-Butanone (MEK)	mg/l	.25	0.284	114.	53-132	WG424709
2-Hexanone	mg/l	.25	0.298	119.	56-147	WG424709
4-Methyl-2-pentanone (MIBK)	mg/l	.25	0.292	117.	60-142	WG424709
Acetone	mg/l	.25	0.269	107.	48-134	WG424709
Benzene	mg/l	.05	0.0474	94.7	67-126	WG424709
Bromochloromethane	mg/l	.05	0.0478	95.7	75-128	WG424709
Bromodichloromethane	mg/l	.05	0.0522	104.	68-133	WG424709
Bromoform	mg/l	.05	0.0487	97.4	60-139	WG424709
Bromomethane	mg/l	.05	0.0374	74.7	45-175	WG424709
Carbon disulfide	mg/l	.05	0.0416	83.2	41-148	WG424709
Carbon tetrachloride	mg/l	.05	0.0435	87.0	64-141	WG424709
Chlorobenzene	mg/l	.05	0.0490	98.1	77-125	WG424709
Chlorodibromomethane	mg/l	.05	0.0560	112.	73-138	WG424709
Chloroethane	mg/l	.05	0.0408	81.7	49-155	WG424709
Chloroform	mg/l	.05	0.0478	95.7	66-126	WG424709
Chloromethane	mg/l	.05	0.0453	90.7	45-152	WG424709
cis-1,2-Dichloroethene	mg/l	.05	0.0477	95.4	72-128	WG424709
cis-1,3-Dichloropropene	mg/l	.05	0.0540	108.	73-131	WG424709
Dichlorodifluoromethane	mg/l	.05	0.0523	105.	39-189	WG424709
Ethylbenzene	mg/l	.05	0.0487	97.3	76-129	WG424709
Isopropylbenzene	mg/l	.05	0.0485	97.0	73-132	WG424709
Methyl tert-butyl ether	mg/l	.05	0.0506	101.	51-142	WG424709
Methylene Chloride	mg/l	.05	0.0486	97.1	64-125	WG424709
Styrene	mg/l	.05	0.0530	106.	78-130	WG424709
Tetrachloroethene	mg/l	.05	0.0491	98.1	67-135	WG424709
Toluene	mg/l	.05	0.0483	96.7	72-122	WG424709
trans-1,2-Dichloroethene	mg/l	.05	0.0498	99.6	67-129	WG424709
trans-1,3-Dichloropropene	mg/l	.05	0.0550	110.	66-137	WG424709
Trichloroethene	mg/l	.05	0.0503	101.	74-126	WG424709
Trichlorofluoromethane	mg/l	.05	0.0463	92.6	54-156	WG424709
Vinyl chloride	mg/l	.05	0.0453	90.7	55-153	WG424709
4-Bromofluorobenzene				102.6	75-128	WG424709
Dibromofluoromethane				101.1	79-125	WG424709
Toluene-d8				103.5	87-114	WG424709
Diesel (C7-C26)	mg/l	.75	0.610	81.3	50-150	WG424561
Motor Oil (C16-C40)	mg/l	.75	0.719	95.8	50-150	WG424561
o-Terphenyl				87.34	50-150	WG424561
1,2,4,5-Tetrachlorobenzene	ppm	.01	0.00710	71.0	39-116	WG424808
2,4,5-Trichlorophenol	ppm	.01	0.00880	88.0	48-120	WG424808
2,4,6-Trichlorophenol	ppm	.01	0.00678	67.8	49-118	WG424808
2,4-Dichlorophenol	ppm	.01	0.00737	73.7	46-115	WG424808
2,4-Dimethylphenol	ppm	.01	0.0122	122.	40-124	WG424808
2,4-Dinitrophenol	ppm	.01	0.00263	26.3	10-125	WG424808

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June 24, 2009

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Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2,4-Dinitrotoluene	ppm	.01	0.00919	91.9	56-128	WG424808
2,6-Dinitrotoluene	ppm	.01	0.00884	88.4	56-121	WG424808
2-Chloronaphthalene	ppm	.01	0.00815	81.5	44-110	WG424808
2-Chlorophenol	ppm	.01	0.00624	62.4	38-114	WG424808
2-Methylnaphthalene	ppm	.01	0.00807	80.7	28-122	WG424808
2-Methylphenol	ppm	.01	0.00573	57.3	42-99	WG424808
2-Nitroaniline	ppm	.01	0.00852	85.2	55-124	WG424808
2-Nitrophenol	ppm	.01	0.00726	72.6	35-118	WG424808
3&4-methyl phenol	ppm	.01	0.00536	53.6	36-102	WG424808
3,3-Dichlorobenzidine	ppm	.01	0.00770	77.0	46-145	WG424808
3-Nitroaniline	ppm	.01	0.00867	86.7	39-141	WG424808
4,6-Dinitro-2-methylphenol	ppm	.01	0.00496	49.6	24-119	WG424808
4-Bromophenyl-phenylether	ppm	.01	0.00755	75.5	45-105	WG424808
4-Chloro-3-methylphenol	ppm	.01	0.00726	72.6	47-116	WG424808
4-Chloroaniline	ppm	.01	0.00722	72.2	21-151	WG424808
4-Chlorophenyl-phenylether	ppm	.01	0.00929	92.9	49-116	WG424808
4-Nitroaniline	ppm	.01	0.00959	95.9	43-144	WG424808
4-Nitrophenol	ppm	.01	0.00162	16.2	10-66	WG424808
Acenaphthene	ppm	.01	0.00830	83.0	48-110	WG424808
Acenaphthylene	ppm	.01	0.00879	87.9	48-113	WG424808
Acetophenone	ppm	.01	0.00600	60.0	35-98	WG424808
Anthracene	ppm	.01	0.00911	91.1	55-127	WG424808
Atrazine	ppm	.01	0.00911	91.1	43-159	WG424808
Benzaldehyde	ppm	.01	0.00604	60.4	1-78	WG424808
Benzo(a)anthracene	ppm	.01	0.00865	86.5	57-115	WG424808
Benzo(a)pyrene	ppm	.01	0.00876	87.6	63-125	WG424808
Benzo(b)fluoranthene	ppm	.01	0.00760	76.0	50-123	WG424808
Benzo(g,h,i)perylene	ppm	.01	0.00775	77.5	39-143	WG424808
Benzo(k)fluoranthene	ppm	.01	0.00876	87.6	45-126	WG424808
Benzylbutyl phthalate	ppm	.01	0.00659	65.9	22-154	WG424808
Biphenyl	ppm	.01	0.00841	84.1	45-111	WG424808
Bis(2-chlorethoxy)methane	ppm	.01	0.00844	84.4	42-116	WG424808
Bis(2-chloroethyl)ether	ppm	.01	0.00743	74.3	26-115	WG424808
Bis(2-chloroisopropyl)ether	ppm	.01	0.00705	70.5	32-115	WG424808
Bis(2-ethylhexyl)phthalate	ppm	.01	0.00912	91.2	47-143	WG424808
Caprolactam	ppm	.01	0.00154	15.4	11-33	WG424808
Carbazole	ppm	.01	0.00844	84.4	49-133	WG424808
Chrysene	ppm	.01	0.00881	88.1	58-113	WG424808
Di-n-butyl phthalate	ppm	.01	0.00841	84.1	51-131	WG424808
Di-n-octyl phthalate	ppm	.01	0.00907	90.7	51-138	WG424808
Dibenz(a,h)anthracene	ppm	.01	0.00758	75.8	39-144	WG424808
Dibenzofuran	ppm	.01	0.00887	88.7	50-121	WG424808
Diethyl phthalate	ppm	.01	0.00779	77.9	36-128	WG424808
Dimethyl phthalate	ppm	.01	0.00577	57.7	10-135	WG424808
Fluoranthene	ppm	.01	0.00860	86.0	53-119	WG424808
Fluorene	ppm	.01	0.00887	88.7	49-116	WG424808
Hexachloro-1,3-butadiene	ppm	.01	0.00745	74.5	21-116	WG424808
Hexachlorobenzene	ppm	.01	0.00797	79.7	51-121	WG424808
Hexachlorocyclopentadiene	ppm	.01	0.00539	53.9	4-126	WG424808
Hexachloroethane	ppm	.01	0.00571	57.1	15-109	WG424808
Indeno(1,2,3-cd)pyrene	ppm	.01	0.00754	75.4	40-143	WG424808
Isophorone	ppm	.01	0.00719	71.9	48-126	WG424808
n-Nitrosodi-n-propylamine	ppm	.01	0.00680	68.0	47-122	WG424808
n-Nitrosodiphenylamine	ppm	.01	0.00912	91.2	59-143	WG424808
Naphthalene	ppm	.01	0.00700	70.0	29-103	WG424808
Nitrobenzene	ppm	.01	0.00619	61.9	31-105	WG424808
Pentachlorophenol	ppm	.01	0.00392	39.2	20-122	WG424808
Phenanthrene	ppm	.01	0.00819	81.9	54-112	WG424808
Phenol	ppm	.01	0.00289	28.9	17-52	WG424808

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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report
Level II

L405232

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Pyrene	ppm	.01	0.00895	89.5	46-130	WG424808
2,4,6-Tribromophenol				74.09	10-148	WG424808
2-Fluorobiphenyl				79.13	26-122	WG424808
2-Fluorophenol				36.86	10-87	WG424808
Nitrobenzene-d5				56.05	12-120	WG424808
Phenol-d5				22.28	10-67	WG424808
p-Terphenyl-d14				98.79	34-149	WG424808
Total Solids	%	50	50.0	100.	85-115	WG424697
Mercury	mg/l	.003	0.00289	96.3	85-115	WG424613
Mercury	mg/kg	8.77	7.89	90.0	71.6-127.7	WG424552
1-Methylnaphthalene	ppm	.033	0.0227	68.7	41-110	WG424733
2-Chloronaphthalene	ppm	.033	0.0231	70.0	43-109	WG424733
2-Methylnaphthalene	ppm	.033	0.0225	68.3	38-104	WG424733
Acenaphthene	ppm	.033	0.0241	73.2	48-103	WG424733
Acenaphthylene	ppm	.033	0.0238	72.2	43-106	WG424733
Anthracene	ppm	.033	0.0256	77.6	51-110	WG424733
Benzo(a)anthracene	ppm	.033	0.0263	79.8	38-126	WG424733
Benzo(a)pyrene	ppm	.033	0.0262	79.5	47-118	WG424733
Benzo(b)fluoranthene	ppm	.033	0.0226	68.5	47-118	WG424733
Benzo(g,h,i)perylene	ppm	.033	0.0255	77.4	40-125	WG424733
Benzo(k)fluoranthene	ppm	.033	0.0293	88.7	45-121	WG424733
Chrysene	ppm	.033	0.0218	66.1	35-135	WG424733
Dibenz(a,h)anthracene	ppm	.033	0.0257	78.0	41-124	WG424733
Fluoranthene	ppm	.033	0.0255	77.2	50-114	WG424733
Fluorene	ppm	.033	0.0253	76.8	49-109	WG424733
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0258	78.2	40-126	WG424733
Naphthalene	ppm	.033	0.0211	64.0	36-100	WG424733
Phenanthrene	ppm	.033	0.0250	75.6	46-108	WG424733
Pyrene	ppm	.033	0.0230	69.6	30-136	WG424733
2-Fluorobiphenyl				65.76	30-120	WG424733
Nitrobenzene-d5				64.19	18-119	WG424733
p-Terphenyl-d14				74.29	23-143	WG424733
Beryllium	mg/l	1.13	1.05	92.9	85-115	WG425034
Cadmium	mg/l	1.13	1.07	94.7	85-115	WG425034
Chromium	mg/l	1.13	1.04	92.0	85-115	WG425034
Copper	mg/l	1.13	1.06	93.8	85-115	WG425034
Lead	mg/l	1.13	1.08	95.6	85-115	WG425034
Nickel	mg/l	1.13	1.09	96.5	85-115	WG425034
Selenium	mg/l	1.13	1.01	89.4	85-115	WG425034
Silver	mg/l	1.13	1.05	92.9	85-115	WG425034
Zinc	mg/l	1.13	1.04	92.0	85-115	WG425034
Diesel Range Organics (DRO)	mg/l	.75	0.605	80.7	50-150	WG425407
Residual Range Organics (RRO)	mg/l	.75	0.564	75.2*	0-0	WG425407
o-Terphenyl				90.85	50-150	WG425407
Antimony	mg/kg	85.1	37.6	44.2	1.2-242.1	WG424546

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



**ENVIRONMENTAL
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Quality Assurance Report
Level II

West Linn, OR 97068

June 24, 2009

L405232

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Arsenic	mg/kg	192	165.	85.9	78.6-120.8	WG424546
Beryllium	mg/kg	69.3	61.2	88.3	79.8-120.1	WG424546
Cadmium	mg/kg	70.1	60.7	86.6	78.5-121.5	WG424546
Chromium	mg/kg	168	151.	89.9	80.4-120.2	WG424546
Copper	mg/kg	122	112.	91.8	81.6-119.7	WG424546
Lead	mg/kg	113	94.5	83.6	77.3-122.1	WG424546
Nickel	mg/kg	74.1	72.1	97.3	78.8-121.2	WG424546
Selenium	mg/kg	176	154.	87.5	75.6-125.0	WG424546
Silver	mg/kg	115	98.5	85.7	66-133.9	WG424546
Thallium	mg/kg	111	96.4	86.8	77.6-122.5	WG424546
Zinc	mg/kg	437	376.	86.0	78.5-121.7	WG424546
Arsenic	mg/l	.0567	0.0541	95.4	85-115	WG425075
Thallium	mg/l	.0567	0.0552	97.4	85-115	WG425075
Diesel (C7-C26)	mg/kg	30	22.6	75.5	50-150	WG425406
Motor Oil (C16-C40)	mg/kg	30	24.1	80.3	50-150	WG425406
o-Terphenyl				84.44	50-150	WG425406
1,1,1-Trichloroethane	mg/kg	.05	0.0514	103.	62-135	WG425508
1,1,2,2-Tetrachloroethane	mg/kg	.05	0.0531	106.	74-129	WG425508
1,1,2-Trichloroethane	mg/kg	.05	0.0496	99.3	77-124	WG425508
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	.05	0.0501	100.	49-155	WG425508
1,1-Dichloroethane	mg/kg	.05	0.0524	105.	61-134	WG425508
1,1-Dichloroethene	mg/kg	.05	0.0474	94.8	53-136	WG425508
1,2,3-Trichlorobenzene	mg/kg	.05	0.0469	93.8	62-146	WG425508
1,2,4-Trichlorobenzene	mg/kg	.05	0.0472	94.4	61-148	WG425508
1,2-Dibromo-3-Chloropropane	mg/kg	.05	0.0508	102.	61-134	WG425508
1,2-Dibromoethane	mg/kg	.05	0.0494	98.7	76-127	WG425508
1,2-Dichlorobenzene	mg/kg	.05	0.0501	100.	77-123	WG425508
1,2-Dichloroethane	mg/kg	.05	0.0516	103.	58-141	WG425508
1,2-Dichloropropane	mg/kg	.05	0.0490	98.0	71-128	WG425508
1,3-Dichlorobenzene	mg/kg	.05	0.0552	110.	71-132	WG425508
1,4-Dichlorobenzene	mg/kg	.05	0.0482	96.4	72-123	WG425508
2-Butanone (MEK)	mg/kg	.25	0.252	101.	51-131	WG425508
2-Hexanone	mg/kg	.25	0.282	113.	62-145	WG425508
4-Methyl-2-pentanone (MIBK)	mg/kg	.25	0.243	97.2	61-143	WG425508
Acetone	mg/kg	.25	0.258	103.	44-140	WG425508
Benzene	mg/kg	.05	0.0501	100.	65-128	WG425508
Bromochloromethane	mg/kg	.05	0.0535	107.	73-130	WG425508
Bromodichloromethane	mg/kg	.05	0.0546	109.	66-126	WG425508
Bromoform	mg/kg	.05	0.0616	123.	64-139	WG425508
Bromomethane	mg/kg	.05	0.0679	136.	41-175	WG425508
Carbon disulfide	mg/kg	.05	0.0419	83.9	36-161	WG425508
Carbon tetrachloride	mg/kg	.05	0.0517	103.	60-140	WG425508
Chlorobenzene	mg/kg	.05	0.0498	99.6	75-125	WG425508
Chlorodibromomethane	mg/kg	.05	0.0542	108.	72-137	WG425508
Chloroethane	mg/kg	.05	0.0580	116.	44-159	WG425508
Chloroform	mg/kg	.05	0.0505	101.	63-123	WG425508
Chloromethane	mg/kg	.05	0.0548	110.	42-149	WG425508
cis-1,2-Dichloroethene	mg/kg	.05	0.0524	105.	71-129	WG425508
cis-1,3-Dichloropropene	mg/kg	.05	0.0507	101.	73-132	WG425508
Dichlorodifluoromethane	mg/kg	.05	0.0589	118.	26-186	WG425508
Ethylbenzene	mg/kg	.05	0.0490	98.0	74-128	WG425508
Isopropylbenzene	mg/kg	.05	0.0529	106.	73-130	WG425508
Methyl tert-butyl ether	mg/kg	.05	0.0525	105.	44-148	WG425508

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Quality Assurance Report
Level II

L405232

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Methylene Chloride	mg/kg	.05	0.0500	100.	57-129	WG425508
Styrene	mg/kg	.05	0.0529	106.	76-133	WG425508
Tetrachloroethene	mg/kg	.05	0.0494	98.8	65-135	WG425508
Toluene	mg/kg	.05	0.0457	91.3	70-120	WG425508
trans-1,2-Dichloroethene	mg/kg	.05	0.0496	99.3	61-133	WG425508
trans-1,3-Dichloropropene	mg/kg	.05	0.0460	91.9	70-135	WG425508
Trichloroethene	mg/kg	.05	0.0508	102.	71-126	WG425508
Trichlorofluoromethane	mg/kg	.05	0.0646	129.	52-147	WG425508
Vinyl chloride	mg/kg	.05	0.0531	106.	50-151	WG425508
4-Bromofluorobenzene				104.7	59-140	WG425508
Dibromofluoromethane				107.3	63-139	WG425508
Toluene-d8				99.23	84-116	WG425508
Beryllium, Dissolved	mg/l	1.13	1.07	94.7	85-115	WG425440
Cadmium, Dissolved	mg/l	1.13	1.12	99.1	85-115	WG425440
Chromium, Dissolved	mg/l	1.13	1.10	97.3	85-115	WG425440
Copper, Dissolved	mg/l	1.13	1.12	99.1	85-115	WG425440
Lead, Dissolved	mg/l	1.13	1.08	95.6	85-115	WG425440
Nickel, Dissolved	mg/l	1.13	1.09	96.5	85-115	WG425440
Selenium, Dissolved	mg/l	1.13	1.01	89.4	85-115	WG425440
Silver, Dissolved	mg/l	1.13	1.08	95.6	85-115	WG425440
Zinc, Dissolved	mg/l	1.13	1.10	97.3	85-115	WG425440
Antimony, Dissolved	mg/l	.0567	0.0532	93.8	85-115	WG425437
Arsenic, Dissolved	mg/l	.0567	0.0516	91.0	85-115	WG425437
Thallium, Dissolved	mg/l	.0567	0.0534	94.2	85-115	WG425437
Mercury, Dissolved	mg/l	.003	0.00275	91.7	85-115	WG425098
Diesel (C7-C26)	mg/kg	30	23.5	78.4	50-150	WG425725
Motor Oil (C16-C40)	mg/kg	30	26.7	89.0	50-150	WG425725
o-Terphenyl				82.90	50-150	WG425725
Antimony	mg/l	.0567	0.0578	102.	85-115	WG426003
1,4-Dioxane	mg/l	.05	0.00	0.00*	70-130	WG427744
4-Bromofluorobenzene				93.54	75-128	WG427744
Dibromofluoromethane				94.81	79-125	WG427744
Toluene-d8				97.93	87-114	WG427744

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1-Methylnaphthalene	ppm	0.000660	0.000729	66.0	30-123	9.95	32	WG424509
2-Chloronaphthalene	ppm	0.000648	0.000735	65.0	34-120	12.6	30	WG424509
2-Methylnaphthalene	ppm	0.000631	0.000677	63.0	29-116	6.98	31	WG424509
Acenaphthene	ppm	0.000690	0.000805	69.0	40-113	15.4	25	WG424509
Acenaphthylene	ppm	0.000727	0.000784	73.0	36-115	7.56	25	WG424509
Anthracene	ppm	0.000747	0.000908	75.0	45-118	19.4	26	WG424509
Benzo(a)anthracene	ppm	0.000725	0.000957	73.0	36-129	27.5*	26	WG424509
Benzo(a)pyrene	ppm	0.000779	0.000964	78.0	44-124	21.2*	21	WG424509
Benzo(b)fluoranthene	ppm	0.000660	0.000953	66.0	43-126	36.3	38	WG424509
Benzo(g,h,i)perylene	ppm	0.000806	0.000936	81.0	39-128	14.8	20	WG424509

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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Benzo(k)fluoranthene	ppm	0.000909	0.000972	91.0	44-127	6.69	39	WG424509
Chrysene	ppm	0.000757	0.000852	76.0	36-137	11.8	22	WG424509
Dibenz(a,h)anthracene	ppm	0.000791	0.000950	79.0	39-129	18.2	20	WG424509
Fluoranthene	ppm	0.000730	0.000914	73.0	45-123	22.3	25	WG424509
Fluorene	ppm	0.000774	0.000850	77.0	41-118	9.39	26	WG424509
Indeno(1,2,3-cd)pyrene	ppm	0.000772	0.000949	77.0	39-129	20.6*	20	WG424509
Naphthalene	ppm	0.000593	0.000678	59.0	26-111	13.3	32	WG424509
Phenanthrene	ppm	0.000720	0.000872	72.0	41-116	19.1	25	WG424509
Pyrene	ppm	0.000729	0.000879	73.0	32-136	18.6	22	WG424509
2-Fluorobiphenyl				64.78	26-122			WG424509
Nitrobenzene-d5				54.23	12-120			WG424509
p-Terphenyl-d14				77.82	34-149			WG424509
1,1,1-Trichloroethane	mg/l	0.0392	0.0405	78.0	67-137	3.30	20	WG424513
1,1,2,2-Tetrachloroethane	mg/l	0.0480	0.0529	96.0	72-128	9.69	20	WG424513
1,1,2-Trichloroethane	mg/l	0.0467	0.0466	93.0	79-123	0.216	20	WG424513
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0365	0.0381	73.0	51-149	4.10	20	WG424513
1,1-Dichloroethane	mg/l	0.0411	0.0426	82.0	67-133	3.48	20	WG424513
1,1-Dichloroethene	mg/l	0.0335	0.0376	67.0	60-130	11.5	20	WG424513
1,2,3-Trichlorobenzene	mg/l	0.0436	0.0402	87.0	63-138	8.17	20	WG424513
1,2,4-Trichlorobenzene	mg/l	0.0419	0.0385	84.0	65-137	8.54	20	WG424513
1,2-Dibromo-3-Chloropropane	mg/l	0.0474	0.0461	95.0	55-134	2.84	20	WG424513
1,2-Dibromoethane	mg/l	0.0440	0.0455	88.0	75-126	3.37	20	WG424513
1,2-Dichlorobenzene	mg/l	0.0418	0.0416	84.0	75-122	0.427	20	WG424513
1,2-Dichloroethane	mg/l	0.0403	0.0408	81.0	63-137	1.19	20	WG424513
1,2-Dichloropropane	mg/l	0.0500	0.0490	100.	74-122	1.94	20	WG424513
1,3-Dichlorobenzene	mg/l	0.0471	0.0511	94.0	73-131	8.14	20	WG424513
1,4-Dichlorobenzene	mg/l	0.0393	0.0383	79.0	70-121	2.55	20	WG424513
2-Butanone (MEK)	mg/l	0.210	0.227	84.0	53-132	7.84	20	WG424513
2-Hexanone	mg/l	0.261	0.288	104.	56-147	9.88	20	WG424513
4-Methyl-2-pentanone (MIBK)	mg/l	0.271	0.287	108.	60-142	5.81	20	WG424513
Acetone	mg/l	0.267	0.292	107.	48-134	8.97	20	WG424513
Benzene	mg/l	0.0378	0.0382	76.0	67-126	1.29	20	WG424513
Bromochloromethane	mg/l	0.0438	0.0450	88.0	75-128	2.60	20	WG424513
Bromodichloromethane	mg/l	0.0473	0.0479	95.0	68-133	1.36	20	WG424513
Bromoform	mg/l	0.0528	0.0569	106.	60-139	7.57	20	WG424513
Bromomethane	mg/l	0.0333	0.0341	67.0	45-175	2.53	20	WG424513
Carbon disulfide	mg/l	0.0159	0.0176	32*	41-148	10.1	20	WG424513
Carbon tetrachloride	mg/l	0.0370	0.0389	74.0	64-141	4.91	20	WG424513
Chlorobenzene	mg/l	0.0436	0.0447	87.0	77-125	2.31	20	WG424513
Chlorodibromomethane	mg/l	0.0484	0.0487	97.0	73-138	0.542	20	WG424513
Chloroethane	mg/l	0.0353	0.0371	71.0	49-155	5.00	20	WG424513
Chloroform	mg/l	0.0415	0.0426	83.0	66-126	2.65	20	WG424513
Chloromethane	mg/l	0.0300	0.0317	60.0	45-152	5.52	20	WG424513
cis-1,2-Dichloroethene	mg/l	0.0414	0.0431	83.0	72-128	4.05	20	WG424513
cis-1,3-Dichloropropene	mg/l	0.0440	0.0446	88.0	73-131	1.22	20	WG424513
Dichlorodifluoromethane	mg/l	0.0343	0.0380	69.0	39-189	10.3	24	WG424513
Ethylbenzene	mg/l	0.0421	0.0438	84.0	76-129	4.07	20	WG424513
Isopropylbenzene	mg/l	0.0436	0.0467	87.0	73-132	6.94	20	WG424513
Methyl tert-butyl ether	mg/l	0.0445	0.0464	89.0	51-142	4.22	20	WG424513
Methylene Chloride	mg/l	0.0367	0.0392	73.0	64-125	6.56	20	WG424513
Styrene	mg/l	0.0451	0.0472	90.0	78-130	4.64	20	WG424513
Tetrachloroethene	mg/l	0.0383	0.0383	77.0	67-135	0.0878	20	WG424513
Toluene	mg/l	0.0390	0.0389	78.0	72-122	0.220	20	WG424513
trans-1,2-Dichloroethene	mg/l	0.0330	0.0340	66*	67-129	3.25	20	WG424513
trans-1,3-Dichloropropene	mg/l	0.0455	0.0451	91.0	66-137	0.933	20	WG424513
Trichloroethene	mg/l	0.0413	0.0418	83.0	74-126	1.28	20	WG424513
Trichlorofluoromethane	mg/l	0.0337	0.0375	67.0	54-156	10.6	20	WG424513

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Quality Assurance Report Level II

June 24, 2009

L405232

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Vinyl chloride	mg/l	0.0296	0.0315	59.0	55-153	6.41	20	WG424513
4-Bromofluorobenzene				102.6	75-128			WG424513
Dibromofluoromethane				96.13	79-125			WG424513
Toluene-d8				104.3	87-114			WG424513
PCB 1260	mg/kg	0.126	0.118	76.0	62-131	6.53	22	WG424512
Decachlorobiphenyl				88.71	18.9-115.8			WG424512
Tetrachloro-m-xylene				90.93	31.8-115.7			WG424512
1,1,1-Trichloroethane	mg/l	0.0450	0.0499	90.0	67-137	10.5	20	WG424709
1,1,2,2-Tetrachloroethane	mg/l	0.0525	0.0532	105.	72-128	1.30	20	WG424709
1,1,2-Trichloroethane	mg/l	0.0486	0.0512	97.0	79-123	5.23	20	WG424709
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0373	0.0422	75.0	51-149	12.4	20	WG424709
1,1-Dichloroethane	mg/l	0.0460	0.0495	92.0	67-133	7.16	20	WG424709
1,1-Dichloroethene	mg/l	0.0387	0.0423	77.0	60-130	8.89	20	WG424709
1,2,3-Trichlorobenzene	mg/l	0.0543	0.0552	109.	63-138	1.69	20	WG424709
1,2,4-Trichlorobenzene	mg/l	0.0550	0.0578	110.	65-137	4.85	20	WG424709
1,2-Dibromo-3-Chloropropane	mg/l	0.0481	0.0518	96.0	55-134	7.27	20	WG424709
1,2-Dibromoethane	mg/l	0.0509	0.0534	102.	75-126	4.71	20	WG424709
1,2-Dichlorobenzene	mg/l	0.0474	0.0498	95.0	75-122	4.93	20	WG424709
1,2-Dichloroethane	mg/l	0.0476	0.0497	95.0	63-137	4.39	20	WG424709
1,2-Dichloropropane	mg/l	0.0491	0.0522	98.0	74-122	6.03	20	WG424709
1,3-Dichlorobenzene	mg/l	0.0456	0.0485	91.0	73-131	6.08	20	WG424709
1,4-Dichlorobenzene	mg/l	0.0461	0.0483	92.0	70-121	4.83	20	WG424709
2-Butanone (MEK)	mg/l	0.277	0.284	111.	53-132	2.77	20	WG424709
2-Hexanone	mg/l	0.286	0.298	115.	56-147	3.99	20	WG424709
4-Methyl-2-pentanone (MIBK)	mg/l	0.276	0.292	111.	60-142	5.33	20	WG424709
Acetone	mg/l	0.258	0.269	103.	48-134	3.98	20	WG424709
Benzene	mg/l	0.0444	0.0474	89.0	67-126	6.36	20	WG424709
Bromochloromethane	mg/l	0.0461	0.0478	92.0	75-128	3.76	20	WG424709
Bromodichloromethane	mg/l	0.0493	0.0522	99.0	68-133	5.74	20	WG424709
Bromoform	mg/l	0.0460	0.0487	92.0	60-139	5.80	20	WG424709
Bromomethane	mg/l	0.0325	0.0374	65.0	45-175	13.8	20	WG424709
Carbon disulfide	mg/l	0.0373	0.0416	75.0	41-148	10.8	20	WG424709
Carbon tetrachloride	mg/l	0.0394	0.0435	79.0	64-141	9.85	20	WG424709
Chlorobenzene	mg/l	0.0460	0.0490	92.0	77-125	6.43	20	WG424709
Chlorodibromomethane	mg/l	0.0535	0.0560	107.	73-138	4.73	20	WG424709
Chloroethane	mg/l	0.0408	0.0408	82.0	49-155	0.189	20	WG424709
Chloroform	mg/l	0.0449	0.0478	90.0	66-126	6.31	20	WG424709
Chloromethane	mg/l	0.0416	0.0453	83.0	45-152	8.62	20	WG424709
cis-1,2-Dichloroethene	mg/l	0.0451	0.0477	90.0	72-128	5.54	20	WG424709
cis-1,3-Dichloropropene	mg/l	0.0510	0.0540	102.	73-131	5.59	20	WG424709
Dichlorodifluoromethane	mg/l	0.0461	0.0523	92.0	39-189	12.5	24	WG424709
Ethylbenzene	mg/l	0.0456	0.0487	91.0	76-129	6.49	20	WG424709
Isopropylbenzene	mg/l	0.0455	0.0485	91.0	73-132	6.30	20	WG424709
Methyl tert-butyl ether	mg/l	0.0480	0.0506	96.0	51-142	5.21	20	WG424709
Methylene Chloride	mg/l	0.0448	0.0486	90.0	64-125	8.04	20	WG424709
Styrene	mg/l	0.0499	0.0530	100.	78-130	5.97	20	WG424709
Tetrachloroethene	mg/l	0.0444	0.0491	89.0	67-135	9.96	20	WG424709
Toluene	mg/l	0.0449	0.0483	90.0	72-122	7.32	20	WG424709
trans-1,2-Dichloroethene	mg/l	0.0463	0.0498	93.0	67-129	7.22	20	WG424709
trans-1,3-Dichloropropene	mg/l	0.0516	0.0550	103.	66-137	6.39	20	WG424709
Trichloroethene	mg/l	0.0456	0.0503	91.0	74-126	9.91	20	WG424709
Trichlorofluoromethane	mg/l	0.0426	0.0463	85.0	54-156	8.18	20	WG424709
Vinyl chloride	mg/l	0.0416	0.0453	83.0	55-153	8.50	20	WG424709
4-Bromofluorobenzene				102.7	75-128			WG424709
Dibromofluoromethane				99.49	79-125			WG424709

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**Quality Assurance Report
Level II**

West Linn, OR 97068

June 24, 2009

L405232

Analyte	Units	Laboratory Control		Sample	Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec					
Toluene-d8				102.5		87-114			
Diesel (C7-C26)	mg/l	0.584	0.610	78.0		50-150	4.42	20	WG424561
Motor Oil (C16-C40)	mg/l	0.675	0.719	90.0		50-150	6.28	25	WG424561
o-Terphenyl				81.32		50-150			WG424561
1,2,4,5-Tetrachlorobenzene	ppm	0.00687	0.00710	69.0		39-116	3.28	33	WG424808
2,4,5-Trichlorophenol	ppm	0.00974	0.00880	97.0		48-120	10.1	29	WG424808
2,4,6-Trichlorophenol	ppm	0.00762	0.00678	76.0		49-118	11.7	28	WG424808
2,4-Dichlorophenol	ppm	0.00733	0.00737	73.0		46-115	0.557	28	WG424808
2,4-Dimethylphenol	ppm	0.0114	0.0122	114.		40-124	6.82	36	WG424808
2,4-Dinitrophenol	ppm	0.00237	0.00263	24.0		10-125	10.4	50	WG424808
2,4-Dinitrotoluene	ppm	0.00939	0.00919	94.0		56-128	2.13	24	WG424808
2,6-Dinitrotoluene	ppm	0.00829	0.00884	83.0		56-121	6.40	23	WG424808
2-Chloronaphthalene	ppm	0.00775	0.00815	77.0		44-110	5.01	30	WG424808
2-Chlorophenol	ppm	0.00554	0.00624	55.0		38-114	11.9	36	WG424808
2-Methylnaphthalene	ppm	0.00758	0.00807	76.0		28-122	6.27	36	WG424808
2-Methylphenol	ppm	0.00536	0.00573	54.0		42-99	6.70	26	WG424808
2-Nitroaniline	ppm	0.00819	0.00852	82.0		55-124	3.90	22	WG424808
2-Nitrophenol	ppm	0.00685	0.00726	69.0		35-118	5.76	35	WG424808
3&4-methyl phenol	ppm	0.00524	0.00536	52.0		36-102	2.18	31	WG424808
3,3-Dichlorobenzidine	ppm	0.00710	0.00770	71.0		46-145	8.14	31	WG424808
3-Nitroaniline	ppm	0.00780	0.00867	78.0		39-141	10.6	32	WG424808
4,6-Dinitro-2-methylphenol	ppm	0.00577	0.00496	58.0		24-119	15.1	50	WG424808
4-Bromophenyl-phenylether	ppm	0.00800	0.00755	80.0		45-105	5.80	26	WG424808
4-Chloro-3-methylphenol	ppm	0.00684	0.00726	68.0		47-116	6.01	22	WG424808
4-Chloroaniline	ppm	0.00633	0.00722	63.0		21-151	13.0	36	WG424808
4-Chlorophenyl-phenylether	ppm	0.00914	0.00929	91.0		49-116	1.64	26	WG424808
4-Nitroaniline	ppm	0.00842	0.00959	84.0		43-144	13.0	34	WG424808
4-Nitrophenol	ppm	0.00170	0.00162	17.0		10-66	5.09	37	WG424808
Acenaphthene	ppm	0.00811	0.00830	81.0		48-110	2.33	26	WG424808
Acenaphthylene	ppm	0.00831	0.00879	83.0		48-113	5.65	28	WG424808
Acetophenone	ppm	0.00545	0.00600	55.0		35-98	9.54	38	WG424808
Anthracene	ppm	0.00907	0.00911	91.0		55-127	0.437	24	WG424808
Atrazine	ppm	0.00891	0.00911	89.0		43-159	2.28	26	WG424808
Benzaldehyde	ppm	0.00497	0.00604	50.0		1-78	19.4	49	WG424808
Benzo(a)anthracene	ppm	0.00833	0.00865	83.0		57-115	3.83	20	WG424808
Benzo(a)pyrene	ppm	0.00851	0.00876	85.0		63-125	2.92	22	WG424808
Benzo(b)fluoranthene	ppm	0.00785	0.00760	78.0		50-123	3.24	32	WG424808
Benzo(g,h,i)perylene	ppm	0.00729	0.00775	73.0		39-143	6.08	31	WG424808
Benzo(k)fluoranthene	ppm	0.00872	0.00876	87.0		45-126	0.476	37	WG424808
Benzylbutyl phthalate	ppm	0.00594	0.00659	59.0		22-154	10.3	29	WG424808
Biphenyl	ppm	0.00793	0.00841	79.0		45-111	5.90	30	WG424808
Bis(2-chlorethoxy)methane	ppm	0.00775	0.00844	77.0		42-116	8.54	38	WG424808
Bis(2-chloroethyl)ether	ppm	0.00615	0.00743	61.0		26-115	18.9	50	WG424808
Bis(2-chloroisopropyl)ether	ppm	0.00607	0.00705	61.0		32-115	15.0	47	WG424808
Bis(2-ethylhexyl)phthalate	ppm	0.00898	0.00912	90.0		47-143	1.52	24	WG424808
Caprolactam	ppm	0.00141	0.00154	14.0		11-33	9.19	37	WG424808
Carbazole	ppm	0.00855	0.00844	85.0		49-133	1.30	29	WG424808
Chrysene	ppm	0.00839	0.00881	84.0		58-113	4.88	21	WG424808
Di-n-butyl phthalate	ppm	0.00775	0.00841	77.0		51-131	8.24	22	WG424808
Di-n-octyl phthalate	ppm	0.00864	0.00907	86.0		51-138	4.92	22	WG424808
Dibenz(a,h)anthracene	ppm	0.00695	0.00758	69.0		39-144	8.71	30	WG424808
Dibenzofuran	ppm	0.00863	0.00887	86.0		50-121	2.74	26	WG424808
Diethyl phthalate	ppm	0.00698	0.00779	70.0		36-128	11.0	27	WG424808
Dimethyl phthalate	ppm	0.00492	0.00577	49.0		10-135	15.9	33	WG424808
Fluoranthene	ppm	0.00883	0.00860	88.0		53-119	2.65	28	WG424808
Fluorene	ppm	0.00837	0.00887	84.0		49-116	5.75	25	WG424808
Hexachloro-1,3-butadiene	ppm	0.00635	0.00745	64.0		21-116	16.0	50	WG424808

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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Hexachlorobenzene	ppm	0.00852	0.00797	85.0	51-121	6.69	23	WG424808
Hexachlorocyclopentadiene	ppm	0.00471	0.00539	47.0	4-126	13.4	50	WG424808
Hexachloroethane	ppm	0.00463	0.00571	46.0	15-109	21.0	50	WG424808
Indeno(1,2,3-cd)pyrene	ppm	0.00693	0.00754	69.0	40-143	8.35	30	WG424808
Isophorone	ppm	0.00677	0.00719	68.0	48-126	6.04	31	WG424808
n-Nitrosodi-n-propylamine	ppm	0.00624	0.00680	62.0	47-122	8.55	33	WG424808
n-Nitrosodiphenylamine	ppm	0.00902	0.00912	90.0	59-143	1.15	23	WG424808
Naphthalene	ppm	0.00605	0.00700	61.0	29-103	14.5	45	WG424808
Nitrobenzene	ppm	0.00538	0.00619	54.0	31-105	14.0	43	WG424808
Pentachlorophenol	ppm	0.00441	0.00392	44.0	20-122	11.7	50	WG424808
Phenanthrene	ppm	0.00816	0.00819	82.0	54-112	0.351	22	WG424808
Phenol	ppm	0.00256	0.00289	26.0	17-52	12.0	33	WG424808
Pyrene	ppm	0.00882	0.00895	88.0	46-130	1.53	28	WG424808
2,4,6-Tribromophenol				89.62	10-148			WG424808
2-Fluorobiphenyl				76.40	26-122			WG424808
2-Fluorophenol				32.15	10-87			WG424808
Nitrobenzene-d5				49.57	12-120			WG424808
Phenol-d5				20.51	10-67			WG424808
p-Terphenyl-d14				103.1	34-149			WG424808
1-Methylnaphthalene	ppm	0.0245	0.0227	74.0	41-110	7.89	24	WG424733
2-Chloronaphthalene	ppm	0.0248	0.0231	75.0	43-109	7.16	21	WG424733
2-Methylnaphthalene	ppm	0.0243	0.0225	74.0	38-104	7.48	24	WG424733
Acenaphthene	ppm	0.0258	0.0241	78.0	48-103	6.71	20	WG424733
Acenaphthylene	ppm	0.0274	0.0238	83.0	43-106	14.0	20	WG424733
Anthracene	ppm	0.0265	0.0256	80.0	51-110	3.60	22	WG424733
Benzo(a)anthracene	ppm	0.0288	0.0263	87.0	38-126	8.84	20	WG424733
Benzo(a)pyrene	ppm	0.0286	0.0262	87.0	47-118	8.55	20	WG424733
Benzo(b)fluoranthene	ppm	0.0247	0.0226	75.0	47-118	8.98	29	WG424733
Benzo(g,h,i)perylene	ppm	0.0277	0.0255	84.0	40-125	8.01	20	WG424733
Benzo(k)fluoranthene	ppm	0.0300	0.0293	91.0	45-121	2.42	31	WG424733
Chrysene	ppm	0.0239	0.0218	72.0	35-135	9.13	20	WG424733
Dibenz(a,h)anthracene	ppm	0.0277	0.0257	84.0	41-124	7.39	20	WG424733
Fluoranthene	ppm	0.0266	0.0255	81.0	50-114	4.29	20	WG424733
Fluorene	ppm	0.0272	0.0253	82.0	49-109	6.99	19	WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0275	0.0258	83.0	40-126	6.16	20	WG424733
Naphthalene	ppm	0.0232	0.0211	70.0	36-100	9.48	24	WG424733
Phenanthrene	ppm	0.0262	0.0250	79.0	46-108	4.77	21	WG424733
Pyrene	ppm	0.0250	0.0230	76.0	30-136	8.55	20	WG424733
2-Fluorobiphenyl				84.42	30-120			WG424733
Nitrobenzene-d5				71.03	18-119			WG424733
p-Terphenyl-d14				83.89	23-143			WG424733
Diesel Range Organics (DRO)	mg/l	0.654	0.605	87.0	50-150	7.83	20	WG425407
Residual Range Organics (RRO)	mg/l	0.603	0.564	80*	-	6.80*	0	WG425407
o-Terphenyl				94.08	50-150			WG425407
Diesel (C7-C26)	mg/kg	21.1	22.6	70.0	50-150	7.09	20	WG425406
Motor Oil (C16-C40)	mg/kg	23.2	24.1	77.0	50-150	3.51	25	WG425406
o-Terphenyl				83.19	50-150			WG425406
1,1,1-Trichloroethane	mg/kg	0.0509	0.0514	102.	62-135	1.02	20	WG425508
1,1,2,2-Tetrachloroethane	mg/kg	0.0566	0.0531	113.	74-129	6.48	20	WG425508
1,1,2-Trichloroethane	mg/kg	0.0526	0.0496	105.	77-124	5.80	20	WG425508
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.0475	0.0501	95.0	49-155	5.42	20	WG425508

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L405232

June 24, 2009

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,1-Dichloroethane	mg/kg	0.0509	0.0524	102.	61-134	3.03	20	WG425508
1,1-Dichloroethene	mg/kg	0.0445	0.0474	89.0	53-136	6.37	20	WG425508
1,2,3-Trichlorobenzene	mg/kg	0.0506	0.0469	101.	62-146	7.63	20	WG425508
1,2,4-Trichlorobenzene	mg/kg	0.0503	0.0472	101.	61-148	6.32	20	WG425508
1,2-Dibromo-3-Chloropropane	mg/kg	0.0577	0.0508	115.	61-134	12.7	21	WG425508
1,2-Dibromoethane	mg/kg	0.0526	0.0494	105.	76-127	6.33	20	WG425508
1,2-Dichlorobenzene	mg/kg	0.0520	0.0501	104.	77-123	3.87	20	WG425508
1,2-Dichloroethane	mg/kg	0.0527	0.0516	105.	58-141	2.08	20	WG425508
1,2-Dichloropropane	mg/kg	0.0521	0.0490	104.	71-128	6.19	20	WG425508
1,3-Dichlorobenzene	mg/kg	0.0541	0.0552	108.	71-132	2.13	20	WG425508
1,4-Dichlorobenzene	mg/kg	0.0503	0.0482	101.	72-123	4.30	20	WG425508
2-Butanone (MEK)	mg/kg	0.288	0.252	115.	51-131	13.4	25	WG425508
2-Hexanone	mg/kg	0.333	0.282	133.	62-145	16.6	23	WG425508
4-Methyl-2-pentanone (MIBK)	mg/kg	0.299	0.243	120.	61-143	20.7	23	WG425508
Acetone	mg/kg	0.279	0.258	112.	44-140	7.89	25	WG425508
Benzene	mg/kg	0.0496	0.0501	99.0	65-128	0.921	20	WG425508
Bromochloromethane	mg/kg	0.0530	0.0535	106.	73-130	0.908	20	WG425508
Bromodichloromethane	mg/kg	0.0571	0.0546	114.	66-126	4.53	20	WG425508
Bromoform	mg/kg	0.0656	0.0616	131.	64-139	6.20	20	WG425508
Bromomethane	mg/kg	0.0643	0.0679	129.	41-175	5.39	20	WG425508
Carbon disulfide	mg/kg	0.0405	0.0419	81.0	36-161	3.52	20	WG425508
Carbon tetrachloride	mg/kg	0.0511	0.0517	102.	60-140	1.13	20	WG425508
Chlorobenzene	mg/kg	0.0496	0.0498	99.0	75-125	0.457	20	WG425508
Chlorodibromomethane	mg/kg	0.0563	0.0542	113.	72-137	3.75	20	WG425508
Chloroethane	mg/kg	0.0524	0.0580	105.	44-159	10.2	20	WG425508
Chloroform	mg/kg	0.0493	0.0505	99.0	63-123	2.34	20	WG425508
Chloromethane	mg/kg	0.0508	0.0548	102.	42-149	7.62	20	WG425508
cis-1,2-Dichloroethene	mg/kg	0.0515	0.0524	103.	71-129	1.58	20	WG425508
cis-1,3-Dichloropropene	mg/kg	0.0554	0.0507	111.	73-132	8.91	20	WG425508
Dichlorodifluoromethane	mg/kg	0.0549	0.0589	110.	26-186	7.03	22	WG425508
Ethylbenzene	mg/kg	0.0503	0.0490	101.	74-128	2.65	20	WG425508
Isopropylbenzene	mg/kg	0.0521	0.0529	104.	73-130	1.42	20	WG425508
Methyl tert-butyl ether	mg/kg	0.0536	0.0525	107.	44-148	2.20	20	WG425508
Methylene Chloride	mg/kg	0.0477	0.0500	95.0	57-129	4.76	20	WG425508
Styrene	mg/kg	0.0544	0.0529	109.	76-133	2.87	20	WG425508
Tetrachloroethene	mg/kg	0.0484	0.0494	97.0	65-135	1.92	20	WG425508
Toluene	mg/kg	0.0488	0.0457	98.0	70-120	6.59	20	WG425508
trans-1,2-Dichloroethene	mg/kg	0.0474	0.0496	95.0	61-133	4.51	20	WG425508
trans-1,3-Dichloropropene	mg/kg	0.0508	0.0460	102.	70-135	9.99	20	WG425508
Trichloroethene	mg/kg	0.0515	0.0508	103.	71-126	1.38	20	WG425508
Trichlorofluoromethane	mg/kg	0.0609	0.0646	122.	52-147	5.82	20	WG425508
Vinyl chloride	mg/kg	0.0494	0.0531	99.0	50-151	7.27	20	WG425508
4-Bromofluorobenzene				102.6	59-140			WG425508
Dibromofluoromethane				103.1	63-139			WG425508
Toluene-d8				102.9	84-116			WG425508
Antimony, Dissolved	mg/l	0.0538	0.0532	95.0	85-115	1.12	20	WG425437
Arsenic, Dissolved	mg/l	0.0530	0.0516	93.0	85-115	2.68	20	WG425437
Thallium, Dissolved	mg/l	0.0533	0.0534	94.0	85-115	0.187	20	WG425437
Diesel (C7-C26)	mg/kg	23.6	23.5	79.0	50-150	0.420	20	WG425725
Motor Oil (C16-C40)	mg/kg	27.2	26.7	91.0	50-150	2.01	20	WG425725
o-Terphenyl				85.53	50-150			WG425725
1,4-Dioxane	mg/l	0.00	0.00	0*	70-130	0.00	25	WG427744
4-Bromofluorobenzene				96.65	75-128			WG427744

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Quality Assurance Report
Level II

June 24, 2009

L405232

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Dibromofluoromethane					93.35	79-125		
Toluene-d8					96.73	87-114		

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,1-Trichloroethane	mg/l	0.0401	0.00	.05	80.2	31-161	L404924-03	WG424513
1,1,2,2-Tetrachloroethane	mg/l	0.0454	0.00	.05	90.9	49-149	L404924-03	WG424513
1,1,2-Trichloroethane	mg/l	0.0455	0.00	.05	91.0	46-145	L404924-03	WG424513
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0407	0.00	.05	81.4	14-168	L404924-03	WG424513
1,1-Dichloroethane	mg/l	0.0405	0.00	.05	80.9	30-159	L404924-03	WG424513
1,1-Dichloroethene	mg/l	0.0336	0.00	.05	67.3	10-162	L404924-03	WG424513
1,2,3-Trichlorobenzene	mg/l	0.0429	0.00	.05	85.8	32-143	L404924-03	WG424513
1,2,4-Trichlorobenzene	mg/l	0.0422	0.00	.05	84.3	27-142	L404924-03	WG424513
1,2-Dibromo-3-Chloropropane	mg/l	0.0449	0.00	.05	89.8	37-148	L404924-03	WG424513
1,2-Dibromoethane	mg/l	0.0430	0.00	.05	86.1	41-149	L404924-03	WG424513
1,2-Dichlorobenzene	mg/l	0.0415	0.00	.05	83.0	40-139	L404924-03	WG424513
1,2-Dichloroethane	mg/l	0.0388	0.00	.05	77.7	29-167	L404924-03	WG424513
1,2-Dichloropropane	mg/l	0.0465	0.00	.05	93.0	39-148	L404924-03	WG424513
1,3-Dichlorobenzene	mg/l	0.0460	0.00	.05	91.9	32-148	L404924-03	WG424513
1,4-Dichlorobenzene	mg/l	0.0396	0.00	.05	79.1	32-136	L404924-03	WG424513
2-Butanone (MEK)	mg/l	0.197	0.00	.25	78.6	32-151	L404924-03	WG424513
2-Hexanone	mg/l	0.242	0.00	.25	96.7	41-155	L404924-03	WG424513
4-Methyl-2-pentanone (MIBK)	mg/l	0.247	0.00	.25	99.0	40-160	L404924-03	WG424513
Acetone	mg/l	0.228	0.00	.25	91.3	25-157	L404924-03	WG424513
Benzene	mg/l	0.0372	0.00	.05	74.5	16-158	L404924-03	WG424513
Bromochloromethane	mg/l	0.0417	0.00	.05	83.4	36-154	L404924-03	WG424513
Bromodichloromethane	mg/l	0.0456	0.00	.05	91.1	45-147	L404924-03	WG424513
Bromoform	mg/l	0.0497	0.00	.05	99.4	38-152	L404924-03	WG424513
Bromomethane	mg/l	0.0328	0.00	.05	65.6	0-191	L404924-03	WG424513
Carbon disulfide	mg/l	0.0180	0.00	.05	35.9	10-166	L404924-03	WG424513
Carbon tetrachloride	mg/l	0.0381	0.00	.05	76.1	22-168	L404924-03	WG424513
Chlorobenzene	mg/l	0.0432	0.00	.05	86.4	33-148	L404924-03	WG424513
Chlorodibromomethane	mg/l	0.0466	0.00	.05	93.2	48-151	L404924-03	WG424513
Chloroethane	mg/l	0.0364	0.00	.05	72.9	4-176	L404924-03	WG424513
Chloroform	mg/l	0.0398	0.00	.05	79.6	37-147	L404924-03	WG424513
Chloromethane	mg/l	0.0307	0.00	.05	61.5	10-174	L404924-03	WG424513
cis-1,2-Dichloroethene	mg/l	0.0402	0.00	.05	80.5	29-156	L404924-03	WG424513
cis-1,3-Dichloropropene	mg/l	0.0427	0.00	.05	85.4	35-148	L404924-03	WG424513
Dichlorodifluoromethane	mg/l	0.0390	0.00	.05	77.9	0-200	L404924-03	WG424513
Ethylbenzene	mg/l	0.0427	0.00	.05	85.5	29-150	L404924-03	WG424513
Isopropylbenzene	mg/l	0.0443	0.00	.05	88.7	35-147	L404924-03	WG424513
Methyl tert-butyl ether	mg/l	0.0412	0.00	.05	82.3	24-167	L404924-03	WG424513
Methylene Chloride	mg/l	0.0355	0.00	.05	71.0	23-151	L404924-03	WG424513
Styrene	mg/l	0.0441	0.00	.05	88.2	38-149	L404924-03	WG424513
Tetrachloroethene	mg/l	0.0391	0.00	.05	78.2	13-157	L404924-03	WG424513
Toluene	mg/l	0.0389	0.00	.05	77.9	22-152	L404924-03	WG424513
trans-1,2-Dichloroethene	mg/l	0.0338	0.00	.05	67.7	11-160	L404924-03	WG424513
trans-1,3-Dichloropropene	mg/l	0.0444	0.00	.05	88.7	33-153	L404924-03	WG424513
Trichloroethene	mg/l	0.0411	0.00	.05	82.2	18-163	L404924-03	WG424513
Trichlorofluoromethane	mg/l	0.0360	0.00	.05	72.0	10-177	L404924-03	WG424513
Vinyl chloride	mg/l	0.0313	0.00	.05	62.6	0-179	L404924-03	WG424513
4-Bromofluorobenzene					104.8	75-128		WG424513
Dibromofluoromethane					95.09	79-125		WG424513
Toluene-d8					103.8	87-114		WG424513

1,1,1-Trichloroethane	mg/l	2.36	0.00	.05	94.5	31-161	L405330-06	WG424709
1,1,2,2-Tetrachloroethane	mg/l	2.59	0.00	.05	104.	49-149	L405330-06	WG424709

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,1,2-Trichloroethane	mg/l	2.42	0.00	.05	96.9	46-145	L405330-06	WG424709
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	2.08	0.00	.05	83.2	14-168	L405330-06	WG424709
1,1-Dichloroethane	mg/l	2.32	0.00	.05	92.9	30-159	L405330-06	WG424709
1,1-Dichloroethene	mg/l	1.88	0.00	.05	75.1	10-162	L405330-06	WG424709
1,2,3-Trichlorobenzene	mg/l	2.79	0.00	.05	112.	32-143	L405330-06	WG424709
1,2,4-Trichlorobenzene	mg/l	2.90	0.00696	.05	116.	27-142	L405330-06	WG424709
1,2-Dibromo-3-Chloropropane	mg/l	2.40	0.00	.05	96.1	37-148	L405330-06	WG424709
1,2-Dibromoethane	mg/l	2.42	0.00	.05	96.8	41-149	L405330-06	WG424709
1,2-Dichlorobenzene	mg/l	2.45	0.00	.05	98.1	40-139	L405330-06	WG424709
1,2-Dichloroethane	mg/l	2.34	0.00	.05	93.7	29-167	L405330-06	WG424709
1,2-Dichloropropane	mg/l	2.36	0.00	.05	94.3	39-148	L405330-06	WG424709
1,3-Dichlorobenzene	mg/l	2.33	0.00359	.05	92.9	32-148	L405330-06	WG424709
1,4-Dichlorobenzene	mg/l	2.35	0.00498	.05	93.8	32-136	L405330-06	WG424709
2-Butanone (MEK)	mg/l	13.2	0.00	.25	106.	32-151	L405330-06	WG424709
2-Hexanone	mg/l	13.9	0.00	.25	111.	41-155	L405330-06	WG424709
4-Methyl-2-pentanone (MIBK)	mg/l	13.8	0.00	.25	110.	40-160	L405330-06	WG424709
Acetone	mg/l	12.8	0.00	.25	102.	25-157	L405330-06	WG424709
Benzene	mg/l	2.25	0.0700	.05	87.4	16-158	L405330-06	WG424709
Bromochloromethane	mg/l	2.24	0.00	.05	89.6	36-154	L405330-06	WG424709
Bromodichloromethane	mg/l	2.49	0.00573	.05	99.5	45-147	L405330-06	WG424709
Bromoform	mg/l	2.27	0.00	.05	90.6	38-152	L405330-06	WG424709
Bromomethane	mg/l	1.74	0.00	.05	69.5	0-191	L405330-06	WG424709
Carbon disulfide	mg/l	1.61	0.0106	.05	63.9	10-166	L405330-06	WG424709
Carbon tetrachloride	mg/l	2.07	0.00	.05	82.9	22-168	L405330-06	WG424709
Chlorobenzene	mg/l	2.26	0.00256	.05	90.3	33-148	L405330-06	WG424709
Chlorodibromomethane	mg/l	2.62	0.00	.05	105.	48-151	L405330-06	WG424709
Chloroethane	mg/l	1.92	0.00	.05	76.8	4-176	L405330-06	WG424709
Chloroform	mg/l	2.30	0.00	.05	92.2	37-147	L405330-06	WG424709
Chloromethane	mg/l	2.10	0.00	.05	84.1	10-174	L405330-06	WG424709
cis-1,2-Dichloroethene	mg/l	2.23	0.0263	.05	88.3	29-156	L405330-06	WG424709
cis-1,3-Dichloropropene	mg/l	2.58	0.00	.05	103.	35-148	L405330-06	WG424709
Dichlorodifluoromethane	mg/l	2.50	0.00	.05	100.	0-200	L405330-06	WG424709
Ethylbenzene	mg/l	3.74	1.60	.05	85.7	29-150	L405330-06	WG424709
Isopropylbenzene	mg/l	2.40	0.0917	.05	92.4	35-147	L405330-06	WG424709
Methyl tert-butyl ether	mg/l	2.41	0.00	.05	96.4	24-167	L405330-06	WG424709
Methylene Chloride	mg/l	2.24	0.00	.05	89.4	23-151	L405330-06	WG424709
Styrene	mg/l	2.45	0.00948	.05	97.7	38-149	L405330-06	WG424709
Tetrachloroethene	mg/l	2.22	0.00	.05	88.8	13-157	L405330-06	WG424709
Toluene	mg/l	5.45	3.80	.05	66.0	22-152	L405330-06	WG424709
trans-1,2-Dichloroethene	mg/l	2.25	0.00	.05	89.9	11-160	L405330-06	WG424709
trans-1,3-Dichloropropene	mg/l	2.57	0.00	.05	103.	33-153	L405330-06	WG424709
Trichloroethene	mg/l	2.30	0.00713	.05	91.9	18-163	L405330-06	WG424709
Trichlorofluoromethane	mg/l	2.19	0.00	.05	87.6	10-177	L405330-06	WG424709
Vinyl chloride	mg/l	2.05	0.00	.05	81.9	0-179	L405330-06	WG424709
4-Bromofluorobenzene					102.2	75-128		WG424709
Dibromofluoromethane					101.3	79-125		WG424709
Toluene-d8					102.4	87-114		WG424709
PCB 1260	mg/kg	0.135	0.00	.167	81.1	10-197	L405319-06	WG424512
Decachlorobiphenyl					84.65	18.9-115.8		WG424512
Tetrachloro-m-xylene					94.68	31.8-115.7		WG424512
1,2,4,5-Tetrachlorobenzene	ppm	0.00685	0.00	.01	68.5	27-126	L404789-03	WG424808
2,4,5-Trichlorophenol	ppm	0.0103	0.00	.01	103.	10-136	L404789-03	WG424808
2,4,6-Trichlorophenol	ppm	0.00850	0.00	.01	85.0	10-137	L404789-03	WG424808
2,4-Dichlorophenol	ppm	0.00764	0.00	.01	76.4	10-133	L404789-03	WG424808
2,4-Dimethylphenol	ppm	0.0116	0.00	.01	116.	10-142	L404789-03	WG424808

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		MS Res	Ref Res	TV				
2,4-Dinitrophenol	ppm	0.00429	0.00	.01	42.9	10-150	L404789-03	WG424808
2,4-Dinitrotoluene	ppm	0.00991	0.00	.01	99.1	32-137	L404789-03	WG424808
2,6-Dinitrotoluene	ppm	0.00918	0.00	.01	91.8	35-123	L404789-03	WG424808
2-Chloronaphthalene	ppm	0.00795	0.00	.01	79.5	33-109	L404789-03	WG424808
2-Chlorophenol	ppm	0.00666	0.00	.01	66.6	10-155	L404789-03	WG424808
2-Methylnaphthalene	ppm	0.00793	0.00	.01	79.3	21-125	L404789-03	WG424808
2-Methylphenol	ppm	0.00569	0.00	.01	56.9	13-110	L404789-03	WG424808
2-Nitroaniline	ppm	0.00926	0.00	.01	92.6	31-135	L404789-03	WG424808
2-Nitrophenol	ppm	0.00767	0.00	.01	76.7	12-121	L404789-03	WG424808
3&4-methyl phenol	ppm	0.00533	0.00	.01	53.3	16-112	L404789-03	WG424808
3,3-Dichlorobenzidine	ppm	0.00702	0.00	.01	70.2	10-135	L404789-03	WG424808
3-Nitroaniline	ppm	0.00845	0.00	.01	84.5	0-139	L404789-03	WG424808
4,6-Dinitro-2-methylphenol	ppm	0.00716	0.00	.01	71.6	0-138	L404789-03	WG424808
4-Bromophenyl-phenylether	ppm	0.00799	0.00	.01	79.9	35-102	L404789-03	WG424808
4-Chloro-3-methylphenol	ppm	0.00700	0.00	.01	70.0	10-136	L404789-03	WG424808
4-Chloroaniline	ppm	0.00680	0.00	.01	68.0	0-169	L404789-03	WG424808
4-Chlorophenyl-phenylether	ppm	0.00969	0.00	.01	96.9	39-116	L404789-03	WG424808
4-Nitroaniline	ppm	0.00913	0.00	.01	91.3	0-166	L404789-03	WG424808
4-Nitrophenol	ppm	0.00203	0.00	.01	20.3	13-59	L404789-03	WG424808
Acenaphthene	ppm	0.00841	0.00	.01	84.1	39-112	L404789-03	WG424808
Acenaphthylene	ppm	0.00872	0.00	.01	87.2	37-114	L404789-03	WG424808
Acetophenone	ppm	0.00649	0.00	.01	64.9	20-103	L404789-03	WG424808
Anthracene	ppm	0.00907	0.00	.01	90.7	44-136	L404789-03	WG424808
Atrazine	ppm	0.0103	0.00	.01	103.	12-159	L404789-03	WG424808
Benzaldehyde	ppm	0.00668	0.00	.01	66.8*	0-65	L404789-03	WG424808
Benzo(a)anthracene	ppm	0.00821	0.00	.01	82.1	43-117	L404789-03	WG424808
Benzo(a)pyrene	ppm	0.00901	0.00	.01	90.1	33-137	L404789-03	WG424808
Benzo(b)fluoranthene	ppm	0.00893	0.00	.01	89.3	35-128	L404789-03	WG424808
Benzo(g,h,i)perylene	ppm	0.00761	0.00	.01	76.1	10-139	L404789-03	WG424808
Benzo(k)fluoranthene	ppm	0.00831	0.00	.01	83.1	36-119	L404789-03	WG424808
Benzylbutyl phthalate	ppm	0.00459	0.00	.01	45.9*	47-121	L404789-03	WG424808
Biphenyl	ppm	0.00822	0.00	.01	82.2	31-112	L404789-03	WG424808
Bis(2-chloroethoxy)methane	ppm	0.00815	0.00	.01	81.5	21-135	L404789-03	WG424808
Bis(2-chloroethyl)ether	ppm	0.00774	0.00	.01	77.4	10-134	L404789-03	WG424808
Bis(2-chloroisopropyl)ether	ppm	0.00702	0.00	.01	70.2	14-124	L404789-03	WG424808
Bis(2-ethylhexyl)phthalate	ppm	0.00919	0.00	.01	91.9	10-115	L404789-03	WG424808
Caprolactam	ppm	0.00163	0.00	.01	16.3	0-50	L404789-03	WG424808
Carbazole	ppm	0.00878	0.00	.01	87.8	31-145	L404789-03	WG424808
Chrysene	ppm	0.00903	0.00	.01	90.3	41-117	L404789-03	WG424808
Di-n-butyl phthalate	ppm	0.00731	0.00	.01	73.1	46-121	L404789-03	WG424808
Di-n-octyl phthalate	ppm	0.00890	0.00	.01	89.0	22-109	L404789-03	WG424808
Dibenz(a,h)anthracene	ppm	0.00730	0.00	.01	73.0	10-145	L404789-03	WG424808
Dibenzofuran	ppm	0.00909	0.00	.01	90.9	36-127	L404789-03	WG424808
Diethyl phthalate	ppm	0.00619	0.00	.01	61.9	23-132	L404789-03	WG424808
Dimethyl phthalate	ppm	0.00327	0.00	.01	32.7*	42-107	L404789-03	WG424808
Fluoranthene	ppm	0.00903	0.00	.01	90.3	36-130	L404789-03	WG424808
Fluorene	ppm	0.00911	0.00	.01	91.1	37-120	L404789-03	WG424808
Hexachloro-1,3-butadiene	ppm	0.00672	0.00	.01	67.2	16-118	L404789-03	WG424808
Hexachlorobenzene	ppm	0.00839	0.00	.01	83.9	41-114	L404789-03	WG424808
Hexachlorocyclopentadiene	ppm	0.00513	0.00	.01	51.3	0-132	L404789-03	WG424808
Hexachloroethane	ppm	0.00508	0.00	.01	50.8	10-125	L404789-03	WG424808
Indeno(1,2,3-cd)pyrene	ppm	0.00737	0.00	.01	73.7	10-138	L404789-03	WG424808
Isophorone	ppm	0.00710	0.00	.01	71.0	32-131	L404789-03	WG424808
n-Nitrosodi-n-propylamine	ppm	0.00707	0.00	.01	70.7	20-145	L404789-03	WG424808
n-Nitrosodiphenylamine	ppm	0.00896	0.00	.01	89.6	10-171	L404789-03	WG424808
Naphthalene	ppm	0.00648	0.00	.01	64.8	14-114	L404789-03	WG424808
Nitrobenzene	ppm	0.00609	0.00	.01	60.9	14-122	L404789-03	WG424808
Pentachlorophenol	ppm	0.00600	0.00	.01	60.0	0-137	L404789-03	WG424808
Phenanthrene	ppm	0.00831	0.00	.01	83.1	38-121	L404789-03	WG424808

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West Linn, OR 97068

**Quality Assurance Report
Level II**

June 24, 2009

L405232

Analyte	Units	MS Res	Matrix Spike			% Rec	Limit	Ref Samp	Batch
			Ref Res	TV					
Phenol	ppm	0.00290	0.00	.01		29.0	10-68	L404789-03	WG424808
Pyrene	ppm	0.00889	0.00	.01		88.9	27-136	L404789-03	WG424808
2,4,6-Tribromophenol						176.1*	10-148		WG424808
2-Fluorobiphenyl						159.4*	26-122		WG424808
2-Fluorophenol						78.23	10-87		WG424808
Nitrobenzene-d5						122.1*	12-120		WG424808
Phenol-d5						45.90	10-67		WG424808
p-Terphenyl-d14						193.3*	34-149		WG424808
Mercury	mg/l	0.00265	0.00	.003		88.3	70-130	L405382-10	WG424613
Mercury	mg/kg	0.251	0.00	.25		100.	70-130	L405194-04	WG424552
1-Methylnaphthalene	ppm	0.0596	0.0180	.033		126.	19-131	L405277-02	WG424733
2-Chloronaphthalene	ppm	0.0257	0.00	.033		77.8	38-117	L405277-02	WG424733
2-Methylnaphthalene	ppm	0.0877	0.0280	.033		181.*	18-125	L405277-02	WG424733
Acenaphthene	ppm	0.0289	0.00	.033		87.5	31-120	L405277-02	WG424733
Acenaphthylene	ppm	0.0266	0.00	.033		80.7	34-116	L405277-02	WG424733
Anthracene	ppm	0.0256	0.00	.033		77.7	32-131	L405277-02	WG424733
Benzo(a)anthracene	ppm	0.0228	0.00	.033		69.0	32-131	L405277-02	WG424733
Benzo(a)pyrene	ppm	0.0236	0.00	.033		71.5	28-130	L405277-02	WG424733
Benzo(b)fluoranthene	ppm	0.0213	0.00	.033		64.5	37-130	L405277-02	WG424733
Benzo(g,h,i)perylene	ppm	0.0215	0.00	.033		65.2	10-134	L405277-02	WG424733
Benzo(k)fluoranthene	ppm	0.0261	0.00	.033		79.2	31-129	L405277-02	WG424733
Chrysene	ppm	0.0223	0.00	.033		67.7	25-137	L405277-02	WG424733
Dibenz(a,h)anthracene	ppm	0.0226	0.00	.033		68.6	20-134	L405277-02	WG424733
Fluoranthene	ppm	0.0245	0.00	.033		74.3	27-138	L405277-02	WG424733
Fluorene	ppm	0.0310	0.00	.033		93.9	26-136	L405277-02	WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0218	0.00	.033		66.1	16-135	L405277-02	WG424733
Naphthalene	ppm	0.0291	0.00	.033		88.3	22-121	L405277-02	WG424733
Phenanthrene	ppm	0.0282	0.00	.033		85.5	27-133	L405277-02	WG424733
Pyrene	ppm	0.0233	0.00	.033		70.7	22-133	L405277-02	WG424733
2-Fluorobiphenyl						73.83	30-120		WG424733
Nitrobenzene-d5						59.50	18-119		WG424733
p-Terphenyl-d14						74.82	23-143		WG424733
Beryllium	mg/l	1.06	0.00065	1.13		93.7	75-125	L405758-01	WG425034
Cadmium	mg/l	1.05	0.00118	1.13		92.8	75-125	L405758-01	WG425034
Chromium	mg/l	1.07	0.00020	1.13		94.7	75-125	L405758-01	WG425034
Copper	mg/l	1.21	0.00	1.13		107.	75-125	L405758-01	WG425034
Lead	mg/l	1.05	0.00	1.13		92.9	75-125	L405758-01	WG425034
Nickel	mg/l	1.11	0.00160	1.13		98.1	75-125	L405758-01	WG425034
Selenium	mg/l	1.06	0.0156	1.13		92.4	75-125	L405758-01	WG425034
Silver	mg/l	0.525	0.00	1.13		46.5*	75-125	L405758-01	WG425034
Zinc	mg/l	1.14	0.0140	1.13		99.6	75-125	L405758-01	WG425034
Antimony	mg/kg	10.7	0.00	50		21.4*	75-125	L405194-02	WG424546
Arsenic	mg/kg	48.2	3.10	50		90.2	75-125	L405194-02	WG424546
Beryllium	mg/kg	47.6	0.767	50		93.7	75-125	L405194-02	WG424546
Cadmium	mg/kg	44.6	0.00	50		89.2	75-125	L405194-02	WG424546
Chromium	mg/kg	63.4	17.0	50		92.8	75-125	L405194-02	WG424546
Copper	mg/kg	62.0	12.0	50		100.	75-125	L405194-02	WG424546
Lead	mg/kg	51.8	5.00	50		93.6	75-125	L405194-02	WG424546
Nickel	mg/kg	64.9	16.0	50		97.8	75-125	L405194-02	WG424546

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June 24, 2009

L405232

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Selenium	mg/kg	40.6	0.00	50	81.2	75-125	L405194-02	WG424546
Silver	mg/kg	47.4	0.00	50	94.8	75-125	L405194-02	WG424546
Zinc	mg/kg	77.5	28.6	50	97.8	75-125	L405194-02	WG424546
Thallium	mg/kg	46.2	0.00	10	92.4	75-125	L405194-02	WG424546
Arsenic	mg/l	0.0553	0.00118	.0567	95.5	75-125	L405710-01	WG425075
Thallium	mg/l	0.0554	0.00008	.0567	97.6	75-125	L405710-01	WG425075
Diesel (C7-C26)	mg/kg	27.8	1.80	30	86.6	50-150	L406294-02	WG425406
Motor Oil (C16-C40)	mg/kg	72.3	50.0	30	74.2	50-150	L406294-02	WG425406
o-Terphenyl					84.42	50-150		WG425406
1,1,1-Trichloroethane	mg/kg	0.250	0.00600	.05	97.7	23-147	L405944-05	WG425508
1,1,2,2-Tetrachloroethane	mg/kg	0.210	0.0124	.05	79.2	18-150	L405944-05	WG425508
1,1,2-Trichloroethane	mg/kg	0.225	0.136	.05	35.6	35-140	L405944-05	WG425508
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.239	0.00	.05	95.5	10-145	L405944-05	WG425508
1,1-Dichloroethane	mg/kg	0.249	0.00409	.05	97.9	24-148	L405944-05	WG425508
1,1-Dichloroethene	mg/kg	0.225	0.00	.05	90.0	10-149	L405944-05	WG425508
1,2,3-Trichlorobenzene	mg/kg	0.243	0.00185	.05	96.6	10-129	L405944-05	WG425508
1,2,4-Trichlorobenzene	mg/kg	0.251	0.00173	.05	99.5	10-119	L405944-05	WG425508
1,2-Dibromo-3-Chloropropane	mg/kg	0.241	0.00	.05	96.5	19-145	L405944-05	WG425508
1,2-Dibromoethane	mg/kg	0.203	0.00564	.05	78.9	24-145	L405944-05	WG425508
1,2-Dichlorobenzene	mg/kg	0.245	0.00031	.05	97.7	12-130	L405944-05	WG425508
1,2-Dichloroethane	mg/kg	0.235	0.00047	.05	93.8	21-155	L405944-05	WG425508
1,2-Dichloropropane	mg/kg	0.239	0.0148	.05	89.5	28-144	L405944-05	WG425508
1,3-Dichlorobenzene	mg/kg	0.231	0.00	.05	92.6	10-129	L405944-05	WG425508
1,4-Dichlorobenzene	mg/kg	0.235	0.00052	.05	94.0	10-121	L405944-05	WG425508
2-Butanone (MEK)	mg/kg	1.13	0.219	.25	73.0	21-143	L405944-05	WG425508
2-Hexanone	mg/kg	1.12	0.0322	.25	87.4	22-151	L405944-05	WG425508
4-Methyl-2-pentanone (MIBK)	mg/kg	1.10	0.0764	.25	81.7	31-151	L405944-05	WG425508
Acetone	mg/kg	1.33	2.21	.25	0.00*	13-158	L405944-05	WG425508
Benzene	mg/kg	0.245	0.00	.05	98.0	16-143	L405944-05	WG425508
Bromochloromethane	mg/kg	0.246	0.00	.05	98.2	25-152	L405944-05	WG425508
Bromodichloromethane	mg/kg	0.268	0.0439	.05	89.6	27-139	L405944-05	WG425508
Bromoform	mg/kg	0.245	0.00	.05	98.1	21-144	L405944-05	WG425508
Bromomethane	mg/kg	0.333	0.00	.05	133.	0-180	L405944-05	WG425508
Carbon disulfide	mg/kg	0.203	0.00119	.05	80.5	10-156	L405944-05	WG425508
Carbon tetrachloride	mg/kg	0.283	0.00	.05	113.	12-149	L405944-05	WG425508
Chlorobenzene	mg/kg	0.216	0.00283	.05	85.2	17-134	L405944-05	WG425508
Chlorodibromomethane	mg/kg	0.225	0.00554	.05	87.9	28-147	L405944-05	WG425508
Chloroethane	mg/kg	0.271	0.00	.05	109.	0-172	L405944-05	WG425508
Chloroform	mg/kg	0.243	0.00996	.05	93.1	28-138	L405944-05	WG425508
Chloromethane	mg/kg	0.270	0.00	.05	108.	10-158	L405944-05	WG425508
cis-1,2-Dichloroethene	mg/kg	0.248	0.00059	.05	98.8	21-147	L405944-05	WG425508
cis-1,3-Dichloropropene	mg/kg	0.244	0.00	.05	97.8	17-145	L405944-05	WG425508
Dichlorodifluoromethane	mg/kg	0.289	0.00	.05	116.	0-192	L405944-05	WG425508
Ethylbenzene	mg/kg	0.223	0.0270	.05	78.4	12-137	L405944-05	WG425508
Isopropylbenzene	mg/kg	0.239	0.0514	.05	75.2	14-134	L405944-05	WG425508
Methyl tert-butyl ether	mg/kg	0.240	0.00	.05	96.0	21-157	L405944-05	WG425508
Methylene Chloride	mg/kg	0.237	0.00283	.05	93.5	12-149	L405944-05	WG425508
Styrene	mg/kg	0.232	0.00	.05	93.0	10-140	L405944-05	WG425508
Tetrachloroethene	mg/kg	0.209	0.00	.05	83.8	10-131	L405944-05	WG425508
Toluene	mg/kg	0.228	0.00	.05	91.0	12-136	L405944-05	WG425508
trans-1,2-Dichloroethene	mg/kg	0.233	0.00	.05	93.4	10-143	L405944-05	WG425508
trans-1,3-Dichloropropene	mg/kg	0.217	0.00363	.05	85.2	16-147	L405944-05	WG425508
Trichloroethene	mg/kg	0.246	0.00	.05	98.3	10-155	L405944-05	WG425508

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June 24, 2009

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Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Trichlorofluoromethane	mg/kg	0.308	0.00	.05	123.	10-154	L405944-05	WG425508
Vinyl chloride	mg/kg	0.250	0.00	.05	100.	10-159	L405944-05	WG425508
4-Bromofluorobenzene					95.26	59-140		WG425508
Dibromofluoromethane					105.2	63-139		WG425508
Toluene-d8					102.2	84-116		WG425508
Beryllium,Dissolved	mg/l	1.09	0.00018	1.13	96.4	75-125	L406228-04	WG425440
Cadmium,Dissolved	mg/l	1.08	0.00	1.13	95.6	75-125	L406228-04	WG425440
Chromium,Dissolved	mg/l	1.06	0.00210	1.13	93.6	75-125	L406228-04	WG425440
Copper,Dissolved	mg/l	1.14	0.00	1.13	101.	75-125	L406228-04	WG425440
Lead,Dissolved	mg/l	1.06	0.00	1.13	93.8	75-125	L406228-04	WG425440
Nickel,Dissolved	mg/l	1.10	0.00	1.13	97.3	75-125	L406228-04	WG425440
Selenium,Dissolved	mg/l	1.08	0.00430	1.13	95.2	75-125	L406228-04	WG425440
Silver,Dissolved	mg/l	0.145	0.00	1.13	12.8*	75-125	L406228-04	WG425440
Zinc,Dissolved	mg/l	1.09	0.00250	1.13	96.2	75-125	L406228-04	WG425440
Antimony,Dissolved	mg/l	0.0557	0.00	.0567	98.2	75-125	L405710-01	WG425437
Arsenic,Dissolved	mg/l	0.0543	0.00110	.0567	93.8	75-125	L405710-01	WG425437
Thallium,Dissolved	mg/l	0.0533	0.00	.0567	94.0	75-125	L405710-01	WG425437
Mercury,Dissolved	mg/l	0.00289	0.00	.003	96.3	70-130	L405337-01	WG425098
Diesel (C7-C26)	mg/kg	31.8	8.90	30	76.4	50-150	L404245-12	WG425725
Motor Oil (C16-C40)	mg/kg	65.5	63.0	30	8.22*	50-150	L404245-12	WG425725
o-Terphenyl					75.48	50-150		WG425725
Antimony	mg/l	0.0614	0.00039	.0567	108.	75-125	L405382-02	WG426003

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,1,1-Trichloroethane	mg/l	0.0424	0.0401	84.9	31-161	5.67	23	L404924-03	WG424513
1,1,2,2-Tetrachloroethane	mg/l	0.0502	0.0454	100.	49-149	9.95	22	L404924-03	WG424513
1,1,2-Trichloroethane	mg/l	0.0468	0.0455	93.6	46-145	2.91	20	L404924-03	WG424513
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	0.0423	0.0407	84.6	14-168	3.83	24	L404924-03	WG424513
1,1-Dichloroethane	mg/l	0.0426	0.0405	85.2	30-159	5.21	21	L404924-03	WG424513
1,1-Dichloroethene	mg/l	0.0346	0.0336	69.2	10-162	2.83	23	L404924-03	WG424513
1,2,3-Trichlorobenzene	mg/l	0.0425	0.0429	85.0	32-143	0.909	33	L404924-03	WG424513
1,2,4-Trichlorobenzene	mg/l	0.0421	0.0422	84.1	27-142	0.245	30	L404924-03	WG424513
1,2-Dibromo-3-Chloropropane	mg/l	0.0491	0.0449	98.3	37-148	9.06	27	L404924-03	WG424513
1,2-Dibromoethane	mg/l	0.0455	0.0430	91.0	41-149	5.52	21	L404924-03	WG424513
1,2-Dichlorobenzene	mg/l	0.0430	0.0415	86.0	40-139	3.47	23	L404924-03	WG424513
1,2-Dichloroethane	mg/l	0.0421	0.0388	84.1	29-167	7.93	21	L404924-03	WG424513
1,2-Dichloropropane	mg/l	0.0471	0.0465	94.2	39-148	1.35	20	L404924-03	WG424513
1,3-Dichlorobenzene	mg/l	0.0477	0.0460	95.3	32-148	3.62	24	L404924-03	WG424513
1,4-Dichlorobenzene	mg/l	0.0407	0.0396	81.4	32-136	2.89	23	L404924-03	WG424513
2-Butanone (MEK)	mg/l	0.222	0.197	88.9	32-151	12.3	26	L404924-03	WG424513
2-Hexanone	mg/l	0.271	0.242	108.	41-155	11.3	28	L404924-03	WG424513
4-Methyl-2-pentanone (MIBK)	mg/l	0.273	0.247	109.	40-160	9.86	28	L404924-03	WG424513
Acetone	mg/l	0.263	0.228	105.	25-157	14.0	26	L404924-03	WG424513
Benzene	mg/l	0.0396	0.0372	79.2	16-158	6.12	21	L404924-03	WG424513
Bromochloromethane	mg/l	0.0457	0.0417	91.3	36-154	9.04	21	L404924-03	WG424513
Bromodichloromethane	mg/l	0.0468	0.0456	93.5	45-147	2.59	20	L404924-03	WG424513
Bromoform	mg/l	0.0544	0.0497	109.	38-152	9.02	20	L404924-03	WG424513

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West Linn, OR 97068

June 24, 2009

L405232

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Bromomethane	mg/l	0.0345	0.0328	68.9	0-191	4.95	35	L404924-03	WG424513
Carbon disulfide	mg/l	0.0184	0.0180	36.7	10-166	2.08	25	L404924-03	WG424513
Carbon tetrachloride	mg/l	0.0399	0.0381	79.9	22-168	4.84	24	L404924-03	WG424513
Chlorobenzene	mg/l	0.0454	0.0432	90.7	33-148	4.90	22	L404924-03	WG424513
Chlorodibromomethane	mg/l	0.0489	0.0466	97.7	48-151	4.77	21	L404924-03	WG424513
Chloroethane	mg/l	0.0380	0.0364	76.0	4-176	4.21	27	L404924-03	WG424513
Chloroform	mg/l	0.0420	0.0398	84.1	37-147	5.44	21	L404924-03	WG424513
Chloromethane	mg/l	0.0311	0.0307	62.2	10-174	1.13	28	L404924-03	WG424513
cis-1,2-Dichloroethene	mg/l	0.0427	0.0402	85.4	29-156	5.92	22	L404924-03	WG424513
cis-1,3-Dichloropropene	mg/l	0.0445	0.0427	89.0	35-148	4.12	21	L404924-03	WG424513
Dichlorodifluoromethane	mg/l	0.0411	0.0390	82.2	0-200	5.33	26	L404924-03	WG424513
Ethylbenzene	mg/l	0.0443	0.0427	88.6	29-150	3.62	24	L404924-03	WG424513
Isopropylbenzene	mg/l	0.0456	0.0443	91.1	35-147	2.74	25	L404924-03	WG424513
Methyl tert-butyl ether	mg/l	0.0464	0.0412	92.8	24-167	12.0	22	L404924-03	WG424513
Methylene Chloride	mg/l	0.0381	0.0355	76.2	23-151	6.99	21	L404924-03	WG424513
Styrene	mg/l	0.0465	0.0441	92.9	38-149	5.22	23	L404924-03	WG424513
Tetrachloroethene	mg/l	0.0391	0.0391	78.3	13-157	0.115	24	L404924-03	WG424513
Toluene	mg/l	0.0397	0.0389	79.5	22-152	2.03	22	L404924-03	WG424513
trans-1,2-Dichloroethene	mg/l	0.0352	0.0338	70.4	11-160	4.03	23	L404924-03	WG424513
trans-1,3-Dichloropropene	mg/l	0.0450	0.0444	89.9	33-153	1.37	22	L404924-03	WG424513
Trichloroethene	mg/l	0.0425	0.0411	85.0	18-163	3.39	21	L404924-03	WG424513
Trichlorofluoromethane	mg/l	0.0386	0.0360	77.2	10-177	7.00	24	L404924-03	WG424513
Vinyl chloride	mg/l	0.0326	0.0313	65.2	0-179	4.11	26	L404924-03	WG424513
4-Bromofluorobenzene				106.3	75-128				WG424513
Dibromofluoromethane				99.09	79-125				WG424513
Toluene-d8				102.6	87-114				WG424513
1,1,1-Trichloroethane	mg/l	2.27	2.36	90.6	31-161	4.13	23	L405330-06	WG424709
1,1,2,2-Tetrachloroethane	mg/l	2.70	2.59	108.	49-149	4.19	22	L405330-06	WG424709
1,1,2-Trichloroethane	mg/l	2.47	2.42	98.7	46-145	1.90	20	L405330-06	WG424709
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/l	1.93	2.08	77.0	14-168	7.70	24	L405330-06	WG424709
1,1-Dichloroethane	mg/l	2.23	2.32	89.1	30-159	4.21	21	L405330-06	WG424709
1,1-Dichloroethene	mg/l	1.79	1.88	71.8	10-162	4.53	23	L405330-06	WG424709
1,2,3-Trichlorobenzene	mg/l	2.72	2.79	109.	32-143	2.47	33	L405330-06	WG424709
1,2,4-Trichlorobenzene	mg/l	2.72	2.90	108.	27-142	6.72	30	L405330-06	WG424709
1,2-Dibromo-3-Chloropropane	mg/l	2.60	2.40	104.	37-148	8.02	27	L405330-06	WG424709
1,2-Dibromoethane	mg/l	2.50	2.42	100.	41-149	3.45	21	L405330-06	WG424709
1,2-Dichlorobenzene	mg/l	2.32	2.45	92.9	40-139	5.39	23	L405330-06	WG424709
1,2-Dichloroethane	mg/l	2.27	2.34	90.6	29-167	3.39	21	L405330-06	WG424709
1,2-Dichloropropane	mg/l	2.34	2.36	93.6	39-148	0.717	20	L405330-06	WG424709
1,3-Dichlorobenzene	mg/l	2.30	2.33	91.7	32-148	1.28	24	L405330-06	WG424709
1,4-Dichlorobenzene	mg/l	2.23	2.35	89.2	32-136	5.00	23	L405330-06	WG424709
2-Butanone (MEK)	mg/l	13.8	13.2	110.	32-151	3.93	26	L405330-06	WG424709
2-Hexanone	mg/l	14.8	13.9	118.	41-155	6.26	28	L405330-06	WG424709
4-Methyl-2-pentanone (MIBK)	mg/l	14.1	13.8	113.	40-160	2.57	28	L405330-06	WG424709
Acetone	mg/l	13.2	12.8	105.	25-157	2.75	26	L405330-06	WG424709
Benzene	mg/l	2.14	2.25	82.7	16-158	5.31	21	L405330-06	WG424709
Bromochloromethane	mg/l	2.19	2.24	87.5	36-154	2.35	21	L405330-06	WG424709
Bromodichloromethane	mg/l	2.41	2.49	96.0	45-147	3.59	20	L405330-06	WG424709
Bromoform	mg/l	2.44	2.27	97.6	38-152	7.36	20	L405330-06	WG424709
Bromomethane	mg/l	1.58	1.74	63.2	0-191	9.53	35	L405330-06	WG424709
Carbon disulfide	mg/l	1.47	1.61	58.4	10-166	8.94	25	L405330-06	WG424709
Carbon tetrachloride	mg/l	2.30	2.07	91.9	22-168	10.3	24	L405330-06	WG424709
Chlorobenzene	mg/l	2.22	2.26	88.6	33-148	1.89	22	L405330-06	WG424709
Chlorodibromomethane	mg/l	2.65	2.62	106.	48-151	1.28	21	L405330-06	WG424709
Chloroethane	mg/l	1.84	1.92	73.8	4-176	3.98	27	L405330-06	WG424709
Chloroform	mg/l	2.19	2.30	87.5	37-147	5.16	21	L405330-06	WG424709
Chloromethane	mg/l	1.89	2.10	75.7	10-174	10.5	28	L405330-06	WG424709

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cis-1,2-Dichloroethene	mg/l	2.14	2.23	84.6	29-156	4.18	22	L405330-06	WG424709
cis-1,3-Dichloropropene	mg/l	2.40	2.58	95.8	35-148	7.27	21	L405330-06	WG424709
Dichlorodifluoromethane	mg/l	2.28	2.50	91.2	0-200	9.24	26	L405330-06	WG424709
Ethylbenzene	mg/l	3.63	3.74	81.2	29-150	3.09	24	L405330-06	WG424709
Isopropylbenzene	mg/l	2.38	2.40	91.6	35-147	0.880	25	L405330-06	WG424709
Methyl tert-butyl ether	mg/l	2.42	2.41	96.9	24-167	0.520	22	L405330-06	WG424709
Methylene Chloride	mg/l	2.15	2.24	85.9	23-151	4.04	21	L405330-06	WG424709
Styrene	mg/l	2.41	2.45	95.8	38-149	1.90	23	L405330-06	WG424709
Tetrachloroethene	mg/l	2.16	2.22	86.2	13-157	2.90	24	L405330-06	WG424709
Toluene	mg/l	5.15	5.45	54.1	22-152	5.61	22	L405330-06	WG424709
trans-1,2-Dichloroethene	mg/l	2.13	2.25	85.3	11-160	5.22	23	L405330-06	WG424709
trans-1,3-Dichloropropene	mg/l	2.49	2.57	99.5	33-153	3.12	22	L405330-06	WG424709
Trichloroethene	mg/l	2.19	2.30	87.2	18-163	5.27	21	L405330-06	WG424709
Trichlorofluoromethane	mg/l	2.05	2.19	82.2	10-177	6.36	24	L405330-06	WG424709
Vinyl chloride	mg/l	1.90	2.05	75.9	0-179	7.60	26	L405330-06	WG424709
4-Bromofluorobenzene				105.3	75-128				WG424709
Dibromofluoromethane				99.09	79-125				WG424709
Toluene-d8				102.4	87-114				WG424709
PCB 1260	mg/kg	0.183	0.135	109.	10-197	29.7	39	L405319-06	WG424512
Decachlorobiphenyl				106.6	18.9-115.8				WG424512
Tetrachloro-m-xylene				114.8	31.8-115.7				WG424512
1,2,4,5-Tetrachlorobenzene	ppm	0.0068	0.0068	68.4	27-126	0.125	46	L404789-03	WG424808
2,4,5-Trichlorophenol	ppm	0.0092	0.0103	92.9	10-136	10.3	45	L404789-03	WG424808
2,4,6-Trichlorophenol	ppm	0.0078	0.0085	78.4	10-137	8.02	42	L404789-03	WG424808
2,4-Dichlorophenol	ppm	0.0076	0.0076	76.8	10-133	0.567	50	L404789-03	WG424808
2,4-Dimethylphenol	ppm	0.0116	0.0116	116.	10-142	0.082	36	L404789-03	WG424808
2,4-Dinitrophenol	ppm	0.0029	0.0042	29.5	10-150	37.2	50	L404789-03	WG424808
2,4-Dinitrotoluene	ppm	0.0091	0.0099	91.1	32-137	8.40	36	L404789-03	WG424808
2,6-Dinitrotoluene	ppm	0.0090	0.0091	90.3	35-123	1.61	37	L404789-03	WG424808
2-Chloronaphthalene	ppm	0.0078	0.0079	78.8	33-109	0.898	39	L404789-03	WG424808
2-Chlorophenol	ppm	0.0063	0.0066	63.1	10-155	5.47	50	L404789-03	WG424808
2-Methylnaphthalene	ppm	0.0079	0.0079	79.0	21-125	0.419	42	L404789-03	WG424808
2-Methylphenol	ppm	0.0054	0.0056	54.6	13-110	4.18	23	L404789-03	WG424808
2-Nitroaniline	ppm	0.0087	0.0092	87.6	31-135	5.53	26	L404789-03	WG424808
2-Nitrophenol	ppm	0.0077	0.0076	77.6	12-121	1.20	48	L404789-03	WG424808
3&4-methyl phenol	ppm	0.0051	0.0053	51.1	16-112	4.11	36	L404789-03	WG424808
3,3-Dichlorobenzidine	ppm	0.0069	0.0070	69.4	10-135	1.21	40	L404789-03	WG424808
3-Nitroaniline	ppm	0.0082	0.0084	82.0	0-139	2.92	50	L404789-03	WG424808
4,6-Dinitro-2-methylphenol	ppm	0.0058	0.0071	58.1	0-138	20.7	50	L404789-03	WG424808
4-Bromophenyl-phenylether	ppm	0.0076	0.0079	76.2	35-102	4.78	23	L404789-03	WG424808
4-Chloro-3-methylphenol	ppm	0.0066	0.0070	66.6	10-136	4.99	29	L404789-03	WG424808
4-Chloroaniline	ppm	0.0066	0.0068	66.5	0-169	2.29	50	L404789-03	WG424808
4-Chlorophenyl-phenylether	ppm	0.0095	0.0096	95.3	39-116	1.58	32	L404789-03	WG424808
4-Nitroaniline	ppm	0.0092	0.0091	92.9	0-166	1.72	50	L404789-03	WG424808
4-Nitrophenol	ppm	0.0018	0.0020	18.0	13-59	11.9	50	L404789-03	WG424808
Acenaphthene	ppm	0.0084	0.0084	84.8	39-112	0.759	37	L404789-03	WG424808
Acenaphthylene	ppm	0.0084	0.0087	84.7	37-114	2.89	35	L404789-03	WG424808
Acetophenone	ppm	0.0060	0.0064	60.8	20-103	6.46	44	L404789-03	WG424808
Anthracene	ppm	0.0094	0.0090	94.0	44-136	3.61	24	L404789-03	WG424808
Atrazine	ppm	0.0092	0.0103	92.7	12-159	10.4	36	L404789-03	WG424808
Benzaldehyde	ppm	0.0056	0.0066	56.5	0-65	16.8	50	L404789-03	WG424808
Benzo(a)anthracene	ppm	0.0082	0.0082	82.9	43-117	0.985	25	L404789-03	WG424808
Benzo(a)pyrene	ppm	0.0088	0.0090	88.1	33-137	2.23	34	L404789-03	WG424808
Benzo(b)fluoranthene	ppm	0.0078	0.0089	78.1	35-128	13.3	50	L404789-03	WG424808
Benzo(g,h,i)perylene	ppm	0.0073	0.0076	73.1	10-139	4.12	50	L404789-03	WG424808

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			Ref	%Rec					
Benzo(k)fluoranthene	ppm	0.0089	0.0083	89.0	36-119	6.86	40	L404789-03	WG424808
Benzybutyl phthalate	ppm	0.0051	0.0045	51.1	47-121	10.6	28	L404789-03	WG424808
Biphenyl	ppm	0.0080	0.0082	80.3	31-112	2.35	40	L404789-03	WG424808
Bis(2-chlorethoxy)methane	ppm	0.0081	0.0081	81.3	21-135	0.255	39	L404789-03	WG424808
Bis(2-chloroethyl)ether	ppm	0.0075	0.0077	75.6	10-134	2.37	50	L404789-03	WG424808
Bis(2-chloroisopropyl)ether	ppm	0.0071	0.0070	71.4	14-124	1.61	40	L404789-03	WG424808
Bis(2-ethylhexyl)phthalate	ppm	0.0084	0.0091	84.8	10-115	8.01	33	L404789-03	WG424808
Caprolactam	ppm	0.0015	0.0016	15.0	0-50	8.37	50	L404789-03	WG424808
Carbazole	ppm	0.0089	0.0087	89.6	31-145	1.98	29	L404789-03	WG424808
Chrysene	ppm	0.0087	0.0090	87.1	41-117	3.61	24	L404789-03	WG424808
Di-n-butyl phthalate	ppm	0.0066	0.0073	66.3	46-121	9.76	27	L404789-03	WG424808
Di-n-octyl phthalate	ppm	0.0083	0.0089	83.2	22-109	6.70	31	L404789-03	WG424808
Dibenz(a,h)anthracene	ppm	0.0070	0.0073	70.6	10-145	3.33	50	L404789-03	WG424808
Dibenzofuran	ppm	0.0088	0.0090	88.6	36-127	2.48	36	L404789-03	WG424808
Diethyl phthalate	ppm	0.0061	0.0061	61.1	23-132	1.30	35	L404789-03	WG424808
Dimethyl phthalate	ppm	0.0048	0.0032	48.5	42-107	38.7*	27	L404789-03	WG424808
Fluoranthene	ppm	0.0082	0.0090	82.8	36-130	8.64	27	L404789-03	WG424808
Fluorene	ppm	0.0087	0.0091	87.3	37-120	4.31	30	L404789-03	WG424808
Hexachloro-1,3-butadiene	ppm	0.0064	0.0067	64.1	16-118	4.79	50	L404789-03	WG424808
Hexachlorobenzene	ppm	0.0081	0.0083	81.1	41-114	3.42	28	L404789-03	WG424808
Hexachlorocyclopentadiene	ppm	0.0046	0.0051	46.7	0-132	9.34	50	L404789-03	WG424808
Hexachloroethane	ppm	0.0048	0.0050	48.7	10-125	4.30	50	L404789-03	WG424808
Indeno(1,2,3-cd)pyrene	ppm	0.0069	0.0073	69.8	10-138	5.40	50	L404789-03	WG424808
Isophorone	ppm	0.0072	0.0071	72.3	32-131	1.71	38	L404789-03	WG424808
n-Nitrosodi-n-propylamine	ppm	0.0071	0.0070	71.4	20-145	0.941	43	L404789-03	WG424808
n-Nitrosodiphenylamine	ppm	0.0090	0.0089	90.0	10-171	0.537	34	L404789-03	WG424808
Naphthalene	ppm	0.0068	0.0064	68.4	14-114	5.49	50	L404789-03	WG424808
Nitrobenzene	ppm	0.0060	0.0060	60.5	14-122	0.693	46	L404789-03	WG424808
Pentachlorophenol	ppm	0.0050	0.0060	50.9	0-137	16.5	50	L404789-03	WG424808
Phenanthrene	ppm	0.0081	0.0083	81.7	38-121	1.76	26	L404789-03	WG424808
Phenol	ppm	0.0026	0.0029	26.7	10-68	8.28	32	L404789-03	WG424808
Pyrene	ppm	0.0086	0.0088	86.7	27-136	2.53	33	L404789-03	WG424808
2,4,6-Tribromophenol				164.3*	10-148				WG424808
2-Fluorobiphenyl				158.2*	26-122				WG424808
2-Fluorophenol				72.13	10-87				WG424808
Nitrobenzene-d5				117.4	12-120				WG424808
Phenol-d5				41.81	10-67				WG424808
p-Terphenyl-d14				196.9*	34-149				WG424808
Mercury	mg/l	0.0025	0.0026	83.3	70-130	5.83	20	L405382-10	WG424613
Mercury	mg/kg	0.243	0.251	97.2	70-130	3.24	20	L405194-04	WG424552
1-Methylnaphthalene	ppm	0.0483	0.0596	91.8	19-131	20.9	30	L405277-02	WG424733
2-Chloronaphthalene	ppm	0.0240	0.0257	72.8	38-117	6.60	26	L405277-02	WG424733
2-Methylnaphthalene	ppm	0.0736	0.0877	138.113*	18-125	17.5	29	L405277-02	WG424733
Acenaphthene	ppm	0.0254	0.0289	76.9	31-120	12.8	30	L405277-02	WG424733
Acenaphthylene	ppm	0.0232	0.0266	70.4	34-116	13.7	29	L405277-02	WG424733
Anthracene	ppm	0.0249	0.0256	75.3	32-131	3.04	26	L405277-02	WG424733
Benzo(a)anthracene	ppm	0.0246	0.0228	74.7	32-131	7.96	31	L405277-02	WG424733
Benzo(a)pyrene	ppm	0.0246	0.0236	74.6	28-130	4.21	28	L405277-02	WG424733
Benzo(b)fluoranthene	ppm	0.0246	0.0213	74.5	37-130	14.4	41	L405277-02	WG424733
Benzo(g,h,i)perylene	ppm	0.0228	0.0215	69.2	10-134	5.96	26	L405277-02	WG424733
Benzo(k)fluoranthene	ppm	0.0245	0.0261	74.2	31-129	6.42	42	L405277-02	WG424733
Chrysene	ppm	0.0215	0.0223	65.1	25-137	3.87	22	L405277-02	WG424733
Dibenz(a,h)anthracene	ppm	0.0232	0.0226	70.3	20-134	2.48	25	L405277-02	WG424733

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Fluoranthene	ppm	0.0242	0.0245	73.3	27-138	1.48	35	L405277-02		WG424733
Fluorene	ppm	0.0271	0.0310	82.1	26-136	13.4	30	L405277-02		WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0231	0.0218	70.1	16-135	5.80	26	L405277-02		WG424733
Naphthalene	ppm	0.0266	0.0291	80.5	22-121	9.26	30	L405277-02		WG424733
Phenanthrene	ppm	0.0292	0.0282	88.5	27-133	3.44	36	L405277-02		WG424733
Pyrene	ppm	0.0235	0.0233	71.1	22-133	0.578	33	L405277-02		WG424733
2-Fluorobiphenyl				66.72	30-120					WG424733
Nitrobenzene-d5				59.30	18-119					WG424733
p-Terphenyl-d14				75.21	23-143					WG424733
Beryllium	mg/l	1.06	1.06	93.7	75-125	0.00	20	L405758-01		WG425034
Cadmium	mg/l	1.03	1.05	91.0	75-125	1.92	20	L405758-01		WG425034
Chromium	mg/l	1.05	1.07	92.9	75-125	1.89	20	L405758-01		WG425034
Copper	mg/l	1.18	1.21	104.	75-125	2.51	20	L405758-01		WG425034
Lead	mg/l	1.03	1.05	91.2	75-125	1.92	20	L405758-01		WG425034
Nickel	mg/l	1.08	1.11	95.4	75-125	2.74	20	L405758-01		WG425034
Selenium	mg/l	1.04	1.06	90.7	75-125	1.90	20	L405758-01		WG425034
Silver	mg/l	0.474	0.525	41.947*	75-125	10.2	20	L405758-01		WG425034
Zinc	mg/l	1.12	1.14	97.9	75-125	1.77	20	L405758-01		WG425034
Antimony	mg/kg	11.1	10.7	22.2*	75-125	3.67	20	L405194-02		WG424546
Arsenic	mg/kg	49.2	48.2	92.2	75-125	2.05	20	L405194-02		WG424546
Beryllium	mg/kg	47.4	47.6	93.3	75-125	0.421	20	L405194-02		WG424546
Cadmium	mg/kg	45.3	44.6	90.6	75-125	1.56	20	L405194-02		WG424546
Chromium	mg/kg	63.7	63.4	93.4	75-125	0.472	20	L405194-02		WG424546
Copper	mg/kg	62.9	62.0	102.	75-125	1.44	20	L405194-02		WG424546
Lead	mg/kg	51.6	51.8	93.2	75-125	0.387	20	L405194-02		WG424546
Nickel	mg/kg	65.0	64.9	98.0	75-125	0.154	20	L405194-02		WG424546
Selenium	mg/kg	41.3	40.6	82.6	75-125	1.71	20	L405194-02		WG424546
Silver	mg/kg	48.0	47.4	96.0	75-125	1.26	20	L405194-02		WG424546
Zinc	mg/kg	79.8	77.5	102.	75-125	2.92	20	L405194-02		WG424546
Thallium	mg/kg	49.4	46.2	98.8	75-125	6.69	20	L405194-02		WG424546
Arsenic	mg/l	0.0552	0.0553	95.3	75-125	0.181	20	L405710-01		WG425075
Thallium	mg/l	0.0543	0.0554	95.6	75-125	2.01	20	L405710-01		WG425075
Diesel (C7-C26)	mg/kg	27.1	27.8	84.3	50-150	2.50	20	L406294-02		WG425406
Motor Oil (C16-C40)	mg/kg	74.1	72.3	80.2	50-150	2.45	25	L406294-02		WG425406
o-Terphenyl				83.52	50-150					WG425406
1,1,1-Trichloroethane	mg/kg	0.251	0.250	97.9	23-147	0.124	32	L405944-05		WG425508
1,1,2,2-Tetrachloroethane	mg/kg	0.213	0.210	80.4	18-150	1.42	33	L405944-05		WG425508
1,1,2-Trichloroethane	mg/kg	0.248	0.225	44.7	35-140	9.67	29	L405944-05		WG425508
1,1,2-Trichloro-1,2,2-trifluoroethane	mg/kg	0.233	0.239	93.4	10-145	2.22	35	L405944-05		WG425508
1,1-Dichloroethane	mg/kg	0.258	0.249	102.	24-148	3.76	31	L405944-05		WG425508
1,1-Dichloroethene	mg/kg	0.224	0.225	89.7	10-149	0.333	34	L405944-05		WG425508
1,2,3-Trichlorobenzene	mg/kg	0.224	0.243	88.7	10-129	8.40	43	L405944-05		WG425508
1,2,4-Trichlorobenzene	mg/kg	0.233	0.251	92.7	10-119	7.09	44	L405944-05		WG425508
1,2-Dibromo-3-Chloropropane	mg/kg	0.321	0.241	128.	19-145	28.3	35	L405944-05		WG425508
1,2-Dibromoethane	mg/kg	0.183	0.203	70.9	24-145	10.3	31	L405944-05		WG425508
1,2-Dichlorobenzene	mg/kg	0.238	0.245	95.1	12-130	2.70	35	L405944-05		WG425508
1,2-Dichloroethane	mg/kg	0.244	0.235	97.2	21-155	3.56	29	L405944-05		WG425508
1,2-Dichloropropane	mg/kg	0.220	0.239	82.0	28-144	8.23	30	L405944-05		WG425508
1,3-Dichlorobenzene	mg/kg	0.216	0.231	86.3	10-129	7.03	38	L405944-05		WG425508

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West Linn, OR 97068

Quality Assurance Report Level II

June 24, 2009

L405232

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
1,4-Dichlorobenzene	mg/kg	0.224	0.235	89.3	10-121	5.02	36	L405944-05	WG425508
2-Butanone (MEK)	mg/kg	1.55	1.13	106.	21-143	31.0	37	L405944-05	WG425508
2-Hexanone	mg/kg	1.23	1.12	95.7	22-151	8.84	38	L405944-05	WG425508
4-Methyl-2-pentanone (MIBK)	mg/kg	1.15	1.10	86.3	31-151	5.11	36	L405944-05	WG425508
Acetone	mg/kg	2.12	1.33	0*	13-158	45.3*	34	L405944-05	WG425508
Benzene	mg/kg	0.230	0.245	92.0	16-143	6.39	31	L405944-05	WG425508
Bromochloromethane	mg/kg	0.272	0.246	109.	25-152	10.3	29	L405944-05	WG425508
Bromodichloromethane	mg/kg	0.255	0.268	84.4	27-139	4.99	30	L405944-05	WG425508
Bromoform	mg/kg	0.271	0.245	108.	21-144	9.87	34	L405944-05	WG425508
Bromomethane	mg/kg	0.335	0.333	134.	0-180	0.659	41	L405944-05	WG425508
Carbon disulfide	mg/kg	0.208	0.203	82.5	10-156	2.45	38	L405944-05	WG425508
Carbon tetrachloride	mg/kg	0.251	0.283	100.	12-149	12.1	34	L405944-05	WG425508
Chlorobenzene	mg/kg	0.201	0.216	79.2	17-134	7.24	34	L405944-05	WG425508
Chlorodibromomethane	mg/kg	0.247	0.225	96.6	28-147	9.21	32	L405944-05	WG425508
Chloroethane	mg/kg	0.267	0.271	107.	0-172	1.61	38	L405944-05	WG425508
Chloroform	mg/kg	0.253	0.243	97.0	28-138	4.02	30	L405944-05	WG425508
Chloromethane	mg/kg	0.272	0.270	109.	10-158	0.705	35	L405944-05	WG425508
cis-1,2-Dichloroethene	mg/kg	0.260	0.248	104.	21-147	4.78	31	L405944-05	WG425508
cis-1,3-Dichloropropene	mg/kg	0.240	0.244	96.2	17-145	1.68	32	L405944-05	WG425508
Dichlorodifluoromethane	mg/kg	0.289	0.289	116.	0-192	0.057	38	L405944-05	WG425508
Ethylbenzene	mg/kg	0.206	0.223	71.8	12-137	7.69	36	L405944-05	WG425508
Isopropylbenzene	mg/kg	0.218	0.239	66.5	14-134	9.51	37	L405944-05	WG425508
Methyl tert-butyl ether	mg/kg	0.289	0.240	116.	21-157	18.7	31	L405944-05	WG425508
Methylene Chloride	mg/kg	0.248	0.237	98.2	12-149	4.87	31	L405944-05	WG425508
Styrene	mg/kg	0.212	0.232	84.9	10-140	9.11	35	L405944-05	WG425508
Tetrachloroethene	mg/kg	0.190	0.209	76.1	10-131	9.69	35	L405944-05	WG425508
Toluene	mg/kg	0.221	0.228	88.2	12-136	3.12	32	L405944-05	WG425508
trans-1,2-Dichloroethene	mg/kg	0.240	0.233	96.0	10-143	2.73	33	L405944-05	WG425508
trans-1,3-Dichloropropene	mg/kg	0.248	0.217	97.7	16-147	13.4	32	L405944-05	WG425508
Trichloroethene	mg/kg	0.240	0.246	95.9	10-155	2.51	33	L405944-05	WG425508
Trichlorofluoromethane	mg/kg	0.310	0.308	124.	10-154	0.666	32	L405944-05	WG425508
Vinyl chloride	mg/kg	0.254	0.250	102.	10-159	1.50	36	L405944-05	WG425508
4-Bromofluorobenzene				81.86	59-140				WG425508
Dibromofluoromethane				113.0	63-139				WG425508
Toluene-d8				100.0	84-116				WG425508
Beryllium, Dissolved	mg/l	1.09	1.09	96.4	75-125	0.00	20	L406228-04	WG425440
Cadmium, Dissolved	mg/l	1.07	1.08	94.7	75-125	0.930	20	L406228-04	WG425440
Chromium, Dissolved	mg/l	1.05	1.06	92.7	75-125	0.948	20	L406228-04	WG425440
Copper, Dissolved	mg/l	1.14	1.14	101.	75-125	0.00	20	L406228-04	WG425440
Lead, Dissolved	mg/l	1.05	1.06	92.9	75-125	0.948	20	L406228-04	WG425440
Nickel, Dissolved	mg/l	1.09	1.10	96.5	75-125	0.913	20	L406228-04	WG425440
Selenium, Dissolved	mg/l	1.10	1.08	97.0	75-125	1.83	20	L406228-04	WG425440
Silver, Dissolved	mg/l	0.379	0.145	33.54*	75-125	89.3*	20	L406228-04	WG425440
Zinc, Dissolved	mg/l	1.09	1.09	96.2	75-125	0.00	20	L406228-04	WG425440
Antimony, Dissolved	mg/l	0.0565	0.0557	99.6	75-125	1.43	20	L405710-01	WG425437
Arsenic, Dissolved	mg/l	0.0542	0.0543	93.7	75-125	0.184	20	L405710-01	WG425437
Thallium, Dissolved	mg/l	0.0537	0.0533	94.7	75-125	0.748	20	L405710-01	WG425437
Mercury, Dissolved	mg/l	0.0029	0.0028	99.0	70-130	2.73	20	L405337-01	WG425098
Diesel (C7-C26)	mg/kg	31.1	31.8	74.1	50-150	2.19	20	L404245-12	WG425725
Motor Oil (C16-C40)	mg/kg	75.4	65.5	41.439*	50-150	14.1	20	L404245-12	WG425725
o-Terphenyl				68.65	50-150				WG425725

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Chris Kramer

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West Linn, OR 97068

Quality Assurance Report
Level II

L405232

June 24, 2009

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Antimony	mg/l	0.0619	0.0614	108.	75-125	0.811	20	L405382-02	WG426003

Batch number /Run number / Sample number cross reference

WG424514: R767767: L405232-09
 WG424509: R768708: L405232-09
 WG424513: R769006: L405232-06
 WG424512: R769767: L405232-07 08
 WG424709: R770566: L405232-09
 WG424561: R771007: L405232-01 03 05
 WG424808: R771967: L405232-06
 WG424697: R772009: L405232-07 08
 WG424613: R772288: L405232-09
 WG424552: R772367: L405232-08
 WG424733: R772686: L405232-08
 WG425034: R775071: L405232-09
 WG425407: R775926: L405232-09
 WG424546: R776106: L405232-08
 WG425075: R776946: L405232-09
 WG425406: R777008: L405232-07
 WG425508: R777028: L405232-08
 WG425440: R777187: L405232-09
 WG425437: R777348: L405232-09
 WG425098: R777767: L405232-09
 WG425725: R778647: L405232-08
 WG426003: R779488: L405232-09
 WG427744: R789452: L405232-06 09

* * Calculations are performed prior to rounding of reported values .
 * Performance of this Analyte is outside of established criteria.
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L405232

June 24, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Report Summary

Wednesday June 24, 2009

Report Number: L405501

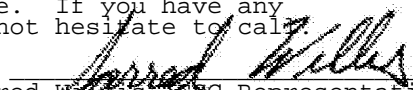
Samples Received: 06/03/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-E1-C
Collected By : Chris Kramer
Collection Date : 06/02/09 12:53

ESC Sample # : L405501-01

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	81.6			%		2540G	06/05/09	1
Mercury	0.077	0.0025	0.024	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	3.1	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.69	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.31	mg/kg		6010B	06/06/09	1
Chromium	40.	0.098	0.61	mg/kg		6010B	06/06/09	1
Copper	44.	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	11.	0.096	0.31	mg/kg		6010B	06/06/09	1
Nickel	34.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.61	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.1	mg/kg	O	6010B	06/07/09	5
Zinc	51.	0.44	1.8	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.070	0.0013	0.0074	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.011	0.0013	0.0074	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.037	0.0011	0.0074	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.75	0.019	0.15	mg/kg		8270C-SI	06/07/09	20
Benzo(a)pyrene	0.15	0.00083	0.0074	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.60	0.029	0.15	mg/kg		8270C-SI	06/07/09	20
Benzo(g,h,i)perylene	0.058	0.00098	0.0074	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.11	0.0012	0.0074	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.82	0.017	0.15	mg/kg		8270C-SI	06/07/09	20
Dibenz(a,h)anthracene	0.032	0.00089	0.0074	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	2.2	0.016	0.15	mg/kg		8270C-SI	06/07/09	20
Fluorene	0.020	0.0010	0.0074	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.065	0.00088	0.0074	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.046	0.0014	0.0074	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.081	0.00098	0.0074	mg/kg		8270C-SI	06/05/09	1
Pyrene	1.1	0.019	0.15	mg/kg		8270C-SI	06/07/09	20
1-Methylnaphthalene	0.0077	0.0015	0.0074	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.018	0.0020	0.0074	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0074	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	53.4			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	45.2			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	61.3			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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The reported analytical results relate only to the sample submitted

Reported: 06/22/09 12:44 Revised: 06/24/09 09:47



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-E2-C
Collected By : Chris Kramer
Collection Date : 06/02/09 13:10

ESC Sample # : L405501-02
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	77.6			%		2540G	06/05/09	1
Mercury	0.093	0.0025	0.026	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.3	mg/kg		6010B	06/06/09	1
Arsenic	2.4	0.27	1.3	mg/kg		6010B	06/06/09	1
Beryllium	0.67	0.038	0.13	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.32	mg/kg		6010B	06/06/09	1
Chromium	37.	0.098	0.64	mg/kg		6010B	06/06/09	1
Copper	64.	0.30	1.3	mg/kg		6010B	06/06/09	1
Lead	15.	0.096	0.32	mg/kg		6010B	06/06/09	1
Nickel	34.	0.49	1.3	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.3	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.64	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.4	mg/kg	O	6010B	06/07/09	5
Zinc	60.	0.44	1.9	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.046	0.0013	0.0077	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0067	0.0013	0.0077	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.015	0.0011	0.0077	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.072	0.00096	0.0077	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.040	0.00083	0.0077	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.088	0.0014	0.0077	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.026	0.00098	0.0077	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.046	0.0012	0.0077	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.15	0.00087	0.0077	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.012	0.00089	0.0077	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.068	0.00081	0.0077	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.017	0.0010	0.0077	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.026	0.00088	0.0077	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.028	0.0014	0.0077	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.060	0.00098	0.0077	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.075	0.00096	0.0077	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0063	0.0015	0.0077	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.017	0.0020	0.0077	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0077	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	44.8			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	40.2			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	49.6			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-03

Sample ID : SP-E3-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 13:13

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	83.5			%		2540G	06/05/09	1
Mercury	0.071	0.0025	0.024	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	2.2	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.71	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	06/06/09	1
Chromium	42.	0.098	0.60	mg/kg		6010B	06/06/09	1
Copper	41.	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	9.5	0.096	0.30	mg/kg		6010B	06/06/09	1
Nickel	37.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.60	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	06/07/09	5
Zinc	54.	0.44	1.8	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.029	0.0013	0.0072	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0068	0.0013	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.013	0.0011	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.051	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.026	0.00083	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.079	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.022	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.026	0.0012	0.0072	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.089	0.00087	0.0072	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0095	0.00089	0.0072	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.11	0.00081	0.0072	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.0093	0.0010	0.0072	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.022	0.00088	0.0072	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.038	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.041	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.089	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0061	0.0015	0.0072	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.011	0.0020	0.0072	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0072	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	54.4			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	44.1			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	54.7			% Rec.		8270C-SI	06/05/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-04

Sample ID : SP-E4-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 13:33

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	87.2			%		2540G	06/05/09	1
Mercury	0.069	0.0025	0.023	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	06/06/09	1
Arsenic	2.9	0.27	1.1	mg/kg		6010B	06/06/09	1
Beryllium	0.63	0.038	0.11	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.29	mg/kg		6010B	06/06/09	1
Chromium	34.	0.098	0.57	mg/kg		6010B	06/06/09	1
Copper	33.	0.30	1.1	mg/kg		6010B	06/06/09	1
Lead	10.	0.096	0.29	mg/kg		6010B	06/06/09	1
Nickel	34.	0.49	1.1	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.1	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.57	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.7	mg/kg	O	6010B	06/07/09	5
Zinc	57.	0.44	1.7	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.044	0.0013	0.0069	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0029	0.0013	0.0069	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.017	0.0011	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.15	0.00096	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.080	0.00083	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.21	0.0014	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.032	0.00098	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.095	0.0012	0.0069	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.24	0.00087	0.0069	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.019	0.00089	0.0069	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.25	0.00081	0.0069	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.011	0.0010	0.0069	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.037	0.00088	0.0069	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.0081	0.0014	0.0069	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.060	0.00098	0.0069	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.16	0.00096	0.0069	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0021	0.0015	0.0069	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0046	0.0020	0.0069	mg/kg	J	8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0069	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	31.2			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	30.7			% Rec.	J2	8270C-SI	06/05/09	1
p-Terphenyl-d14	37.9			% Rec.		8270C-SI	06/05/09	1

Base/Neutral Extractables

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-04

Sample ID : SP-E4-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 13:33

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthylene	U	0.028	0.038	mg/kg		8270C	06/04/09	1
Acetophenone	U	0.011	0.038	mg/kg		8270C	06/04/09	1
Atrazine	U	0.11	0.38	mg/kg		8270C	06/04/09	1
Benzaldehyde	U	0.11	0.38	mg/kg		8270C	06/04/09	1
Biphenyl	U	0.11	0.38	mg/kg		8270C	06/04/09	1
Bis(2-chlorethoxy)methane	U	0.032	0.38	mg/kg		8270C	06/04/09	1
Bis(2-chloroethyl)ether	U	0.028	0.38	mg/kg		8270C	06/04/09	1
Bis(2-chloroisopropyl)ether	U	0.033	0.38	mg/kg		8270C	06/04/09	1
4-Bromophenyl-phenylether	U	0.022	0.38	mg/kg		8270C	06/04/09	1
2-Chloronaphthalene	U	0.026	0.38	mg/kg		8270C	06/04/09	1
4-Chlorophenyl-phenylether	U	0.025	0.38	mg/kg		8270C	06/04/09	1
3,3-Dichlorobenzidine	U	0.31	3.8	mg/kg		8270C	06/07/09	10
2,4-Dinitrotoluene	U	0.025	0.38	mg/kg		8270C	06/04/09	1
2,6-Dinitrotoluene	U	0.023	0.38	mg/kg		8270C	06/04/09	1
Hexachlorobenzene	U	0.025	0.38	mg/kg		8270C	06/04/09	1
Hexachloro-1,3-butadiene	U	0.032	0.38	mg/kg		8270C	06/04/09	1
Hexachlorocyclopentadiene	U	0.035	0.38	mg/kg		8270C	06/04/09	1
Hexachloroethane	U	0.033	0.38	mg/kg		8270C	06/04/09	1
Isophorone	U	0.038	0.38	mg/kg		8270C	06/04/09	1
2-Methylnaphthalene	U	0.026	0.38	mg/kg		8270C	06/04/09	1
2-Methylphenol	U	0.033	0.38	mg/kg		8270C	06/04/09	1
3&4-Methyl Phenol	U	0.033	0.38	mg/kg	J4	8270C	06/04/09	1
2-Nitroaniline	U	0.021	0.38	mg/kg		8270C	06/04/09	1
3-Nitroaniline	U	0.065	0.38	mg/kg		8270C	06/04/09	1
4-Nitroaniline	U	0.038	0.38	mg/kg		8270C	06/04/09	1
Nitrobenzene	U	0.028	0.38	mg/kg		8270C	06/04/09	1
n-Nitrosodiphenylamine	U	0.034	0.38	mg/kg		8270C	06/04/09	1
n-Nitrosodi-n-propylamine	U	0.033	0.38	mg/kg		8270C	06/04/09	1
Benzylbutyl phthalate	U	0.38	3.8	mg/kg		8270C	06/07/09	10
Caprolactam	U	0.11	0.38	mg/kg		8270C	06/04/09	1
Carbazole	U	0.029	0.38	mg/kg		8270C	06/04/09	1
Bis(2-ethylhexyl)phthalate	U	0.60	3.8	mg/kg		8270C	06/07/09	10
4-Chloroaniline	U	0.036	0.38	mg/kg		8270C	06/04/09	1
Di-n-butyl phthalate	U	0.027	0.38	mg/kg		8270C	06/04/09	1
Dibenzofuran	U	0.022	0.38	mg/kg		8270C	06/04/09	1
Diethyl phthalate	U	0.040	0.38	mg/kg		8270C	06/04/09	1
Dimethyl phthalate	U	0.026	0.38	mg/kg		8270C	06/04/09	1
Di-n-octyl phthalate	U	0.36	3.8	mg/kg		8270C	06/07/09	10
Acid Extractables								
4-Chloro-3-methylphenol	U	0.034	0.38	mg/kg		8270C	06/04/09	1
2-Chlorophenol	U	0.031	0.38	mg/kg		8270C	06/04/09	1
2,4-Dichlorophenol	U	0.024	0.38	mg/kg		8270C	06/04/09	1
2,4-Dimethylphenol	U	0.038	0.38	mg/kg		8270C	06/04/09	1

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REPORT OF ANALYSIS

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June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-E4-C
Collected By : Chris Kramer
Collection Date : 06/02/09 13:33

ESC Sample # : L405501-04
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	U	0.040	0.38	mg/kg		8270C	06/04/09	1
2,4-Dinitrophenol	U	0.041	0.38	mg/kg		8270C	06/04/09	1
2-Nitrophenol	U	0.027	0.38	mg/kg		8270C	06/04/09	1
4-Nitrophenol	U	0.027	0.38	mg/kg		8270C	06/04/09	1
Pentachlorophenol	U	0.031	0.38	mg/kg		8270C	06/04/09	1
Phenol	U	0.029	0.38	mg/kg		8270C	06/04/09	1
1,2,4,5-Tetrachlorobenzene	U	0.016	0.057	mg/kg		8270C	06/04/09	1
2,4,5-Trichlorophenol	U	0.030	0.38	mg/kg		8270C	06/04/09	1
2,4,6-Trichlorophenol	U	0.028	0.38	mg/kg		8270C	06/04/09	1
2,3,4,6-Tetrachlorophenol	U	0.016	0.057	mg/kg		8270C	06/17/09	1
Benzo(a)anthracene	U	0.32	3.8	mg/kg		8270C	06/07/09	10
Benzo(a)pyrene	0.081	0.027	0.38	mg/kg	J	8270C	06/04/09	1
Benzo(b)fluoranthene	0.19	0.030	0.38	mg/kg	J	8270C	06/04/09	1
Benzo(k)fluoranthene	0.11	0.031	0.38	mg/kg	J	8270C	06/04/09	1
Chrysene	0.44	0.35	3.8	mg/kg	J	8270C	06/07/09	10
Dibenz(a,h)anthracene	U	0.028	0.38	mg/kg		8270C	06/04/09	1
Indeno(1,2,3-cd)pyrene	U	0.029	0.38	mg/kg		8270C	06/04/09	1
Acenaphthene	U	0.024	0.38	mg/kg		8270C	06/04/09	1
Anthracene	0.033	0.023	0.38	mg/kg	J	8270C	06/04/09	1
Benzo(g,h,i)perylene	U	0.029	0.38	mg/kg		8270C	06/04/09	1
Fluoranthene	0.40	0.024	0.38	mg/kg		8270C	06/04/09	1
Fluorene	U	0.023	0.38	mg/kg		8270C	06/04/09	1
Naphthalene	U	0.026	0.38	mg/kg		8270C	06/04/09	1
Phenanthrene	0.095	0.025	0.38	mg/kg	J	8270C	06/04/09	1
Pyrene	0.53	0.36	3.8	mg/kg	J	8270C	06/07/09	10
Surrogate Recovery								
Nitrobenzene-d5	50.3			% Rec.		8270C	06/04/09	1
2-Fluorobiphenyl	57.1			% Rec.		8270C	06/04/09	1
p-Terphenyl-d14	126.			% Rec.		8270C	06/07/09	10
Phenol-d5	53.2			% Rec.		8270C	06/04/09	1
2-Fluorophenol	53.8			% Rec.		8270C	06/04/09	1
2,4,6-Tribromophenol	65.9			% Rec.		8270C	06/04/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-05

Sample ID : SP-E5-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 13:40

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	92.6			%		2540G	06/05/09	1
Mercury	0.081	0.0025	0.022	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	06/06/09	1
Arsenic	1.7	0.27	1.1	mg/kg		6010B	06/06/09	1
Beryllium	0.67	0.038	0.11	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.27	mg/kg		6010B	06/06/09	1
Chromium	36.	0.098	0.54	mg/kg		6010B	06/06/09	1
Copper	33.	0.30	1.1	mg/kg		6010B	06/06/09	1
Lead	10.	0.096	0.27	mg/kg		6010B	06/06/09	1
Nickel	33.	0.49	1.1	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.1	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.54	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.4	mg/kg	O	6010B	06/07/09	5
Zinc	51.	0.44	1.6	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.050	0.0013	0.0065	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.022	0.0013	0.0065	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.017	0.0011	0.0065	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.10	0.00096	0.0065	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.038	0.00083	0.0065	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.10	0.0014	0.0065	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.022	0.00098	0.0065	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.042	0.0012	0.0065	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.13	0.00087	0.0065	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.012	0.00089	0.0065	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.24	0.00081	0.0065	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.024	0.0010	0.0065	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.023	0.00088	0.0065	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.030	0.0014	0.0065	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.093	0.00098	0.0065	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.10	0.00096	0.0065	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0091	0.0015	0.0065	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.020	0.0020	0.0065	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0065	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	44.8			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	40.4			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	48.7			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-E6-C
Collected By : Chris Kramer
Collection Date : 06/02/09 13:52

ESC Sample # : L405501-06

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	94.4			%		2540G	06/05/09	1
Mercury	0.072	0.0025	0.021	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.0	mg/kg		6010B	06/06/09	1
Arsenic	5.6	0.27	1.0	mg/kg		6010B	06/06/09	1
Beryllium	0.55	0.038	0.10	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.26	mg/kg		6010B	06/06/09	1
Chromium	26.	0.098	0.53	mg/kg		6010B	06/06/09	1
Copper	32.	0.30	1.0	mg/kg		6010B	06/06/09	1
Lead	14.	0.096	0.26	mg/kg		6010B	06/06/09	1
Nickel	28.	0.49	1.0	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.0	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.53	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.3	mg/kg	O	6010B	06/07/09	5
Zinc	65.	0.44	1.6	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.010	0.0013	0.0064	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0025	0.0013	0.0064	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.0085	0.0011	0.0064	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.023	0.00096	0.0064	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.022	0.00083	0.0064	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.030	0.0014	0.0064	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.015	0.00098	0.0064	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.013	0.0012	0.0064	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.022	0.00087	0.0064	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0050	0.00089	0.0064	mg/kg	J	8270C-SI	06/05/09	1
Fluoranthene	0.053	0.00081	0.0064	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.0044	0.0010	0.0064	mg/kg	J	8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.014	0.00088	0.0064	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.0066	0.0014	0.0064	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.034	0.00098	0.0064	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.039	0.00096	0.0064	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0023	0.0015	0.0064	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0035	0.0020	0.0064	mg/kg	J	8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0064	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	34.8			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	37.9			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	40.9			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-07

Sample ID : SP-E7-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 14:00

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	94.8			%		2540G	06/05/09	1
Mercury	0.044	0.0025	0.021	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.0	mg/kg		6010B	06/06/09	1
Arsenic	10.	0.27	1.0	mg/kg		6010B	06/06/09	1
Beryllium	0.55	0.038	0.10	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.26	mg/kg		6010B	06/06/09	1
Chromium	27.	0.098	0.53	mg/kg		6010B	06/06/09	1
Copper	38.	0.30	1.0	mg/kg		6010B	06/06/09	1
Lead	36.	0.096	0.26	mg/kg		6010B	06/06/09	1
Nickel	32.	0.49	1.0	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.0	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.53	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.3	mg/kg	O	6010B	06/07/09	5
Zinc	180	0.44	1.6	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.035	0.0013	0.0063	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0099	0.0013	0.0063	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.018	0.0011	0.0063	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.14	0.00096	0.0063	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.080	0.00083	0.0063	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.14	0.0014	0.0063	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.026	0.00098	0.0063	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.072	0.0012	0.0063	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.097	0.00087	0.0063	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.014	0.00089	0.0063	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.14	0.00081	0.0063	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.012	0.0010	0.0063	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.028	0.00088	0.0063	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.017	0.0014	0.0063	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.044	0.00098	0.0063	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.086	0.00096	0.0063	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0055	0.0015	0.0063	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0097	0.0020	0.0063	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0063	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	65.8			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	60.3			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	57.4			% Rec.		8270C-SI	06/05/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-M1-C
Collected By : Chris Kramer
Collection Date : 06/02/09 14:12

ESC Sample # : L405501-08

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	79.1			%		2540G	06/05/09	1
Mercury	0.11	0.0025	0.025	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.3	mg/kg		6010B	06/06/09	1
Arsenic	3.5	0.27	1.3	mg/kg		6010B	06/06/09	1
Beryllium	0.68	0.038	0.13	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.32	mg/kg		6010B	06/06/09	1
Chromium	40.	0.098	0.63	mg/kg		6010B	06/06/09	1
Copper	52.	0.30	1.3	mg/kg		6010B	06/06/09	1
Lead	15.	0.096	0.32	mg/kg		6010B	06/06/09	1
Nickel	35.	0.49	1.3	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.3	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.63	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.3	mg/kg	O	6010B	06/07/09	5
Zinc	130	0.44	1.9	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.077	0.0013	0.0076	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.024	0.0013	0.0076	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.034	0.0011	0.0076	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.15	0.00096	0.0076	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.072	0.00083	0.0076	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.23	0.0014	0.0076	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.032	0.00098	0.0076	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.070	0.0012	0.0076	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.20	0.00087	0.0076	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.016	0.00089	0.0076	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.30	0.00081	0.0076	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.029	0.0010	0.0076	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.035	0.00088	0.0076	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.13	0.0014	0.0076	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.096	0.00098	0.0076	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.20	0.00096	0.0076	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.015	0.0015	0.0076	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.033	0.0020	0.0076	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0076	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	65.1			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	59.2			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	59.3			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-09

Sample ID : SP-M2-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 14:20

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	71.5			%		2540G	06/05/09	1
Mercury	0.11	0.0025	0.028	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.4	mg/kg		6010B	06/06/09	1
Arsenic	3.8	0.27	1.4	mg/kg		6010B	06/06/09	1
Beryllium	0.77	0.038	0.14	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.35	mg/kg		6010B	06/06/09	1
Chromium	45.	0.098	0.70	mg/kg		6010B	06/06/09	1
Copper	53.	0.30	1.4	mg/kg		6010B	06/06/09	1
Lead	20.	0.096	0.35	mg/kg		6010B	06/06/09	1
Nickel	36.	0.49	1.4	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.4	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.70	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	7.0	mg/kg	0	6010B	06/07/09	5
Zinc	76.	0.44	2.1	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.10	0.0013	0.0084	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.026	0.0013	0.0084	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.049	0.0011	0.0084	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.18	0.00096	0.0084	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.10	0.00083	0.0084	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.25	0.0014	0.0084	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.039	0.00098	0.0084	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.11	0.0012	0.0084	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.31	0.00087	0.0084	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.013	0.00089	0.0084	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.71	0.041	0.42	mg/kg		8270C-SI	06/07/09	50
Fluorene	0.048	0.0010	0.0084	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.043	0.00088	0.0084	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.098	0.0014	0.0084	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.24	0.00098	0.0084	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.25	0.00096	0.0084	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.022	0.0015	0.0084	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.046	0.0020	0.0084	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0084	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	57.2			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	49.1			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	43.8			% Rec.		8270C-SI	06/05/09	1

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-10

Sample ID : SP-M3-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 14:30

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	97.8			%		2540G	06/05/09	1
Mercury	0.035	0.0025	0.020	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.0	mg/kg		6010B	06/06/09	1
Arsenic	2.6	0.27	1.0	mg/kg		6010B	06/06/09	1
Beryllium	0.57	0.038	0.10	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.26	mg/kg		6010B	06/06/09	1
Chromium	26.	0.098	0.51	mg/kg		6010B	06/06/09	1
Copper	22.	0.30	1.0	mg/kg		6010B	06/06/09	1
Lead	7.0	0.096	0.26	mg/kg		6010B	06/06/09	1
Nickel	34.	0.49	1.0	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.0	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.51	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.1	mg/kg	O	6010B	06/07/09	5
Zinc	47.	0.44	1.5	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.015	0.0013	0.0061	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0026	0.0013	0.0061	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.029	0.0011	0.0061	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.087	0.00096	0.0061	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.076	0.00083	0.0061	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.067	0.0014	0.0061	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.018	0.00098	0.0061	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.040	0.0012	0.0061	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.084	0.00087	0.0061	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0098	0.00089	0.0061	mg/kg		8270C-SI	06/05/09	1
Fluoranthene	0.089	0.00081	0.0061	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.0048	0.0010	0.0061	mg/kg	J	8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.017	0.00088	0.0061	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.0076	0.0014	0.0061	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.020	0.00098	0.0061	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.096	0.00096	0.0061	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0018	0.0015	0.0061	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0039	0.0020	0.0061	mg/kg	J	8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0061	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	54.2			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	57.0			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	53.4			% Rec.		8270C-SI	06/05/09	1

Base/Neutral Extractables

Results listed are dry weight basis.

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-M3-C
Collected By : Chris Kramer
Collection Date : 06/02/09 14:30

ESC Sample # : L405501-10

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthylene	U	0.028	0.034	mg/kg		8270C	06/05/09	1
Acetophenone	U	0.011	0.034	mg/kg		8270C	06/05/09	1
Atrazine	U	0.11	0.34	mg/kg		8270C	06/05/09	1
Benzaldehyde	U	0.11	0.34	mg/kg		8270C	06/05/09	1
Biphenyl	U	0.11	0.34	mg/kg		8270C	06/05/09	1
Bis(2-chlorethoxy)methane	U	0.032	0.34	mg/kg		8270C	06/05/09	1
Bis(2-chloroethyl)ether	U	0.028	0.34	mg/kg		8270C	06/05/09	1
Bis(2-chloroisopropyl)ether	U	0.033	0.34	mg/kg		8270C	06/05/09	1
4-Bromophenyl-phenylether	U	0.022	0.34	mg/kg		8270C	06/05/09	1
2-Chloronaphthalene	U	0.026	0.34	mg/kg		8270C	06/05/09	1
4-Chlorophenyl-phenylether	U	0.025	0.34	mg/kg		8270C	06/05/09	1
3,3-Dichlorobenzidine	U	0.031	0.34	mg/kg		8270C	06/05/09	1
2,4-Dinitrotoluene	U	0.025	0.34	mg/kg		8270C	06/05/09	1
2,6-Dinitrotoluene	U	0.023	0.34	mg/kg		8270C	06/05/09	1
Hexachlorobenzene	U	0.025	0.34	mg/kg		8270C	06/05/09	1
Hexachloro-1,3-butadiene	U	0.032	0.34	mg/kg		8270C	06/05/09	1
Hexachlorocyclopentadiene	U	0.035	0.34	mg/kg		8270C	06/05/09	1
Hexachloroethane	U	0.033	0.34	mg/kg		8270C	06/05/09	1
Isophorone	U	0.038	0.34	mg/kg		8270C	06/05/09	1
2-Methylnaphthalene	U	0.026	0.34	mg/kg		8270C	06/05/09	1
2-Methylphenol	U	0.033	0.34	mg/kg		8270C	06/05/09	1
3&4-Methyl Phenol	U	0.033	0.34	mg/kg	J4	8270C	06/05/09	1
2-Nitroaniline	U	0.021	0.34	mg/kg		8270C	06/05/09	1
3-Nitroaniline	U	0.065	0.34	mg/kg		8270C	06/05/09	1
4-Nitroaniline	U	0.038	0.34	mg/kg		8270C	06/05/09	1
Nitrobenzene	U	0.028	0.34	mg/kg		8270C	06/05/09	1
n-Nitrosodiphenylamine	U	0.034	0.34	mg/kg		8270C	06/05/09	1
n-Nitrosodi-n-propylamine	U	0.033	0.34	mg/kg		8270C	06/05/09	1
Benzylbutyl phthalate	U	0.038	0.34	mg/kg		8270C	06/05/09	1
Caprolactam	U	0.11	0.34	mg/kg		8270C	06/05/09	1
Carbazole	U	0.029	0.34	mg/kg		8270C	06/05/09	1
Bis(2-ethylhexyl)phthalate	U	0.060	0.34	mg/kg		8270C	06/05/09	1
4-Chloroaniline	U	0.036	0.34	mg/kg		8270C	06/05/09	1
Di-n-butyl phthalate	U	0.027	0.34	mg/kg		8270C	06/05/09	1
Dibenzofuran	U	0.022	0.34	mg/kg		8270C	06/05/09	1
Diethyl phthalate	U	0.040	0.34	mg/kg		8270C	06/05/09	1
Dimethyl phthalate	U	0.026	0.34	mg/kg		8270C	06/05/09	1
Di-n-octyl phthalate	U	0.036	0.34	mg/kg		8270C	06/05/09	1
Acid Extractables								
4-Chloro-3-methylphenol	U	0.034	0.34	mg/kg		8270C	06/05/09	1
2-Chlorophenol	U	0.031	0.34	mg/kg		8270C	06/05/09	1
2,4-Dichlorophenol	U	0.024	0.34	mg/kg		8270C	06/05/09	1
2,4-Dimethylphenol	U	0.038	0.34	mg/kg		8270C	06/05/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-10

Sample ID : SP-M3-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 14:30

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	U	0.040	0.34	mg/kg		8270C	06/05/09	1
2,4-Dinitrophenol	U	0.041	0.34	mg/kg		8270C	06/05/09	1
2-Nitrophenol	U	0.027	0.34	mg/kg		8270C	06/05/09	1
4-Nitrophenol	U	0.027	0.34	mg/kg		8270C	06/05/09	1
Pentachlorophenol	U	0.031	0.34	mg/kg		8270C	06/05/09	1
Phenol	U	0.029	0.34	mg/kg		8270C	06/05/09	1
1,2,4,5-Tetrachlorobenzene	U	0.016	0.051	mg/kg		8270C	06/05/09	1
2,4,5-Trichlorophenol	U	0.030	0.34	mg/kg		8270C	06/05/09	1
2,4,6-Trichlorophenol	U	0.028	0.34	mg/kg		8270C	06/05/09	1
2,3,4,6-Tetrachlorophenol	U	0.016	0.051	mg/kg		8270C	06/17/09	1
Benzo(a)anthracene	U	0.032	0.34	mg/kg		8270C	06/05/09	1
Benzo(a)pyrene	U	0.027	0.34	mg/kg		8270C	06/05/09	1
Benzo(b)fluoranthene	U	0.030	0.34	mg/kg		8270C	06/05/09	1
Benzo(k)fluoranthene	U	0.031	0.34	mg/kg		8270C	06/05/09	1
Chrysene	U	0.035	0.34	mg/kg		8270C	06/05/09	1
Dibenz(a,h)anthracene	U	0.028	0.34	mg/kg		8270C	06/05/09	1
Indeno(1,2,3-cd)pyrene	U	0.029	0.34	mg/kg		8270C	06/05/09	1
Acenaphthene	U	0.024	0.34	mg/kg		8270C	06/05/09	1
Anthracene	U	0.023	0.34	mg/kg		8270C	06/05/09	1
Benzo(g,h,i)perylene	U	0.029	0.34	mg/kg		8270C	06/05/09	1
Fluoranthene	0.024	0.024	0.34	mg/kg	J	8270C	06/05/09	1
Fluorene	U	0.023	0.34	mg/kg		8270C	06/05/09	1
Naphthalene	U	0.026	0.34	mg/kg		8270C	06/05/09	1
Phenanthrene	U	0.025	0.34	mg/kg		8270C	06/05/09	1
Pyrene	U	0.036	0.34	mg/kg		8270C	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	50.1			% Rec.		8270C	06/05/09	1
2-Fluorobiphenyl	56.4			% Rec.		8270C	06/05/09	1
p-Terphenyl-d14	60.7			% Rec.		8270C	06/05/09	1
Phenol-d5	53.4			% Rec.		8270C	06/05/09	1
2-Fluorophenol	52.7			% Rec.		8270C	06/05/09	1
2,4,6-Tribromophenol	60.3			% Rec.		8270C	06/05/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-W1-C
Collected By : Chris Kramer
Collection Date : 06/02/09 14:46

ESC Sample # : L405501-11

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	83.2			%		2540G	06/05/09	1
Mercury	0.072	0.0025	0.024	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	3.1	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.68	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	06/06/09	1
Chromium	38.	0.098	0.60	mg/kg		6010B	06/06/09	1
Copper	36.	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	10.	0.096	0.30	mg/kg		6010B	06/06/09	1
Nickel	37.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.60	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	06/07/09	5
Zinc	55.	0.44	1.8	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.034	0.0013	0.0072	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0053	0.0013	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.013	0.0011	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.058	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.024	0.00083	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.065	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.0079	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.034	0.0012	0.0072	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.11	0.00087	0.0072	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0032	0.00089	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Fluoranthene	0.13	0.00081	0.0072	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.012	0.0010	0.0072	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.0086	0.00088	0.0072	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.023	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.048	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.065	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0046	0.0015	0.0072	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0098	0.0020	0.0072	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0072	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	45.6			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	44.7			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	40.9			% Rec.		8270C-SI	06/05/09	1

Base/Neutral Extractables

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L405501-11 (SV8270BNA) - Dilution due to matrix



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June 24, 2009

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Description : Bay Wood Project - Everett, WA
Sample ID : SP-W1-C
Collected By : Chris Kramer
Collection Date : 06/02/09 14:46

ESC Sample # : L405501-11

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Acenaphthylene	U	0.028	0.040	mg/kg		8270C	06/05/09	1
Acetophenone	U	0.011	0.040	mg/kg		8270C	06/05/09	1
Atrazine	U	0.11	0.40	mg/kg		8270C	06/05/09	1
Benzaldehyde	U	0.11	0.40	mg/kg		8270C	06/05/09	1
Biphenyl	U	0.11	0.40	mg/kg		8270C	06/05/09	1
Bis(2-chlorethoxy)methane	U	0.032	0.40	mg/kg		8270C	06/05/09	1
Bis(2-chloroethyl)ether	U	0.028	0.40	mg/kg		8270C	06/05/09	1
Bis(2-chloroisopropyl)ether	U	0.033	0.40	mg/kg		8270C	06/05/09	1
4-Bromophenyl-phenylether	U	0.022	0.40	mg/kg		8270C	06/05/09	1
2-Chloronaphthalene	U	0.026	0.40	mg/kg		8270C	06/05/09	1
4-Chlorophenyl-phenylether	U	0.025	0.40	mg/kg		8270C	06/05/09	1
3,3-Dichlorobenzidine	U	0.61	7.9	mg/kg	0	8270C	06/05/09	20
2,4-Dinitrotoluene	U	0.025	0.40	mg/kg		8270C	06/05/09	1
2,6-Dinitrotoluene	U	0.023	0.40	mg/kg		8270C	06/05/09	1
Hexachlorobenzene	U	0.025	0.40	mg/kg		8270C	06/05/09	1
Hexachloro-1,3-butadiene	U	0.032	0.40	mg/kg		8270C	06/05/09	1
Hexachlorocyclopentadiene	U	0.035	0.40	mg/kg		8270C	06/05/09	1
Hexachloroethane	U	0.033	0.40	mg/kg		8270C	06/05/09	1
Isophorone	U	0.038	0.40	mg/kg		8270C	06/05/09	1
2-Methylnaphthalene	U	0.026	0.40	mg/kg		8270C	06/05/09	1
2-Methylphenol	U	0.033	0.40	mg/kg		8270C	06/05/09	1
3&4-Methyl Phenol	U	0.033	0.40	mg/kg	J4	8270C	06/05/09	1
2-Nitroaniline	U	0.021	0.40	mg/kg		8270C	06/05/09	1
3-Nitroaniline	U	0.065	0.40	mg/kg		8270C	06/05/09	1
4-Nitroaniline	U	0.038	0.40	mg/kg		8270C	06/05/09	1
Nitrobenzene	U	0.028	0.40	mg/kg		8270C	06/05/09	1
n-Nitrosodiphenylamine	U	0.034	0.40	mg/kg		8270C	06/05/09	1
n-Nitrosodi-n-propylamine	U	0.033	0.40	mg/kg		8270C	06/05/09	1
Benzylbutyl phthalate	U	0.76	7.9	mg/kg	0	8270C	06/05/09	20
Caprolactam	U	0.11	0.40	mg/kg		8270C	06/05/09	1
Carbazole	U	0.029	0.40	mg/kg		8270C	06/05/09	1
Bis(2-ethylhexyl)phthalate	U	1.2	7.9	mg/kg	0	8270C	06/05/09	20
4-Chloroaniline	U	0.036	0.40	mg/kg		8270C	06/05/09	1
Di-n-butyl phthalate	U	0.027	0.40	mg/kg		8270C	06/05/09	1
Dibenzofuran	U	0.022	0.40	mg/kg		8270C	06/05/09	1
Diethyl phthalate	U	0.040	0.40	mg/kg		8270C	06/05/09	1
Dimethyl phthalate	U	0.026	0.40	mg/kg		8270C	06/05/09	1
Di-n-octyl phthalate	U	0.72	7.9	mg/kg	0	8270C	06/05/09	20
Acid Extractables								
4-Chloro-3-methylphenol	U	0.034	0.40	mg/kg		8270C	06/05/09	1
2-Chlorophenol	U	0.031	0.40	mg/kg		8270C	06/05/09	1
2,4-Dichlorophenol	U	0.024	0.40	mg/kg		8270C	06/05/09	1
2,4-Dimethylphenol	U	0.038	0.40	mg/kg		8270C	06/05/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

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Reported: 06/22/09 12:44 Revised: 06/24/09 09:47

L405501-11 (SV8270BNA) - Dilution due to matrix



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-W1-C
Collected By : Chris Kramer
Collection Date : 06/02/09 14:46

ESC Sample # : L405501-11
Site ID : EVERETT, WA
Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
4,6-Dinitro-2-methylphenol	U	0.040	0.40	mg/kg		8270C	06/05/09	1
2,4-Dinitrophenol	U	0.041	0.40	mg/kg		8270C	06/05/09	1
2-Nitrophenol	U	0.027	0.40	mg/kg		8270C	06/05/09	1
4-Nitrophenol	U	0.027	0.40	mg/kg		8270C	06/05/09	1
Pentachlorophenol	U	0.031	0.40	mg/kg		8270C	06/05/09	1
Phenol	U	0.029	0.40	mg/kg		8270C	06/05/09	1
1,2,4,5-Tetrachlorobenzene	U	0.016	0.060	mg/kg		8270C	06/05/09	1
2,4,5-Trichlorophenol	U	0.030	0.40	mg/kg		8270C	06/05/09	1
2,4,6-Trichlorophenol	U	0.028	0.40	mg/kg		8270C	06/05/09	1
2,3,4,6-Tetrachlorophenol	U	0.016	0.060	mg/kg		8270C	06/17/09	1
Benzo(a)anthracene	U	0.64	7.9	mg/kg	O	8270C	06/05/09	20
Benzo(a)pyrene	0.046	0.027	0.40	mg/kg	J	8270C	06/05/09	1
Benzo(b)fluoranthene	0.14	0.030	0.40	mg/kg	J	8270C	06/05/09	1
Benzo(k)fluoranthene	0.067	0.031	0.40	mg/kg	J	8270C	06/05/09	1
Chrysene	U	0.71	7.9	mg/kg	O	8270C	06/05/09	20
Dibenz(a,h)anthracene	U	0.028	0.40	mg/kg		8270C	06/05/09	1
Indeno(1,2,3-cd)pyrene	U	0.029	0.40	mg/kg		8270C	06/05/09	1
Acenaphthene	U	0.024	0.40	mg/kg		8270C	06/05/09	1
Anthracene	U	0.023	0.40	mg/kg		8270C	06/05/09	1
Benzo(g,h,i)perylene	U	0.029	0.40	mg/kg		8270C	06/05/09	1
Fluoranthene	0.32	0.024	0.40	mg/kg	J	8270C	06/05/09	1
Fluorene	U	0.023	0.40	mg/kg		8270C	06/05/09	1
Naphthalene	0.035	0.026	0.40	mg/kg	J	8270C	06/05/09	1
Phenanthrene	0.11	0.025	0.40	mg/kg	J	8270C	06/05/09	1
Pyrene	U	0.71	7.9	mg/kg	O	8270C	06/05/09	20
Surrogate Recovery								
Nitrobenzene-d5	51.9			% Rec.		8270C	06/05/09	1
2-Fluorobiphenyl	60.8			% Rec.		8270C	06/05/09	1
p-Terphenyl-d14	0.00			% Rec.	J7	8270C	06/05/09	20
Phenol-d5	54.7			% Rec.		8270C	06/05/09	1
2-Fluorophenol	56.0			% Rec.		8270C	06/05/09	1
2,4,6-Tribromophenol	69.8			% Rec.		8270C	06/05/09	1

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L405501-11 (SV8270BNA) - Dilution due to matrix



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L405501-12

Sample ID : SP-W2-C

Site ID : EVERETT, WA

Collected By : Chris Kramer
Collection Date : 06/02/09 14:58

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	83.6			%		2540G	06/05/09	1
Mercury	0.066	0.0025	0.024	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	2.6	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.62	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.30	mg/kg		6010B	06/06/09	1
Chromium	39.	0.098	0.60	mg/kg		6010B	06/06/09	1
Copper	28.	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	6.2	0.096	0.30	mg/kg		6010B	06/06/09	1
Nickel	36.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.60	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	6.0	mg/kg	O	6010B	06/07/09	5
Zinc	47.	0.44	1.8	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.024	0.0013	0.0072	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0043	0.0013	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.011	0.0011	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.047	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.031	0.00083	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.090	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.0075	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.038	0.0012	0.0072	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.075	0.00087	0.0072	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0045	0.00089	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Fluoranthene	0.076	0.00081	0.0072	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.0068	0.0010	0.0072	mg/kg	J	8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.010	0.00088	0.0072	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.010	0.0014	0.0072	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.020	0.00098	0.0072	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.054	0.00096	0.0072	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0022	0.0015	0.0072	mg/kg	J	8270C-SI	06/05/09	1
2-Methylnaphthalene	0.0045	0.0020	0.0072	mg/kg	J	8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0072	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	47.5			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	49.0			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	50.1			% Rec.		8270C-SI	06/05/09	1

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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-M4-C
Collected By : Chris Kramer
Collection Date : 06/02/09 15:11

ESC Sample # : L405501-13

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	86.5			%		2540G	06/05/09	1
Mercury	0.088	0.0025	0.023	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.2	mg/kg		6010B	06/06/09	1
Arsenic	2.3	0.27	1.2	mg/kg		6010B	06/06/09	1
Beryllium	0.80	0.038	0.12	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.29	mg/kg		6010B	06/06/09	1
Chromium	37.	0.098	0.58	mg/kg		6010B	06/06/09	1
Copper	39.	0.30	1.2	mg/kg		6010B	06/06/09	1
Lead	10.	0.096	0.29	mg/kg		6010B	06/06/09	1
Nickel	36.	0.49	1.2	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.2	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.58	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.8	mg/kg	O	6010B	06/07/09	5
Zinc	64.	0.44	1.7	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.029	0.0013	0.0069	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.011	0.0013	0.0069	mg/kg		8270C-SI	06/05/09	1
Acenaphthylene	0.017	0.0011	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(a)anthracene	0.050	0.00096	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.032	0.00083	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.072	0.0014	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.011	0.00098	0.0069	mg/kg		8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.022	0.0012	0.0069	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.060	0.00087	0.0069	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0055	0.00089	0.0069	mg/kg	J	8270C-SI	06/05/09	1
Fluoranthene	0.14	0.00081	0.0069	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.016	0.0010	0.0069	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.011	0.00088	0.0069	mg/kg		8270C-SI	06/05/09	1
Naphthalene	0.040	0.0014	0.0069	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.069	0.00098	0.0069	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.092	0.00096	0.0069	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0092	0.0015	0.0069	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.021	0.0020	0.0069	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0069	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	53.7			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	54.8			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	44.1			% Rec.		8270C-SI	06/05/09	1

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REPORT OF ANALYSIS

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SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

June 24, 2009

Date Received : June 03, 2009
Description : Bay Wood Project - Everett, WA
Sample ID : SP-M5-C
Collected By : Chris Kramer
Collection Date : 06/02/09 15:17

ESC Sample # : L405501-14

Site ID : EVERETT, WA

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	89.4			%		2540G	06/05/09	1
Mercury	0.038	0.0025	0.022	mg/kg		7471	06/05/09	1
Antimony	U	0.52	1.1	mg/kg		6010B	06/06/09	1
Arsenic	1.1	0.27	1.1	mg/kg	J	6010B	06/06/09	1
Beryllium	0.51	0.038	0.11	mg/kg		6010B	06/06/09	1
Cadmium	U	0.037	0.28	mg/kg		6010B	06/06/09	1
Chromium	31.	0.098	0.56	mg/kg		6010B	06/06/09	1
Copper	19.	0.30	1.1	mg/kg		6010B	06/06/09	1
Lead	3.7	0.096	0.28	mg/kg		6010B	06/06/09	1
Nickel	32.	0.49	1.1	mg/kg		6010B	06/06/09	1
Selenium	U	0.33	1.1	mg/kg		6010B	06/06/09	1
Silver	U	0.16	0.56	mg/kg		6010B	06/06/09	1
Thallium	U	1.5	5.6	mg/kg	O	6010B	06/07/09	5
Zinc	38.	0.44	1.7	mg/kg		6010B	06/06/09	1
Polynuclear Aromatic Hydrocarbons								
Anthracene	0.0098	0.0013	0.0067	mg/kg		8270C-SI	06/05/09	1
Acenaphthene	0.0056	0.0013	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Acenaphthylene	0.0041	0.0011	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Benzo(a)anthracene	0.011	0.00096	0.0067	mg/kg		8270C-SI	06/05/09	1
Benzo(a)pyrene	0.0058	0.00083	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Benzo(b)fluoranthene	0.018	0.0014	0.0067	mg/kg		8270C-SI	06/05/09	1
Benzo(g,h,i)perylene	0.0027	0.00098	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Benzo(k)fluoranthene	0.0072	0.0012	0.0067	mg/kg		8270C-SI	06/05/09	1
Chrysene	0.022	0.00087	0.0067	mg/kg		8270C-SI	06/05/09	1
Dibenz(a,h)anthracene	0.0012	0.00089	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Fluoranthene	0.025	0.00081	0.0067	mg/kg		8270C-SI	06/05/09	1
Fluorene	0.0098	0.0010	0.0067	mg/kg		8270C-SI	06/05/09	1
Indeno(1,2,3-cd)pyrene	0.0030	0.00088	0.0067	mg/kg	J	8270C-SI	06/05/09	1
Naphthalene	0.088	0.0014	0.0067	mg/kg		8270C-SI	06/05/09	1
Phenanthrene	0.017	0.00098	0.0067	mg/kg		8270C-SI	06/05/09	1
Pyrene	0.016	0.00096	0.0067	mg/kg		8270C-SI	06/05/09	1
1-Methylnaphthalene	0.0098	0.0015	0.0067	mg/kg		8270C-SI	06/05/09	1
2-Methylnaphthalene	0.039	0.0020	0.0067	mg/kg		8270C-SI	06/05/09	1
2-Chloronaphthalene	U	0.0010	0.0067	mg/kg		8270C-SI	06/05/09	1
Surrogate Recovery								
Nitrobenzene-d5	61.2			% Rec.		8270C-SI	06/05/09	1
2-Fluorobiphenyl	66.6			% Rec.		8270C-SI	06/05/09	1
p-Terphenyl-d14	64.9			% Rec.		8270C-SI	06/05/09	1

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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L405501-01	WG424884	SAMP	Thallium	R775950	O
L405501-02	WG424884	SAMP	Thallium	R775950	O
	WG424733	SAMP	Acenaphthene	R772686	J
	WG424733	SAMP	1-Methylnaphthalene	R772686	J
L405501-03	WG424884	SAMP	Thallium	R775950	O
	WG424733	SAMP	Acenaphthene	R772686	J
	WG424733	SAMP	1-Methylnaphthalene	R772686	J
L405501-04	WG424884	SAMP	Thallium	R775950	O
	WG424733	SAMP	Acenaphthene	R772686	J
	WG424733	SAMP	1-Methylnaphthalene	R772686	J
	WG424733	SAMP	2-Methylnaphthalene	R772686	J
	WG424733	SAMP	2-Fluorobiphenyl	R772686	J2
	WG424847	SAMP	3&4-Methyl Phenol	R774848	J4
	WG424847	SAMP	Benzo(a)pyrene	R774848	J
	WG424847	SAMP	Benzo(b)fluoranthene	R774848	J
	WG424847	SAMP	Benzo(k)fluoranthene	R774848	J
	WG424847	SAMP	Chrysene	R774848	J
	WG424847	SAMP	Anthracene	R774848	J
	WG424847	SAMP	Phenanthrene	R774848	J
	WG424847	SAMP	Pyrene	R774848	J
L405501-05	WG424884	SAMP	Thallium	R775950	O
L405501-06	WG424884	SAMP	Thallium	R775950	O
	WG424733	SAMP	Acenaphthene	R772686	J
	WG424733	SAMP	Dibenz(a,h)anthracene	R772686	J
	WG424733	SAMP	Fluorene	R772686	J
	WG424733	SAMP	1-Methylnaphthalene	R772686	J
	WG424733	SAMP	2-Methylnaphthalene	R772686	J
L405501-07	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	1-Methylnaphthalene	R775006	J
L405501-08	WG424884	SAMP	Thallium	R775950	O
L405501-09	WG424884	SAMP	Thallium	R775950	O
L405501-10	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	Acenaphthene	R775006	J
	WG425046	SAMP	Fluorene	R775006	J
	WG425046	SAMP	1-Methylnaphthalene	R775006	J
	WG425046	SAMP	2-Methylnaphthalene	R775006	J
	WG424847	SAMP	3&4-Methyl Phenol	R774848	J4
	WG424847	SAMP	Fluoranthene	R774848	J
L405501-11	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	Acenaphthene	R775006	J
	WG425046	SAMP	Dibenz(a,h)anthracene	R775006	J
	WG425046	SAMP	1-Methylnaphthalene	R775006	J
	WG424847	SAMP	3,3-Dichlorobenzidine	R774848	O
	WG424847	SAMP	3&4-Methyl Phenol	R774848	J4
	WG424847	SAMP	Benzylbutyl phthalate	R774848	O
	WG424847	SAMP	Bis(2-ethylhexyl)phthalate	R774848	O
	WG424847	SAMP	Di-n-octyl phthalate	R774848	O
	WG424847	SAMP	Benzo(a)anthracene	R774848	O
	WG424847	SAMP	Benzo(a)pyrene	R774848	J
	WG424847	SAMP	Benzo(b)fluoranthene	R774848	J
	WG424847	SAMP	Benzo(k)fluoranthene	R774848	J
	WG424847	SAMP	Chrysene	R774848	O
	WG424847	SAMP	Fluoranthene	R774848	J
	WG424847	SAMP	Naphthalene	R774848	J
	WG424847	SAMP	Phenanthrene	R774848	J
	WG424847	SAMP	Pyrene	R774848	O
	WG424847	SAMP	p-Terphenyl-d14	R774848	J7
L405501-12	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	Acenaphthene	R775006	J
	WG425046	SAMP	Dibenz(a,h)anthracene	R775006	J
	WG425046	SAMP	Fluorene	R775006	J
	WG425046	SAMP	1-Methylnaphthalene	R775006	J
	WG425046	SAMP	2-Methylnaphthalene	R775006	J
L405501-13	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	Dibenz(a,h)anthracene	R775006	J
L405501-14	WG424884	SAMP	Arsenic	R775950	J
	WG424884	SAMP	Thallium	R775950	O
	WG425046	SAMP	Acenaphthene	R775006	J
	WG425046	SAMP	Acenaphthylene	R775006	J

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
	WG425046	SAMP	Benzo(a)pyrene	R775006	J
	WG425046	SAMP	Benzo(g,h,i)perylene	R775006	J
	WG425046	SAMP	Dibenz(a,h)anthracene	R775006	J
	WG425046	SAMP	Indeno(1,2,3-cd)pyrene	R775006	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J4	The associated batch QC was outside the established quality control range for accuracy.
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
06/24/09 at 09:47:35

TSR Signing Reports: 358
R5 - Desired TAT

Log all arsenic gw samples as ASG.

Sample: L405501-01 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
WA EIM EDD needed. UNI 480224 dor 6/16/09
Sample: L405501-02 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-03 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-04 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Changed SV8270ACID to full 8270 per JW -JCH 6/5
Sample: L405501-05 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-06 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-07 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-08 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-09 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-10 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Changed SV8270ACID to full 8270 per JW -JCH 6/5
Sample: L405501-11 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Changed SV8270ACID to full 8270 per JW -JCH 6/5
Sample: L405501-12 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-13 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44
Sample: L405501-14 Account: SLRWLOR Received: 06/03/09 09:00 Due Date: 06/22/09 00:00 RPT Date: 06/22/09 12:44



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West Linn, OR 97068

Quality Assurance Report
Level II

June 24, 2009

L405501

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1-Methylnaphthalene	< .33	ppm			WG424733	06/04/09 13:12
2-Chloronaphthalene	< .33	ppm			WG424733	06/04/09 13:12
2-Methylnaphthalene	< .33	ppm			WG424733	06/04/09 13:12
Acenaphthene	< .33	ppm			WG424733	06/04/09 13:12
Acenaphthylene	< .33	ppm			WG424733	06/04/09 13:12
Anthracene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(a)anthracene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(a)pyrene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(b)fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(g,h,i)perylene	< .33	ppm			WG424733	06/04/09 13:12
Benzo(k)fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Chrysene	< .33	ppm			WG424733	06/04/09 13:12
Dibenz(a,h)anthracene	< .33	ppm			WG424733	06/04/09 13:12
Fluoranthene	< .33	ppm			WG424733	06/04/09 13:12
Fluorene	< .33	ppm			WG424733	06/04/09 13:12
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG424733	06/04/09 13:12
Naphthalene	< .33	ppm			WG424733	06/04/09 13:12
Phenanthrene	< .33	ppm			WG424733	06/04/09 13:12
Pyrene	< .33	ppm			WG424733	06/04/09 13:12
2-Fluorobiphenyl		% Rec.	67.88	30-120	WG424733	06/04/09 13:12
Nitrobenzene-d5		% Rec.	58.82	18-119	WG424733	06/04/09 13:12
p-Terphenyl-d14		% Rec.	74.08	23-143	WG424733	06/04/09 13:12
Mercury	< .02	mg/kg			WG424760	06/05/09 08:59
Total Solids	< .1	%			WG424911	06/05/09 10:22
Total Solids	< .1	%			WG424912	06/05/09 10:17
1-Methylnaphthalene	< .33	ppm			WG425046	06/05/09 12:29
2-Chloronaphthalene	< .33	ppm			WG425046	06/05/09 12:29
2-Methylnaphthalene	< .33	ppm			WG425046	06/05/09 12:29
Acenaphthene	< .33	ppm			WG425046	06/05/09 12:29
Acenaphthylene	< .33	ppm			WG425046	06/05/09 12:29
Anthracene	< .33	ppm			WG425046	06/05/09 12:29
Benzo(a)anthracene	< .33	ppm			WG425046	06/05/09 12:29
Benzo(a)pyrene	< .33	ppm			WG425046	06/05/09 12:29
Benzo(b)fluoranthene	< .33	ppm			WG425046	06/05/09 12:29
Benzo(g,h,i)perylene	< .33	ppm			WG425046	06/05/09 12:29
Benzo(k)fluoranthene	< .33	ppm			WG425046	06/05/09 12:29
Chrysene	< .33	ppm			WG425046	06/05/09 12:29
Dibenz(a,h)anthracene	< .33	ppm			WG425046	06/05/09 12:29
Fluoranthene	< .33	ppm			WG425046	06/05/09 12:29
Fluorene	< .33	ppm			WG425046	06/05/09 12:29
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG425046	06/05/09 12:29
Naphthalene	< .33	ppm			WG425046	06/05/09 12:29
Phenanthrene	< .33	ppm			WG425046	06/05/09 12:29
Pyrene	< .33	ppm			WG425046	06/05/09 12:29
2-Fluorobiphenyl		% Rec.	70.89	30-120	WG425046	06/05/09 12:29
Nitrobenzene-d5		% Rec.	76.10	18-119	WG425046	06/05/09 12:29
p-Terphenyl-d14		% Rec.	84.07	23-143	WG425046	06/05/09 12:29
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG424847	06/04/09 19:15
2,4,5-Trichlorophenol	< .33	ppm			WG424847	06/04/09 19:15

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

June 24, 2009

L405501

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
2,4,6-Trichlorophenol	< .33	ppm			WG424847	06/04/09 19:15
2,4-Dichlorophenol	< .33	ppm			WG424847	06/04/09 19:15
2,4-Dimethylphenol	< .33	ppm			WG424847	06/04/09 19:15
2,4-Dinitrophenol	< .33	ppm			WG424847	06/04/09 19:15
2,4-Dinitrotoluene	< .33	ppm			WG424847	06/04/09 19:15
2,6-Dinitrotoluene	< .33	ppm			WG424847	06/04/09 19:15
2-Chloronaphthalene	< .33	ppm			WG424847	06/04/09 19:15
2-Chlorophenol	< .33	ppm			WG424847	06/04/09 19:15
2-Methylnaphthalene	< .33	ppm			WG424847	06/04/09 19:15
2-Methylphenol	< .33	ppm			WG424847	06/04/09 19:15
2-Nitroaniline	< .33	ppm			WG424847	06/04/09 19:15
2-Nitrophenol	< .33	ppm			WG424847	06/04/09 19:15
3&4-Methyl Phenol	< .33	ppm			WG424847	06/04/09 19:15
3,3-Dichlorobenzidine	< .33	ppm			WG424847	06/04/09 19:15
3-Nitroaniline	< .33	ppm			WG424847	06/04/09 19:15
4,6-Dinitro-2-methylphenol	< .33	ppm			WG424847	06/04/09 19:15
4-Bromophenyl-phenylether	< .33	ppm			WG424847	06/04/09 19:15
4-Chloro-3-methylphenol	< .33	ppm			WG424847	06/04/09 19:15
4-Chloroaniline	< .33	ppm			WG424847	06/04/09 19:15
4-Chlorophenyl-phenylether	< .33	ppm			WG424847	06/04/09 19:15
4-Nitroaniline	< .33	ppm			WG424847	06/04/09 19:15
4-Nitrophenol	< .33	ppm			WG424847	06/04/09 19:15
Acenaphthene	< .33	ppm			WG424847	06/04/09 19:15
Acenaphthylene	< .33	ppm			WG424847	06/04/09 19:15
Acetophenone	< .33	ppm			WG424847	06/04/09 19:15
Anthracene	< .33	ppm			WG424847	06/04/09 19:15
Atrazine	< .33	ppm			WG424847	06/04/09 19:15
Benzaldehyde	< .33	ppm			WG424847	06/04/09 19:15
Benzo(a)anthracene	< .33	ppm			WG424847	06/04/09 19:15
Benzo(a)pyrene	< .33	ppm			WG424847	06/04/09 19:15
Benzo(b)fluoranthene	< .33	ppm			WG424847	06/04/09 19:15
Benzo(g,h,i)perylene	< .33	ppm			WG424847	06/04/09 19:15
Benzo(k)fluoranthene	< .33	ppm			WG424847	06/04/09 19:15
Benzylbutyl phthalate	< .33	ppm			WG424847	06/04/09 19:15
Biphenyl	< .33	ppm			WG424847	06/04/09 19:15
Bis(2-chlorethoxy)methane	< .33	ppm			WG424847	06/04/09 19:15
Bis(2-chloroethyl)ether	< .33	ppm			WG424847	06/04/09 19:15
Bis(2-chloroisopropyl)ether	< .33	ppm			WG424847	06/04/09 19:15
Bis(2-ethylhexyl)phthalate	< .33	ppm			WG424847	06/04/09 19:15
Caprolactam	< .33	ppm			WG424847	06/04/09 19:15
Carbazole	< .33	ppm			WG424847	06/04/09 19:15
Chrysene	< .33	ppm			WG424847	06/04/09 19:15
Di-n-butyl phthalate	< .33	ppm			WG424847	06/04/09 19:15
Di-n-octyl phthalate	< .33	ppm			WG424847	06/04/09 19:15
Dibenz(a,h)anthracene	< .33	ppm			WG424847	06/04/09 19:15
Dibenzofuran	< .33	ppm			WG424847	06/04/09 19:15
Diethyl phthalate	< .33	ppm			WG424847	06/04/09 19:15
Dimethyl phthalate	< .33	ppm			WG424847	06/04/09 19:15
Fluoranthene	< .33	ppm			WG424847	06/04/09 19:15
Fluorene	< .33	ppm			WG424847	06/04/09 19:15
Hexachloro-1,3-butadiene	< .33	ppm			WG424847	06/04/09 19:15
Hexachlorobenzene	< .33	ppm			WG424847	06/04/09 19:15
Hexachlorocyclopentadiene	< .33	ppm			WG424847	06/04/09 19:15
Hexachloroethane	< .33	ppm			WG424847	06/04/09 19:15
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG424847	06/04/09 19:15
Isophorone	< .33	ppm			WG424847	06/04/09 19:15
n-Nitrosodi-n-propylamine	< .33	ppm			WG424847	06/04/09 19:15
n-Nitrosodiphenylamine	< .33	ppm			WG424847	06/04/09 19:15
Naphthalene	< .33	ppm			WG424847	06/04/09 19:15

* Performance of this Analyte is outside of established criteria.

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Quality Assurance Report Level II

June 24, 2009

L405501

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
Nitrobenzene	< .33	ppm			WG424847	06/04/09 19:15
Pentachlorophenol	< .33	ppm			WG424847	06/04/09 19:15
Phenanthrene	< .33	ppm			WG424847	06/04/09 19:15
Phenol	< .33	ppm			WG424847	06/04/09 19:15
Pyrene	< .33	ppm			WG424847	06/04/09 19:15
2,4,6-Tribromophenol		% Rec.	69.05	25-137	WG424847	06/04/09 19:15
2-Fluorobiphenyl		% Rec.	65.78	30-120	WG424847	06/04/09 19:15
2-Fluorophenol		% Rec.	62.03	26-130	WG424847	06/04/09 19:15
Nitrobenzene-d5		% Rec.	56.49	18-119	WG424847	06/04/09 19:15
Phenol-d5		% Rec.	61.48	37-141	WG424847	06/04/09 19:15
p-Terphenyl-d14		% Rec.	83.66	23-143	WG424847	06/04/09 19:15
Antimony	< 1	mg/kg			WG424884	06/07/09 08:19
Arsenic	< 1	mg/kg			WG424884	06/07/09 08:19
Beryllium	< .1	mg/kg			WG424884	06/07/09 08:19
Cadmium	< .25	mg/kg			WG424884	06/07/09 08:19
Chromium	< .5	mg/kg			WG424884	06/07/09 08:19
Copper	< 1	mg/kg			WG424884	06/07/09 08:19
Lead	< .25	mg/kg			WG424884	06/07/09 08:19
Nickel	< 1	mg/kg			WG424884	06/07/09 08:19
Selenium	< 1	mg/kg			WG424884	06/07/09 08:19
Silver	< .5	mg/kg			WG424884	06/07/09 08:19
Thallium	< 1	mg/kg			WG424884	06/07/09 08:19
Zinc	< 1.5	mg/kg			WG424884	06/07/09 08:19

Analyte	Units	Duplicate		RPD	Limit	Ref Samp	Batch
		Result	Duplicate				
Mercury	mg/kg	0.0399	0.0340	16.0	20	L405501-14	WG424760
Total Solids	%	84.3	83.5	0.973	5	L405501-03	WG424911
Total Solids	%	90.2	89.4	0.839	5	L405501-14	WG424912
Antimony	mg/kg	0.00	0.00	0.00	20	L405676-01	WG424884
Arsenic	mg/kg	36.4	15.0	83.3*	20	L405676-01	WG424884
Beryllium	mg/kg	0.603	0.461	26.7*	20	L405676-01	WG424884
Cadmium	mg/kg	0.00	0.00	0.00	20	L405676-01	WG424884
Chromium	mg/kg	22.0	27.0	20.4*	20	L405676-01	WG424884
Copper	mg/kg	20.7	25.3	20.0	20	L405676-01	WG424884
Lead	mg/kg	33.6	65.0	63.7*	20	L405676-01	WG424884
Nickel	mg/kg	17.0	16.5	2.99	20	L405676-01	WG424884
Selenium	mg/kg	0.00	0.00	0.00	20	L405676-01	WG424884
Silver	mg/kg	0.00	0.00	0.00	20	L405676-01	WG424884
Thallium	mg/kg	0.00	0.101	NA	20	L405676-01	WG424884
Zinc	mg/kg	57.2	87.2	41.6*	20	L405676-01	WG424884

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1-Methylnaphthalene	ppm	.033	0.0227	68.7	41-110	WG424733
2-Chloronaphthalene	ppm	.033	0.0231	70.0	43-109	WG424733
2-Methylnaphthalene	ppm	.033	0.0225	68.3	38-104	WG424733
Acenaphthene	ppm	.033	0.0241	73.2	48-103	WG424733
Acenaphthylene	ppm	.033	0.0238	72.2	43-106	WG424733

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Tax I.D. 62-0814289

Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report
Level II

L405501

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Anthracene	ppm	.033	0.0256	77.6	51-110	WG424733
Benzo(a)anthracene	ppm	.033	0.0263	79.8	38-126	WG424733
Benzo(a)pyrene	ppm	.033	0.0262	79.5	47-118	WG424733
Benzo(b)fluoranthene	ppm	.033	0.0226	68.5	47-118	WG424733
Benzo(g,h,i)perylene	ppm	.033	0.0255	77.4	40-125	WG424733
Benzo(k)fluoranthene	ppm	.033	0.0293	88.7	45-121	WG424733
Chrysene	ppm	.033	0.0218	66.1	35-135	WG424733
Dibenz(a,h)anthracene	ppm	.033	0.0257	78.0	41-124	WG424733
Fluoranthene	ppm	.033	0.0255	77.2	50-114	WG424733
Fluorene	ppm	.033	0.0253	76.8	49-109	WG424733
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0258	78.2	40-126	WG424733
Naphthalene	ppm	.033	0.0211	64.0	36-100	WG424733
Phenanthrene	ppm	.033	0.0250	75.6	46-108	WG424733
Pyrene	ppm	.033	0.0230	69.6	30-136	WG424733
2-Fluorobiphenyl				65.76	30-120	WG424733
Nitrobenzene-d5				64.19	18-119	WG424733
p-Terphenyl-d14				74.29	23-143	WG424733
Mercury	mg/kg	8.77	8.53	97.3	71.6-127.7	WG424760
Total Solids	%	50	50.0	99.9	85-115	WG424911
Total Solids	%	50	50.0	100.	85-115	WG424912
1-Methylnaphthalene	ppm	.033	0.0237	71.9	41-110	WG425046
2-Chloronaphthalene	ppm	.033	0.0250	75.8	43-109	WG425046
2-Methylnaphthalene	ppm	.033	0.0243	73.7	38-104	WG425046
Acenaphthene	ppm	.033	0.0247	74.9	48-103	WG425046
Acenaphthylene	ppm	.033	0.0259	78.4	43-106	WG425046
Anthracene	ppm	.033	0.0279	84.6	51-110	WG425046
Benzo(a)anthracene	ppm	.033	0.0272	82.6	38-126	WG425046
Benzo(a)pyrene	ppm	.033	0.0259	78.6	47-118	WG425046
Benzo(b)fluoranthene	ppm	.033	0.0241	73.1	47-118	WG425046
Benzo(g,h,i)perylene	ppm	.033	0.0251	76.0	40-125	WG425046
Benzo(k)fluoranthene	ppm	.033	0.0283	85.7	45-121	WG425046
Chrysene	ppm	.033	0.0253	76.7	35-135	WG425046
Dibenz(a,h)anthracene	ppm	.033	0.0252	76.3	41-124	WG425046
Fluoranthene	ppm	.033	0.0262	79.3	50-114	WG425046
Fluorene	ppm	.033	0.0246	74.5	49-109	WG425046
Indeno(1,2,3-cd)pyrene	ppm	.033	0.0260	78.7	40-126	WG425046
Naphthalene	ppm	.033	0.0240	72.8	36-100	WG425046
Phenanthrene	ppm	.033	0.0267	81.0	46-108	WG425046
Pyrene	ppm	.033	0.0263	79.8	30-136	WG425046
2-Fluorobiphenyl				69.37	30-120	WG425046
Nitrobenzene-d5				74.30	18-119	WG425046
p-Terphenyl-d14				78.33	23-143	WG425046
1,2,4,5-Tetrachlorobenzene	ppm	.333	0.237	71.1	51-112	WG424847
2,4,5-Trichlorophenol	ppm	.333	0.221	66.4	53-110	WG424847
2,4,6-Trichlorophenol	ppm	.333	0.221	66.3	56-109	WG424847
2,4-Dichlorophenol	ppm	.333	0.216	64.7	54-107	WG424847
2,4-Dimethylphenol	ppm	.333	0.349	105.	58-119	WG424847
2,4-Dinitrophenol	ppm	.333	0.273	82.1	16-130	WG424847
2,4-Dinitrotoluene	ppm	.333	0.204	61.2	53-120	WG424847

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Quality Assurance Report
Level II

West Linn, OR 97068

L405501

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2,6-Dinitrotoluene	ppm	.333	0.210	63.0	56-113	WG424847
2-Chloronaphthalene	ppm	.333	0.208	62.4	55-103	WG424847
2-Chlorophenol	ppm	.333	0.195	58.6	52-108	WG424847
2-Methylnaphthalene	ppm	.333	0.215	64.5	52-107	WG424847
2-Methylphenol	ppm	.333	0.218	65.4	58-116	WG424847
2-Nitroaniline	ppm	.333	0.212	63.6	54-116	WG424847
2-Nitrophenol	ppm	.333	0.217	65.1	38-110	WG424847
3&4-Methyl Phenol	ppm	.333	0.252	75.7	60-136	WG424847
3,3-Dichlorobenzidine	ppm	.333	0.152	45.8	24-123	WG424847
3-Nitroaniline	ppm	.333	0.177	53.2	17-135	WG424847
4,6-Dinitro-2-methylphenol	ppm	.333	0.294	88.2	34-111	WG424847
4-Bromophenyl-phenylether	ppm	.333	0.230	69.2	47-98	WG424847
4-Chloro-3-methylphenol	ppm	.333	0.225	67.6	54-116	WG424847
4-Chloroaniline	ppm	.333	0.234	70.2	18-130	WG424847
4-Chlorophenyl-phenylether	ppm	.333	0.235	70.6	55-106	WG424847
4-Nitroaniline	ppm	.333	0.179	53.7	16-133	WG424847
4-Nitrophenol	ppm	.333	0.220	65.9	34-123	WG424847
Acenaphthene	ppm	.333	0.216	65.0	54-102	WG424847
Acenaphthylene	ppm	.333	0.217	65.1	56-104	WG424847
Acetophenone	ppm	.333	0.195	58.6	42-92	WG424847
Anthracene	ppm	.333	0.225	67.6	57-112	WG424847
Atrazine	ppm	.333	0.234	70.4	40-143	WG424847
Benzaldehyde	ppm	.333	0.0850	25.5	0-69	WG424847
Benzo(a)anthracene	ppm	.333	0.205	61.6	55-105	WG424847
Benzo(a)pyrene	ppm	.333	0.229	68.7	59-114	WG424847
Benzo(b)fluoranthene	ppm	.333	0.242	72.6	44-116	WG424847
Benzo(g,h,i)perylene	ppm	.333	0.271	81.4	41-127	WG424847
Benzo(k)fluoranthene	ppm	.333	0.200	60.1	36-119	WG424847
Benzylbutyl phthalate	ppm	.333	0.293	88.1	57-130	WG424847
Biphenyl	ppm	.333	0.209	62.9	54-103	WG424847
Bis(2-chlorethoxy)methane	ppm	.333	0.235	70.7	52-107	WG424847
Bis(2-chloroethyl)ether	ppm	.333	0.226	67.9	38-115	WG424847
Bis(2-chloroisopropyl)ether	ppm	.333	0.208	62.5	49-106	WG424847
Bis(2-ethylhexyl)phthalate	ppm	.333	0.325	97.6	50-130	WG424847
Caprolactam	ppm	.333	0.205	61.7	43-131	WG424847
Carbazole	ppm	.333	0.202	60.5	42-120	WG424847
Chrysene	ppm	.333	0.195	58.5	54-103	WG424847
Di-n-butyl phthalate	ppm	.333	0.266	79.9	56-121	WG424847
Di-n-octyl phthalate	ppm	.333	0.302	90.7	50-128	WG424847
Dibenz(a,h)anthracene	ppm	.333	0.257	77.1	42-128	WG424847
Dibenzofuran	ppm	.333	0.215	64.6	56-111	WG424847
Diethyl phthalate	ppm	.333	0.242	72.6	57-110	WG424847
Dimethyl phthalate	ppm	.333	0.239	71.8	57-108	WG424847
Fluoranthene	ppm	.333	0.199	59.7	51-109	WG424847
Fluorene	ppm	.333	0.211	63.3	53-106	WG424847
Hexachloro-1,3-butadiene	ppm	.333	0.223	67.1	46-110	WG424847
Hexachlorobenzene	ppm	.333	0.237	71.0	51-117	WG424847
Hexachlorocyclopentadiene	ppm	.333	0.196	58.9	21-127	WG424847
Hexachloroethane	ppm	.333	0.196	58.8	43-104	WG424847
Indeno(1,2,3-cd)pyrene	ppm	.333	0.258	77.3	42-127	WG424847
Isophorone	ppm	.333	0.213	64.1	56-116	WG424847
n-Nitrosodi-n-propylamine	ppm	.333	0.237	71.0	54-113	WG424847
n-Nitrosodiphenylamine	ppm	.333	0.242	72.6	66-126	WG424847
Naphthalene	ppm	.333	0.197	59.1	46-97	WG424847
Nitrobenzene	ppm	.333	0.206	61.8	46-102	WG424847
Pentachlorophenol	ppm	.333	0.214	64.3	37-118	WG424847
Phenanthrene	ppm	.333	0.213	63.8	56-102	WG424847
Phenol	ppm	.333	0.218	65.5	55-115	WG424847
Pyrene	ppm	.333	0.230	69.2	53-111	WG424847

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Quality Assurance Report
Level II

L405501

June 24, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
2,4,6-Tribromophenol				66.89	25-137	
2-Fluorobiphenyl				61.36	30-120	
2-Fluorophenol				56.75	26-130	
Nitrobenzene-d5				52.48	18-119	
Phenol-d5				57.15	37-141	
p-Terphenyl-d14				77.14	23-143	
Antimony	mg/kg	85.1	36.6	43.0	1.2-242.1	WG424884
Arsenic	mg/kg	192	171.	89.1	78.6-120.8	WG424884
Beryllium	mg/kg	69.3	64.3	92.8	79.8-120.1	WG424884
Cadmium	mg/kg	70.1	61.9	88.3	78.5-121.5	WG424884
Chromium	mg/kg	168	157.	93.5	80.4-120.2	WG424884
Copper	mg/kg	122	119.	97.5	81.6-119.7	WG424884
Lead	mg/kg	113	100.	88.5	77.3-122.1	WG424884
Nickel	mg/kg	74.1	72.7	98.1	78.8-121.2	WG424884
Selenium	mg/kg	176	156.	88.6	75.6-125.0	WG424884
Silver	mg/kg	115	105.	91.3	66-133.9	WG424884
Thallium	mg/kg	111	99.5	89.6	77.6-122.5	WG424884
Zinc	mg/kg	437	411.	94.1	78.5-121.7	WG424884

Analyte	Units	Laboratory Control Sample Duplicate		%Rec	Limit	RPD	Limit	Batch
		Result	Ref					
1-Methylnaphthalene	ppm	0.0245	0.0227	74.0	41-110	7.89	24	WG424733
2-Chloronaphthalene	ppm	0.0248	0.0231	75.0	43-109	7.16	21	WG424733
2-Methylnaphthalene	ppm	0.0243	0.0225	74.0	38-104	7.48	24	WG424733
Acenaphthene	ppm	0.0258	0.0241	78.0	48-103	6.71	20	WG424733
Acenaphthylene	ppm	0.0274	0.0238	83.0	43-106	14.0	20	WG424733
Anthracene	ppm	0.0265	0.0256	80.0	51-110	3.60	22	WG424733
Benzo(a)anthracene	ppm	0.0288	0.0263	87.0	38-126	8.84	20	WG424733
Benzo(a)pyrene	ppm	0.0286	0.0262	87.0	47-118	8.55	20	WG424733
Benzo(b)fluoranthene	ppm	0.0247	0.0226	75.0	47-118	8.98	29	WG424733
Benzo(g,h,i)perylene	ppm	0.0277	0.0255	84.0	40-125	8.01	20	WG424733
Benzo(k)fluoranthene	ppm	0.0300	0.0293	91.0	45-121	2.42	31	WG424733
Chrysene	ppm	0.0239	0.0218	72.0	35-135	9.13	20	WG424733
Dibenz(a,h)anthracene	ppm	0.0277	0.0257	84.0	41-124	7.39	20	WG424733
Fluoranthene	ppm	0.0266	0.0255	81.0	50-114	4.29	20	WG424733
Fluorene	ppm	0.0272	0.0253	82.0	49-109	6.99	19	WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0275	0.0258	83.0	40-126	6.16	20	WG424733
Naphthalene	ppm	0.0232	0.0211	70.0	36-100	9.48	24	WG424733
Phenanthrene	ppm	0.0262	0.0250	79.0	46-108	4.77	21	WG424733
Pyrene	ppm	0.0250	0.0230	76.0	30-136	8.55	20	WG424733
2-Fluorobiphenyl				84.42	30-120			WG424733
Nitrobenzene-d5				71.03	18-119			WG424733
p-Terphenyl-d14				83.89	23-143			WG424733
1-Methylnaphthalene	ppm	0.0274	0.0237	83.0	41-110	14.5	24	WG425046
2-Chloronaphthalene	ppm	0.0276	0.0250	84.0	43-109	9.76	21	WG425046
2-Methylnaphthalene	ppm	0.0271	0.0243	82.0	38-104	11.0	24	WG425046
Acenaphthene	ppm	0.0282	0.0247	86.0	48-103	13.2	20	WG425046
Acenaphthylene	ppm	0.0284	0.0259	86.0	43-106	9.36	20	WG425046
Anthracene	ppm	0.0290	0.0279	88.0	51-110	3.71	22	WG425046
Benzo(a)anthracene	ppm	0.0323	0.0272	98.0	38-126	17.0	20	WG425046
Benzo(a)pyrene	ppm	0.0304	0.0259	92.0	47-118	15.8	20	WG425046
Benzo(b)fluoranthene	ppm	0.0313	0.0241	95.0	47-118	25.9	29	WG425046
Benzo(g,h,i)perylene	ppm	0.0298	0.0251	90.0	40-125	17.2	20	WG425046
Benzo(k)fluoranthene	ppm	0.0299	0.0283	91.0	45-121	5.55	31	WG425046
Chrysene	ppm	0.0294	0.0253	89.0	35-135	15.1	20	WG425046
Dibenz(a,h)anthracene	ppm	0.0295	0.0252	89.0	41-124	15.9	20	WG425046

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**Quality Assurance Report
Level II**

June 24, 2009

L405501

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Fluoranthene	ppm	0.0284	0.0262	86.0	50-114	8.25	20	WG425046
Fluorene	ppm	0.0282	0.0246	85.0	49-109	13.7	19	WG425046
Indeno(1,2,3-cd)pyrene	ppm	0.0298	0.0260	90.0	40-126	13.7	20	WG425046
Naphthalene	ppm	0.0266	0.0240	81.0	36-100	10.3	24	WG425046
Phenanthrene	ppm	0.0285	0.0267	87.0	46-108	6.62	21	WG425046
Pyrene	ppm	0.0312	0.0263	94.0	30-136	16.9	20	WG425046
2-Fluorobiphenyl				76.69	30-120			WG425046
Nitrobenzene-d5				78.03	18-119			WG425046
p-Terphenyl-d14				89.92	23-143			WG425046
1,2,4,5-Tetrachlorobenzene	ppm	0.255	0.237	76.0	51-112	7.31	21	WG424847
2,4,5-Trichlorophenol	ppm	0.236	0.221	71.0	53-110	6.48	25	WG424847
2,4,6-Trichlorophenol	ppm	0.237	0.221	71.0	56-109	7.11	20	WG424847
2,4-Dichlorophenol	ppm	0.235	0.216	71.0	54-107	8.69	21	WG424847
2,4-Dimethylphenol	ppm	0.388	0.349	116.	58-119	10.6	23	WG424847
2,4-Dinitrophenol	ppm	0.285	0.273	86.0	16-130	4.20	45	WG424847
2,4-Dinitrotoluene	ppm	0.225	0.204	68.0	53-120	9.95	23	WG424847
2,6-Dinitrotoluene	ppm	0.220	0.210	66.0	56-113	4.91	22	WG424847
2-Chloronaphthalene	ppm	0.220	0.208	66.0	55-103	5.61	20	WG424847
2-Chlorophenol	ppm	0.212	0.195	64.0	52-108	8.58	24	WG424847
2-Methylnaphthalene	ppm	0.229	0.215	69.0	52-107	6.20	21	WG424847
2-Methylphenol	ppm	0.240	0.218	72.0	58-116	9.67	22	WG424847
2-Nitroaniline	ppm	0.229	0.212	69.0	54-116	7.97	24	WG424847
2-Nitrophenol	ppm	0.223	0.217	67.0	38-110	2.99	24	WG424847
3&4-Methyl Phenol	ppm	0.189	0.252	57*	60-136	28.6	29	WG424847
3,3-Dichlorobenzidine	ppm	0.171	0.152	51.0	24-123	11.5	35	WG424847
3-Nitroaniline	ppm	0.191	0.177	57.0	17-135	7.49	33	WG424847
4,6-Dinitro-2-methylphenol	ppm	0.297	0.294	89.0	34-111	1.17	33	WG424847
4-Bromophenyl-phenylether	ppm	0.246	0.230	74.0	47-98	6.52	23	WG424847
4-Chloro-3-methylphenol	ppm	0.237	0.225	71.0	54-116	5.08	23	WG424847
4-Chloroaniline	ppm	0.250	0.234	75.0	18-130	6.67	31	WG424847
4-Chlorophenyl-phenylether	ppm	0.247	0.235	74.0	55-106	4.78	22	WG424847
4-Nitroaniline	ppm	0.185	0.179	56.0	16-133	3.59	37	WG424847
4-Nitrophenol	ppm	0.230	0.220	69.0	34-123	4.54	36	WG424847
Acenaphthene	ppm	0.229	0.216	69.0	54-102	5.72	20	WG424847
Acenaphthylene	ppm	0.232	0.217	70.0	56-104	6.95	20	WG424847
Acetophenone	ppm	0.208	0.195	63.0	42-92	6.48	22	WG424847
Anthracene	ppm	0.235	0.225	71.0	57-112	4.16	21	WG424847
Atrazine	ppm	0.242	0.234	73.0	40-143	3.18	25	WG424847
Benzaldehyde	ppm	0.0883	0.0850	27.0	0-69	3.84	32	WG424847
Benzo(a)anthracene	ppm	0.233	0.205	70.0	55-105	12.7	21	WG424847
Benzo(a)pyrene	ppm	0.242	0.229	73.0	59-114	5.78	22	WG424847
Benzo(b)fluoranthene	ppm	0.209	0.242	63.0	44-116	14.5	33	WG424847
Benzo(g,h,i)perylene	ppm	0.280	0.271	84.0	41-127	3.13	29	WG424847
Benzo(k)fluoranthene	ppm	0.229	0.200	69.0	36-119	13.4	37	WG424847
Benzylbutyl phthalate	ppm	0.308	0.293	93.0	57-130	4.91	27	WG424847
Biphenyl	ppm	0.226	0.209	68.0	54-103	7.59	21	WG424847
Bis(2-chlorethoxy)methane	ppm	0.255	0.235	77.0	52-107	8.18	21	WG424847
Bis(2-chloroethyl)ether	ppm	0.226	0.226	68.0	38-115	0.0885	28	WG424847
Bis(2-chloroisopropyl)ether	ppm	0.224	0.208	67.0	49-106	7.39	25	WG424847
Bis(2-ethylhexyl)phthalate	ppm	0.335	0.325	101.	50-130	3.12	29	WG424847
Caprolactam	ppm	0.223	0.205	67.0	43-131	8.22	24	WG424847
Carbazole	ppm	0.207	0.202	62.0	42-120	2.72	26	WG424847
Chrysene	ppm	0.192	0.195	58.0	54-103	1.37	23	WG424847
Di-n-butyl phthalate	ppm	0.274	0.266	82.0	56-121	3.05	22	WG424847
Di-n-octyl phthalate	ppm	0.311	0.302	93.0	50-128	2.95	26	WG424847
Dibenz(a,h)anthracene	ppm	0.271	0.257	81.0	42-128	5.46	28	WG424847
Dibenzofuran	ppm	0.231	0.215	69.0	56-111	7.26	21	WG424847

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Quality Assurance Report
Level II

West Linn, OR 97068

June 24, 2009

L405501

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
Diethyl phthalate	ppm	0.258	0.242	78.0	57-110	6.63	20	WG424847
Dimethyl phthalate	ppm	0.255	0.239	77.0	57-108	6.42	20	WG424847
Fluoranthene	ppm	0.210	0.199	63.0	51-109	5.59	26	WG424847
Fluorene	ppm	0.228	0.211	68.0	53-106	7.65	20	WG424847
Hexachloro-1,3-butadiene	ppm	0.238	0.223	71.0	46-110	6.26	25	WG424847
Hexachlorobenzene	ppm	0.245	0.237	74.0	51-117	3.66	24	WG424847
Hexachlorocyclopentadiene	ppm	0.197	0.196	59.0	21-127	0.410	40	WG424847
Hexachloroethane	ppm	0.201	0.196	60.0	43-104	2.78	27	WG424847
Indeno(1,2,3-cd)pyrene	ppm	0.271	0.258	81.0	42-127	4.95	28	WG424847
Isophorone	ppm	0.224	0.213	67.0	56-116	4.89	21	WG424847
n-Nitrosodi-n-propylamine	ppm	0.257	0.237	77.0	54-113	8.25	21	WG424847
n-Nitrosodiphenylamine	ppm	0.252	0.242	76.0	66-126	3.96	22	WG424847
Naphthalene	ppm	0.212	0.197	64.0	46-97	7.57	23	WG424847
Nitrobenzene	ppm	0.216	0.206	65.0	46-102	5.02	23	WG424847
Pentachlorophenol	ppm	0.225	0.214	68.0	37-118	4.96	28	WG424847
Phenanthrene	ppm	0.220	0.213	66.0	56-102	3.60	20	WG424847
Phenol	ppm	0.236	0.218	71.0	55-115	7.71	22	WG424847
Pyrene	ppm	0.242	0.230	73.0	53-111	5.05	26	WG424847
2,4,6-Tribromophenol				63.25	25-137			WG424847
2-Fluorobiphenyl				64.14	30-120			WG424847
2-Fluorophenol				56.69	26-130			WG424847
Nitrobenzene-d5				52.38	18-119			WG424847
Phenol-d5				57.19	37-141			WG424847
p-Terphenyl-d14				76.32	23-143			WG424847

Analyte	Units	Matrix Spike				Limit	Ref Samp	Batch
		MS Res	Ref Res	TV	% Rec			
Mercury	mg/kg	0.293	0.0340	.25	104.	70-130	L405501-14	WG424760
1-Methylnaphthalene	ppm	0.0596	0.0180	.033	126.	19-131	L405277-02	WG424733
2-Chloronaphthalene	ppm	0.0257	0.00	.033	77.8	38-117	L405277-02	WG424733
2-Methylnaphthalene	ppm	0.0877	0.0280	.033	181.*	18-125	L405277-02	WG424733
Acenaphthene	ppm	0.0289	0.00	.033	87.5	31-120	L405277-02	WG424733
Acenaphthylene	ppm	0.0266	0.00	.033	80.7	34-116	L405277-02	WG424733
Anthracene	ppm	0.0256	0.00	.033	77.7	32-131	L405277-02	WG424733
Benzo(a)anthracene	ppm	0.0228	0.00	.033	69.0	32-131	L405277-02	WG424733
Benzo(a)pyrene	ppm	0.0236	0.00	.033	71.5	28-130	L405277-02	WG424733
Benzo(b)fluoranthene	ppm	0.0213	0.00	.033	64.5	37-130	L405277-02	WG424733
Benzo(g,h,i)perylene	ppm	0.0215	0.00	.033	65.2	10-134	L405277-02	WG424733
Benzo(k)fluoranthene	ppm	0.0261	0.00	.033	79.2	31-129	L405277-02	WG424733
Chrysene	ppm	0.0223	0.00	.033	67.7	25-137	L405277-02	WG424733
Dibenz(a,h)anthracene	ppm	0.0226	0.00	.033	68.6	20-134	L405277-02	WG424733
Fluoranthene	ppm	0.0245	0.00	.033	74.3	27-138	L405277-02	WG424733
Fluorene	ppm	0.0310	0.00	.033	93.9	26-136	L405277-02	WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0218	0.00	.033	66.1	16-135	L405277-02	WG424733
Naphthalene	ppm	0.0291	0.00	.033	88.3	22-121	L405277-02	WG424733
Phenanthrene	ppm	0.0282	0.00	.033	85.5	27-133	L405277-02	WG424733
Pyrene	ppm	0.0233	0.00	.033	70.7	22-133	L405277-02	WG424733
2-Fluorobiphenyl					73.83	30-120		WG424733
Nitrobenzene-d5					59.50	18-119		WG424733
p-Terphenyl-d14					74.82	23-143		WG424733

1-Methylnaphthalene	ppm	0.0251	0.00	.033	75.9	19-131	L405619-04	WG425046
2-Chloronaphthalene	ppm	0.0260	0.00	.033	78.9	38-117	L405619-04	WG425046
2-Methylnaphthalene	ppm	0.0247	0.00	.033	74.7	18-125	L405619-04	WG425046
Acenaphthene	ppm	0.0257	0.00	.033	77.8	31-120	L405619-04	WG425046

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June 24, 2009

L405501

Analyte	Units	Matrix Spike			% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res	TV				
Acenaphthylene	ppm	0.0262	0.00	.033	79.3	34-116	L405619-04	WG425046
Anthracene	ppm	0.0254	0.00	.033	76.9	32-131	L405619-04	WG425046
Benzo(a)anthracene	ppm	0.0275	0.00	.033	83.3	32-131	L405619-04	WG425046
Benzo(a)pyrene	ppm	0.0281	0.00	.033	85.1	28-130	L405619-04	WG425046
Benzo(b)fluoranthene	ppm	0.0325	0.00	.033	98.3	37-130	L405619-04	WG425046
Benzo(g,h,i)perylene	ppm	0.0149	0.00	.033	45.1	10-134	L405619-04	WG425046
Benzo(k)fluoranthene	ppm	0.0298	0.00	.033	90.3	31-129	L405619-04	WG425046
Chrysene	ppm	0.0271	0.00	.033	82.2	25-137	L405619-04	WG425046
Dibenz(a,h)anthracene	ppm	0.0206	0.00	.033	62.4	20-134	L405619-04	WG425046
Fluoranthene	ppm	0.0281	0.00	.033	85.0	27-138	L405619-04	WG425046
Fluorene	ppm	0.0271	0.00	.033	82.1	26-136	L405619-04	WG425046
Indeno(1,2,3-cd)pyrene	ppm	0.0189	0.00	.033	57.3	16-135	L405619-04	WG425046
Naphthalene	ppm	0.0238	0.00	.033	72.2	22-121	L405619-04	WG425046
Phenanthrene	ppm	0.0256	0.00	.033	77.5	27-133	L405619-04	WG425046
Pyrene	ppm	0.0231	0.00	.033	70.1	22-133	L405619-04	WG425046
2-Fluorobiphenyl					74.92	30-120		WG425046
Nitrobenzene-d5					59.57	18-119		WG425046
p-Terphenyl-d14					69.90	23-143		WG425046
1,2,4,5-Tetrachlorobenzene	ppm	0.270	0.00	.333	81.1	47-111	L405609-11	WG424847
2,4,5-Trichlorophenol	ppm	0.244	0.00	.333	73.2	28-128	L405609-11	WG424847
2,4,6-Trichlorophenol	ppm	0.246	0.00	.333	73.9	27-128	L405609-11	WG424847
2,4-Dichlorophenol	ppm	0.245	0.00	.333	73.5	39-116	L405609-11	WG424847
2,4-Dimethylphenol	ppm	0.400	0.00	.333	120.*	50-119	L405609-11	WG424847
2,4-Dinitrophenol	ppm	0.156	0.00	.333	46.8	10-123	L405609-11	WG424847
2,4-Dinitrotoluene	ppm	0.227	0.00	.333	68.3	52-121	L405609-11	WG424847
2,6-Dinitrotoluene	ppm	0.226	0.00	.333	67.8	53-114	L405609-11	WG424847
2-Chloronaphthalene	ppm	0.237	0.00	.333	71.3	52-101	L405609-11	WG424847
2-Chlorophenol	ppm	0.227	0.00	.333	68.1	41-112	L405609-11	WG424847
2-Methylnaphthalene	ppm	0.246	0.00	.333	74.0	48-109	L405609-11	WG424847
2-Methylphenol	ppm	0.252	0.00	.333	75.7	56-111	L405609-11	WG424847
2-Nitroaniline	ppm	0.248	0.00	.333	74.5	52-117	L405609-11	WG424847
2-Nitrophenol	ppm	0.238	0.00	.333	71.5	23-117	L405609-11	WG424847
3&4-Methyl Phenol	ppm	0.294	0.00	.333	88.4	50-134	L405609-11	WG424847
3,3-Dichlorobenzidine	ppm	0.168	0.00	.333	50.4	10-133	L405609-11	WG424847
3-Nitroaniline	ppm	0.191	0.00	.333	57.5	5-134	L405609-11	WG424847
4,6-Dinitro-2-methylphenol	ppm	0.263	0.00	.333	79.0	10-124	L405609-11	WG424847
4-Bromophenyl-phenylether	ppm	0.255	0.00	.333	76.6	37-103	L405609-11	WG424847
4-Chloro-3-methylphenol	ppm	0.243	0.00	.333	73.0	52-119	L405609-11	WG424847
4-Chloroaniline	ppm	0.262	0.00	.333	78.6	4-134	L405609-11	WG424847
4-Chlorophenyl-phenylether	ppm	0.262	0.00	.333	78.6	53-105	L405609-11	WG424847
4-Nitroaniline	ppm	0.193	0.00	.333	58.0	12-129	L405609-11	WG424847
4-Nitrophenol	ppm	0.231	0.00	.333	69.3	15-140	L405609-11	WG424847
Acenaphthene	ppm	0.242	0.00	.333	72.7	52-102	L405609-11	WG424847
Acenaphthylene	ppm	0.253	0.00	.333	75.8	54-103	L405609-11	WG424847
Acetophenone	ppm	0.229	0.00	.333	68.8	38-94	L405609-11	WG424847
Anthracene	ppm	0.238	0.00	.333	71.4	55-114	L405609-11	WG424847
Atrazine	ppm	0.258	0.00	.333	77.5	40-144	L405609-11	WG424847
Benzaldehyde	ppm	0.105	0.00	.333	31.7	0-100	L405609-11	WG424847
Benzo(a)anthracene	ppm	0.230	0.00	.333	69.0	37-124	L405609-11	WG424847
Benzo(a)pyrene	ppm	0.234	0.00	.333	70.3	44-129	L405609-11	WG424847
Benzo(b)fluoranthene	ppm	0.216	0.00	.333	64.8	28-135	L405609-11	WG424847
Benzo(g,h,i)perylene	ppm	0.282	0.00	.333	84.8	25-123	L405609-11	WG424847
Benzo(k)fluoranthene	ppm	0.238	0.00	.333	71.4	41-116	L405609-11	WG424847
Benzylbutyl phthalate	ppm	0.301	0.00	.333	90.5	45-143	L405609-11	WG424847
Biphenyl	ppm	0.243	0.00	.333	72.9	49-103	L405609-11	WG424847
Bis(2-chloroethoxy)methane	ppm	0.266	0.00	.333	80.0	48-108	L405609-11	WG424847
Bis(2-chloroethyl)ether	ppm	0.262	0.00	.333	78.6	36-115	L405609-11	WG424847

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L405501

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Bis(2-chloroisopropyl)ether	ppm	0.253	0.00	.333	76.1	44-109	L405609-11	WG424847
Bis(2-ethylhexyl)phthalate	ppm	0.350	0.00	.333	105.	40-128	L405609-11	WG424847
Caprolactam	ppm	0.208	0.00	.333	62.6	26-140	L405609-11	WG424847
Carbazole	ppm	0.208	0.00	.333	62.4	43-122	L405609-11	WG424847
Chrysene	ppm	0.197	0.00	.333	59.0	39-119	L405609-11	WG424847
Di-n-butyl phthalate	ppm	0.282	0.00	.333	84.5	49-121	L405609-11	WG424847
Di-n-octyl phthalate	ppm	0.321	0.00	.333	96.3	40-132	L405609-11	WG424847
Dibenz(a,h)anthracene	ppm	0.265	0.00	.333	79.6	29-123	L405609-11	WG424847
Dibenzofuran	ppm	0.248	0.00	.333	74.3	54-111	L405609-11	WG424847
Diethyl phthalate	ppm	0.264	0.00	.333	79.4	51-113	L405609-11	WG424847
Dimethyl phthalate	ppm	0.267	0.00	.333	80.1	54-108	L405609-11	WG424847
Fluoranthene	ppm	0.220	0.00	.333	65.9	23-143	L405609-11	WG424847
Fluorene	ppm	0.238	0.00	.333	71.6	53-107	L405609-11	WG424847
Hexachloro-1,3-butadiene	ppm	0.257	0.00	.333	77.2	39-113	L405609-11	WG424847
Hexachlorobenzene	ppm	0.269	0.00	.333	80.7	49-108	L405609-11	WG424847
Hexachlorocyclopentadiene	ppm	0.222	0.00	.333	66.5	10-131	L405609-11	WG424847
Hexachloroethane	ppm	0.236	0.00	.333	70.9	25-118	L405609-11	WG424847
Indeno(1,2,3-cd)pyrene	ppm	0.267	0.00	.333	80.2	28-125	L405609-11	WG424847
Isophorone	ppm	0.238	0.00	.333	71.6	51-115	L405609-11	WG424847
n-Nitrosodi-n-propylamine	ppm	0.276	0.00	.333	82.8	54-110	L405609-11	WG424847
n-Nitrosodiphenylamine	ppm	0.257	0.00	.333	77.0	54-138	L405609-11	WG424847
Naphthalene	ppm	0.230	0.00	.333	69.1	41-100	L405609-11	WG424847
Nitrobenzene	ppm	0.236	0.00	.333	70.7	40-102	L405609-11	WG424847
Pentachlorophenol	ppm	0.234	0.00	.333	70.2	10-146	L405609-11	WG424847
Phenanthrene	ppm	0.235	0.00	.333	70.5	37-125	L405609-11	WG424847
Phenol	ppm	0.248	0.00	.333	74.6	52-111	L405609-11	WG424847
Pyrene	ppm	0.240	0.00	.333	72.1	22-151	L405609-11	WG424847
2,4,6-Tribromophenol					73.05	25-137		WG424847
2-Fluorobiphenyl					68.75	30-120		WG424847
2-Fluorophenol					63.97	26-130		WG424847
Nitrobenzene-d5					58.62	18-119		WG424847
Phenol-d5					61.03	37-141		WG424847
p-Terphenyl-d14					64.02	23-143		WG424847
Antimony	mg/kg	9.75	0.00	50	19.5*	75-125	L405676-01	WG424884
Arsenic	mg/kg	58.6	15.0	50	87.2	75-125	L405676-01	WG424884
Beryllium	mg/kg	44.8	0.461	50	88.7	75-125	L405676-01	WG424884
Cadmium	mg/kg	44.6	0.00	50	89.2	75-125	L405676-01	WG424884
Chromium	mg/kg	74.5	27.0	50	95.0	75-125	L405676-01	WG424884
Copper	mg/kg	73.3	25.3	50	96.0	75-125	L405676-01	WG424884
Lead	mg/kg	123.	65.0	50	116.	75-125	L405676-01	WG424884
Nickel	mg/kg	60.8	16.5	50	88.6	75-125	L405676-01	WG424884
Selenium	mg/kg	33.2	0.00	50	66.4*	75-125	L405676-01	WG424884
Silver	mg/kg	44.2	0.00	50	88.4	75-125	L405676-01	WG424884
Thallium	mg/kg	43.2	0.101	50	86.2	75-125	L405676-01	WG424884
Zinc	mg/kg	109.	87.2	50	43.6*	75-125	L405676-01	WG424884

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Mercury	mg/kg	0.306	0.293	109.	70-130	4.34	20	L405501-14	WG424760
1-Methylnaphthalene	ppm	0.0483	0.0596	91.8	19-131	20.9	30	L405277-02	WG424733
2-Chloronaphthalene	ppm	0.0240	0.0257	72.8	38-117	6.60	26	L405277-02	WG424733
2-Methylnaphthalene	ppm	0.0736	0.0877	138.113*	18-125	17.5	29	L405277-02	WG424733
Acenaphthene	ppm	0.0254	0.0289	76.9	31-120	12.8	30	L405277-02	WG424733
Acenaphthylene	ppm	0.0232	0.0266	70.4	34-116	13.7	29	L405277-02	WG424733

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**Quality Assurance Report
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L405501

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Anthracene	ppm	0.0249	0.0256	75.3	32-131	3.04	26	L405277-02	WG424733
Benzo(a)anthracene	ppm	0.0246	0.0228	74.7	32-131	7.96	31	L405277-02	WG424733
Benzo(a)pyrene	ppm	0.0246	0.0236	74.6	28-130	4.21	28	L405277-02	WG424733
Benzo(b)fluoranthene	ppm	0.0246	0.0213	74.5	37-130	14.4	41	L405277-02	WG424733
Benzo(g,h,i)perylene	ppm	0.0228	0.0215	69.2	10-134	5.96	26	L405277-02	WG424733
Benzo(k)fluoranthene	ppm	0.0245	0.0261	74.2	31-129	6.42	42	L405277-02	WG424733
Chrysene	ppm	0.0215	0.0223	65.1	25-137	3.87	22	L405277-02	WG424733
Dibenz(a,h)anthracene	ppm	0.0232	0.0226	70.3	20-134	2.48	25	L405277-02	WG424733
Fluoranthene	ppm	0.0242	0.0245	73.3	27-138	1.48	35	L405277-02	WG424733
Fluorene	ppm	0.0271	0.0310	82.1	26-136	13.4	30	L405277-02	WG424733
Indeno(1,2,3-cd)pyrene	ppm	0.0231	0.0218	70.1	16-135	5.80	26	L405277-02	WG424733
Naphthalene	ppm	0.0266	0.0291	80.5	22-121	9.26	30	L405277-02	WG424733
Phenanthrene	ppm	0.0292	0.0282	88.5	27-133	3.44	36	L405277-02	WG424733
Pyrene	ppm	0.0235	0.0233	71.1	22-133	0.578	33	L405277-02	WG424733
2-Fluorobiphenyl				66.72	30-120				WG424733
Nitrobenzene-d5				59.30	18-119				WG424733
p-Terphenyl-d14				75.21	23-143				WG424733
1-Methylnaphthalene	ppm	0.0251	0.0251	76.1	19-131	0.224	30	L405619-04	WG425046
2-Chloronaphthalene	ppm	0.0273	0.0260	82.6	38-117	4.62	26	L405619-04	WG425046
2-Methylnaphthalene	ppm	0.0260	0.0247	78.8	18-125	5.24	29	L405619-04	WG425046
Acenaphthene	ppm	0.0261	0.0257	79.2	31-120	1.76	30	L405619-04	WG425046
Acenaphthylene	ppm	0.0269	0.0262	81.7	34-116	2.97	29	L405619-04	WG425046
Anthracene	ppm	0.0279	0.0254	84.6	32-131	9.56	26	L405619-04	WG425046
Benzo(a)anthracene	ppm	0.0301	0.0275	91.2	32-131	8.97	31	L405619-04	WG425046
Benzo(a)pyrene	ppm	0.0287	0.0281	86.9	28-130	2.16	28	L405619-04	WG425046
Benzo(b)fluoranthene	ppm	0.0321	0.0325	97.2	37-130	1.22	41	L405619-04	WG425046
Benzo(g,h,i)perylene	ppm	0.0165	0.0149	50.0	10-134	10.3	26	L405619-04	WG425046
Benzo(k)fluoranthene	ppm	0.0312	0.0298	94.5	31-129	4.49	42	L405619-04	WG425046
Chrysene	ppm	0.0265	0.0271	80.3	25-137	2.33	22	L405619-04	WG425046
Dibenz(a,h)anthracene	ppm	0.0220	0.0206	66.8	20-134	6.84	25	L405619-04	WG425046
Fluoranthene	ppm	0.0317	0.0281	96.2	27-138	12.3	35	L405619-04	WG425046
Fluorene	ppm	0.0276	0.0271	83.6	26-136	1.83	30	L405619-04	WG425046
Indeno(1,2,3-cd)pyrene	ppm	0.0201	0.0189	60.9	16-135	6.13	26	L405619-04	WG425046
Naphthalene	ppm	0.0245	0.0238	74.1	22-121	2.67	30	L405619-04	WG425046
Phenanthrene	ppm	0.0284	0.0256	86.1	27-133	10.5	36	L405619-04	WG425046
Pyrene	ppm	0.0239	0.0231	72.3	22-133	3.07	33	L405619-04	WG425046
2-Fluorobiphenyl				73.43	30-120				WG425046
Nitrobenzene-d5				61.13	18-119				WG425046
p-Terphenyl-d14				74.13	23-143				WG425046
1,2,4,5-Tetrachlorobenzene	ppm	0.296	0.270	89.0	47-111	9.29	20	L405609-11	WG424847
2,4,5-Trichlorophenol	ppm	0.257	0.244	77.2	28-128	5.33	29	L405609-11	WG424847
2,4,6-Trichlorophenol	ppm	0.261	0.246	78.4	27-128	5.82	31	L405609-11	WG424847
2,4-Dichlorophenol	ppm	0.261	0.245	78.3	39-116	6.34	23	L405609-11	WG424847
2,4-Dimethylphenol	ppm	0.402	0.400	120.763*	50-119	0.489	27	L405609-11	WG424847
2,4-Dinitrophenol	ppm	0.189	0.156	56.7	10-123	19.2	42	L405609-11	WG424847
2,4-Dinitrotoluene	ppm	0.234	0.227	70.2	52-121	2.72	23	L405609-11	WG424847
2,6-Dinitrotoluene	ppm	0.240	0.226	71.9	53-114	5.92	22	L405609-11	WG424847
2-Chloronaphthalene	ppm	0.252	0.237	75.8	52-101	6.11	20	L405609-11	WG424847
2-Chlorophenol	ppm	0.236	0.227	70.9	41-112	4.04	27	L405609-11	WG424847
2-Methylnaphthalene	ppm	0.259	0.246	77.8	48-109	4.96	22	L405609-11	WG424847
2-Methylphenol	ppm	0.268	0.252	80.5	56-111	6.19	20	L405609-11	WG424847
2-Nitroaniline	ppm	0.256	0.248	76.8	52-117	3.09	24	L405609-11	WG424847
2-Nitrophenol	ppm	0.260	0.238	78.2	23-117	8.87	31	L405609-11	WG424847
3&4-Methyl Phenol	ppm	0.300	0.294	90.0	50-134	1.79	32	L405609-11	WG424847
3,3-Dichlorobenzidine	ppm	0.178	0.168	53.5	10-133	5.97	41	L405609-11	WG424847

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Chris Kramer
1800 Blankenship Road, Suite 440

**Quality Assurance Report
Level II**

West Linn, OR 97068

June 24, 2009

L405501

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
3-Nitroaniline	ppm	0.207	0.191	62.2	5-134	7.82	30	L405609-11	WG424847
4,6-Dinitro-2-methylphenol	ppm	0.280	0.263	84.2	10-124	6.38	38	L405609-11	WG424847
4-Bromophenyl-phenylether	ppm	0.271	0.255	81.3	37-103	5.97	23	L405609-11	WG424847
4-Chloro-3-methylphenol	ppm	0.258	0.243	77.5	52-119	6.02	24	L405609-11	WG424847
4-Chloroaniline	ppm	0.278	0.262	83.6	4-134	6.12	28	L405609-11	WG424847
4-Chlorophenyl-phenylether	ppm	0.287	0.262	86.1	53-105	9.15	20	L405609-11	WG424847
4-Nitroaniline	ppm	0.203	0.193	61.0	12-129	5.01	34	L405609-11	WG424847
4-Nitrophenol	ppm	0.228	0.231	68.5	15-140	1.25	40	L405609-11	WG424847
Acenaphthene	ppm	0.262	0.242	78.8	52-102	8.08	23	L405609-11	WG424847
Acenaphthylene	ppm	0.257	0.253	77.2	54-103	1.79	22	L405609-11	WG424847
Acetophenone	ppm	0.238	0.229	71.5	38-94	3.80	22	L405609-11	WG424847
Anthracene	ppm	0.266	0.238	80.0	55-114	11.4	21	L405609-11	WG424847
Atrazine	ppm	0.265	0.258	79.6	40-144	2.64	21	L405609-11	WG424847
Benzaldehyde	ppm	0.103	0.105	31.1	0-100	1.86	37	L405609-11	WG424847
Benzo(a)anthracene	ppm	0.247	0.230	74.2	37-124	7.24	33	L405609-11	WG424847
Benzo(a)pyrene	ppm	0.253	0.234	76.0	44-129	7.74	27	L405609-11	WG424847
Benzo(b)fluoranthene	ppm	0.233	0.216	69.8	28-135	7.48	33	L405609-11	WG424847
Benzo(g,h,i)perylene	ppm	0.300	0.282	90.0	25-123	5.92	35	L405609-11	WG424847
Benzo(k)fluoranthene	ppm	0.258	0.238	77.4	41-116	8.07	34	L405609-11	WG424847
Benzylbutyl phthalate	ppm	0.315	0.301	94.7	45-143	4.53	39	L405609-11	WG424847
Biphenyl	ppm	0.258	0.243	77.6	49-103	6.21	24	L405609-11	WG424847
Bis(2-chloroethoxy)methane	ppm	0.285	0.266	85.6	48-108	6.74	23	L405609-11	WG424847
Bis(2-chloroethyl)ether	ppm	0.265	0.262	79.6	36-115	1.25	30	L405609-11	WG424847
Bis(2-chloroisopropyl)ether	ppm	0.262	0.253	78.6	44-109	3.25	27	L405609-11	WG424847
Bis(2-ethylhexyl)phthalate	ppm	0.358	0.350	108.	40-128	2.33	34	L405609-11	WG424847
Caprolactam	ppm	0.227	0.208	68.2	26-140	8.62	27	L405609-11	WG424847
Carbazole	ppm	0.230	0.208	69.0	43-122	9.93	25	L405609-11	WG424847
Chrysene	ppm	0.210	0.197	63.0	39-119	6.44	31	L405609-11	WG424847
Di-n-butyl phthalate	ppm	0.302	0.282	90.6	49-121	6.89	22	L405609-11	WG424847
Di-n-octyl phthalate	ppm	0.329	0.321	98.9	40-132	2.68	27	L405609-11	WG424847
Dibenz(a,h)anthracene	ppm	0.289	0.265	86.9	29-123	8.79	30	L405609-11	WG424847
Dibenzofuran	ppm	0.252	0.248	75.8	54-111	1.99	21	L405609-11	WG424847
Diethyl phthalate	ppm	0.279	0.264	83.8	51-113	5.42	21	L405609-11	WG424847
Dimethyl phthalate	ppm	0.271	0.267	81.4	54-108	1.60	23	L405609-11	WG424847
Fluoranthene	ppm	0.234	0.220	70.2	23-143	6.28	29	L405609-11	WG424847
Fluorene	ppm	0.246	0.238	73.9	53-107	3.19	22	L405609-11	WG424847
Hexachloro-1,3-butadiene	ppm	0.277	0.257	83.2	39-113	7.42	26	L405609-11	WG424847
Hexachlorobenzene	ppm	0.267	0.269	80.0	49-108	0.804	27	L405609-11	WG424847
Hexachlorocyclopentadiene	ppm	0.235	0.222	70.7	10-131	6.04	39	L405609-11	WG424847
Hexachloroethane	ppm	0.240	0.236	72.0	25-118	1.52	35	L405609-11	WG424847
Indeno(1,2,3-cd)pyrene	ppm	0.291	0.267	87.3	28-125	8.42	32	L405609-11	WG424847
Isophorone	ppm	0.245	0.238	73.4	51-115	2.57	22	L405609-11	WG424847
n-Nitrosodi-n-propylamine	ppm	0.287	0.276	86.0	54-110	3.86	23	L405609-11	WG424847
n-Nitrosodiphenylamine	ppm	0.272	0.257	81.7	54-138	5.85	26	L405609-11	WG424847
Naphthalene	ppm	0.244	0.230	73.3	41-100	5.92	26	L405609-11	WG424847
Nitrobenzene	ppm	0.247	0.236	74.2	40-102	4.72	24	L405609-11	WG424847
Pentachlorophenol	ppm	0.252	0.234	75.6	10-146	7.36	35	L405609-11	WG424847
Phenanthrene	ppm	0.249	0.235	74.8	37-125	5.86	27	L405609-11	WG424847
Phenol	ppm	0.255	0.248	76.7	52-111	2.83	22	L405609-11	WG424847
Pyrene	ppm	0.250	0.240	74.9	22-151	3.83	38	L405609-11	WG424847
2,4,6-Tribromophenol				79.97	25-137				WG424847
2-Fluorobiphenyl				73.68	30-120				WG424847
2-Fluorophenol				66.86	26-130				WG424847
Nitrobenzene-d5				63.54	18-119				WG424847
Phenol-d5				65.78	37-141				WG424847
p-Terphenyl-d14				72.51	23-143				WG424847
Antimony	mg/kg	7.95	9.75	15.9*	75-125	20.3*	20	L405676-01	WG424884

* Performance of this Analyte is outside of established criteria.

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Chris Kramer
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West Linn, OR 97068

Quality Assurance Report
Level II

L405501

June 24, 2009

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
Arsenic	mg/kg	60.4	58.6	90.8	75-125	3.03	20	L405676-01	WG424884
Beryllium	mg/kg	44.7	44.8	88.5	75-125	0.223	20	L405676-01	WG424884
Cadmium	mg/kg	43.2	44.6	86.4	75-125	3.19	20	L405676-01	WG424884
Chromium	mg/kg	62.4	74.5	70.8*	75-125	17.7	20	L405676-01	WG424884
Copper	mg/kg	65.9	73.3	81.2	75-125	10.6	20	L405676-01	WG424884
Lead	mg/kg	73.6	123.	17.2*	75-125	50.3*	20	L405676-01	WG424884
Nickel	mg/kg	60.3	60.8	87.6	75-125	0.826	20	L405676-01	WG424884
Selenium	mg/kg	32.1	33.2	64.2*	75-125	3.37	20	L405676-01	WG424884
Silver	mg/kg	43.2	44.2	86.4	75-125	2.29	20	L405676-01	WG424884
Thallium	mg/kg	42.8	43.2	85.4	75-125	0.930	20	L405676-01	WG424884
Zinc	mg/kg	100.	109.	25.6*	75-125	8.61	20	L405676-01	WG424884

Batch number /Run number / Sample number cross reference

WG424733: R772686: L405501-01 02 03 04 05 06
 WG424760: R773427: L405501-01 02 03 04 05 06 07 08 09 10 11 12 13 14
 WG424911: R773829: L405501-01 02 03 04 05 06 07
 WG424912: R773830: L405501-08 09 10 11 12 13 14
 WG424847: R774848: L405501-04 10 11
 WG425046: R775006: L405501-07 08 09 10 11 12 13 14
 WG424884: R775950: L405501-01 02 03 04 05 06 07 08 09 10 11 12 13 14

* * Calculations are performed prior to rounding of reported values .
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Level II

West Linn, OR 97068

L405501

June 24, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



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Chris Kramer
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West Linn, OR 97068

Report Summary

Friday July 03, 2009

Report Number: L410340

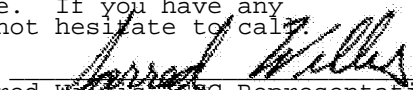
Samples Received: 05/23/09

Client Project: 008.0339.00001

Description: Bay Wood Project - Everett, WA

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:


Jarred Willis, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140
NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

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Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



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REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

July 03, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L410340-01

Sample ID : PB-5B

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 00:00

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
Total Solids	93.1			%		2540G	05/29/09	1
Base/Neutral Extractables								
Acenaphthylene	U	0.028	0.035	mg/kg		8270C	05/27/09	1
Acetophenone	U	0.011	0.035	mg/kg		8270C	05/27/09	1
Atrazine	U	0.11	0.35	mg/kg		8270C	05/27/09	1
Benzaldehyde	U	0.11	0.35	mg/kg		8270C	05/27/09	1
Biphenyl	U	0.11	0.35	mg/kg		8270C	05/27/09	1
Bis(2-chloroethoxy)methane	U	0.032	0.35	mg/kg		8270C	05/27/09	1
Bis(2-chloroethyl)ether	U	0.028	0.35	mg/kg		8270C	05/27/09	1
Bis(2-chloroisopropyl)ether	U	0.033	0.35	mg/kg		8270C	05/27/09	1
4-Bromophenyl-phenylether	U	0.022	0.35	mg/kg		8270C	05/27/09	1
2-Chloronaphthalene	U	0.026	0.35	mg/kg		8270C	05/27/09	1
4-Chlorophenyl-phenylether	U	0.025	0.35	mg/kg		8270C	05/27/09	1
3,3-Dichlorobenzidine	U	0.031	0.35	mg/kg		8270C	05/27/09	1
2,4-Dinitrotoluene	U	0.025	0.35	mg/kg		8270C	05/27/09	1
2,6-Dinitrotoluene	U	0.023	0.35	mg/kg		8270C	05/27/09	1
Hexachlorobenzene	U	0.025	0.35	mg/kg		8270C	05/27/09	1
Hexachloro-1,3-butadiene	U	0.032	0.35	mg/kg		8270C	05/27/09	1
Hexachlorocyclopentadiene	U	0.035	0.35	mg/kg		8270C	05/27/09	1
Hexachloroethane	U	0.033	0.35	mg/kg		8270C	05/27/09	1
Isophorone	U	0.038	0.35	mg/kg		8270C	05/27/09	1
2-Methylnaphthalene	U	0.026	0.35	mg/kg		8270C	05/27/09	1
2-Methylphenol	U	0.033	0.35	mg/kg		8270C	05/27/09	1
3&4-Methyl Phenol	U	0.033	0.35	mg/kg		8270C	05/27/09	1
2-Nitroaniline	U	0.021	0.35	mg/kg		8270C	05/27/09	1
3-Nitroaniline	U	0.065	0.35	mg/kg		8270C	05/27/09	1
4-Nitroaniline	U	0.038	0.35	mg/kg		8270C	05/27/09	1
Nitrobenzene	U	0.028	0.35	mg/kg		8270C	05/27/09	1
n-Nitrosodiphenylamine	U	0.034	0.35	mg/kg		8270C	05/27/09	1
n-Nitrosodi-n-propylamine	U	0.033	0.35	mg/kg		8270C	05/27/09	1
Benzylbutyl phthalate	U	0.038	0.35	mg/kg		8270C	05/27/09	1
Caprolactam	U	0.11	0.35	mg/kg		8270C	05/27/09	1
Carbazole	U	0.029	0.35	mg/kg		8270C	05/27/09	1
Bis(2-ethylhexyl)phthalate	U	0.060	0.35	mg/kg		8270C	05/27/09	1
4-Chloroaniline	U	0.036	0.35	mg/kg		8270C	05/27/09	1
Di-n-butyl phthalate	U	0.027	0.35	mg/kg		8270C	05/27/09	1
Dibenzofuran	U	0.022	0.35	mg/kg		8270C	05/27/09	1
Diethyl phthalate	U	0.040	0.35	mg/kg		8270C	05/27/09	1
Dimethyl phthalate	U	0.026	0.35	mg/kg		8270C	05/27/09	1
Di-n-octyl phthalate	U	0.036	0.35	mg/kg		8270C	05/27/09	1
Acid Extractables								
4-Chloro-3-methylphenol	U	0.034	0.35	mg/kg		8270C	05/27/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

Note:

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Reported: 07/02/09 17:19 Revised: 07/03/09 17:06



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Est. 1970

REPORT OF ANALYSIS

Chris Kramer
SLR International Corp. - West Linn
1800 Blankenship Road, Suite 440
West Linn, OR 97068

July 03, 2009

Date Received : May 23, 2009
Description : Bay Wood Project - Everett, WA

ESC Sample # : L410340-01

Sample ID : PB-5B

Site ID : EVERETT, WA

Collected By :
Collection Date : 05/21/09 00:00

Project # : 008.0339.00001

Parameter	Dry Result	MDL	RDL	Units	Q	Method	Date	Dil.
2-Chlorophenol	U	0.031	0.35	mg/kg		8270C	05/27/09	1
2,4-Dichlorophenol	U	0.024	0.35	mg/kg		8270C	05/27/09	1
2,4-Dimethylphenol	U	0.038	0.35	mg/kg	J4	8270C	05/27/09	1
4,6-Dinitro-2-methylphenol	U	0.040	0.35	mg/kg		8270C	05/27/09	1
2,4-Dinitrophenol	U	0.041	0.35	mg/kg		8270C	05/27/09	1
2-Nitrophenol	U	0.027	0.35	mg/kg		8270C	05/27/09	1
4-Nitrophenol	U	0.027	0.35	mg/kg		8270C	05/27/09	1
Pentachlorophenol	U	0.031	0.35	mg/kg		8270C	05/27/09	1
Phenol	U	0.029	0.35	mg/kg		8270C	05/27/09	1
1,2,4,5-Tetrachlorobenzene	U	0.016	0.054	mg/kg		8270C	05/27/09	1
2,4,5-Trichlorophenol	U	0.030	0.35	mg/kg		8270C	05/27/09	1
2,4,6-Trichlorophenol	U	0.028	0.35	mg/kg		8270C	05/27/09	1
Benzo(a)anthracene	U	0.032	0.35	mg/kg		8270C	05/27/09	1
Benzo(a)pyrene	U	0.027	0.35	mg/kg		8270C	05/27/09	1
Benzo(b)fluoranthene	U	0.030	0.35	mg/kg		8270C	05/27/09	1
Benzo(k)fluoranthene	U	0.031	0.35	mg/kg		8270C	05/27/09	1
Chrysene	U	0.035	0.35	mg/kg		8270C	05/27/09	1
Dibenz(a,h)anthracene	U	0.028	0.35	mg/kg		8270C	05/27/09	1
Indeno(1,2,3-cd)pyrene	U	0.029	0.35	mg/kg		8270C	05/27/09	1
Acenaphthene	U	0.024	0.35	mg/kg		8270C	05/27/09	1
Anthracene	U	0.023	0.35	mg/kg		8270C	05/27/09	1
Benzo(g,h,i)perylene	U	0.029	0.35	mg/kg		8270C	05/27/09	1
Fluoranthene	U	0.024	0.35	mg/kg		8270C	05/27/09	1
Fluorene	U	0.023	0.35	mg/kg		8270C	05/27/09	1
Naphthalene	U	0.026	0.35	mg/kg		8270C	05/27/09	1
Phenanthrene	U	0.025	0.35	mg/kg		8270C	05/27/09	1
Pyrene	U	0.036	0.35	mg/kg		8270C	05/27/09	1
Surrogate Recovery								
Nitrobenzene-d5	63.5			% Rec.		8270C	05/27/09	1
2-Fluorobiphenyl	62.5			% Rec.		8270C	05/27/09	1
p-Terphenyl-d14	96.4			% Rec.		8270C	05/27/09	1
Phenol-d5	70.7			% Rec.		8270C	05/27/09	1
2-Fluorophenol	74.2			% Rec.		8270C	05/27/09	1
2,4,6-Tribromophenol	77.9			% Rec.		8270C	05/27/09	1

Results listed are dry weight basis.

U = ND (Not Detected)

MDL = Minimum Detection Limit = LOD

RDL = Reported Detection Limit = LOQ = PQL = EQL

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Reported: 07/02/09 17:19 Revised: 07/03/09 17:06

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L410340-01	WG423526	SAMP	2,4-Dimethylphenol	R759406	J4

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

- Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.
- Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.
- Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.
- TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
07/03/09 at 17:07:00

TSR Signing Reports: 358
R5 - Desired TAT

Log all arsenic gw samples as ASG.

Sample: L410340-01 Account: SLRWLOR Received: 05/23/09 09:00 Due Date: 07/08/09 00:00 RPT Date: 07/02/09 17:19
Relogged from L404242-05



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West Linn, OR 97068

Quality Assurance Report
Level II

July 03, 2009

L410340

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
1,2,4,5-Tetrachlorobenzene	< .05	ppm			WG423526	05/27/09 10:47
2,4,5-Trichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4,6-Trichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dichlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dimethylphenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dinitrophenol	< .33	ppm			WG423526	05/27/09 10:47
2,4-Dinitrotoluene	< .33	ppm			WG423526	05/27/09 10:47
2,6-Dinitrotoluene	< .33	ppm			WG423526	05/27/09 10:47
2-Chloronaphthalene	< .33	ppm			WG423526	05/27/09 10:47
2-Chlorophenol	< .33	ppm			WG423526	05/27/09 10:47
2-Methylnaphthalene	< .33	ppm			WG423526	05/27/09 10:47
2-Methylphenol	< .33	ppm			WG423526	05/27/09 10:47
2-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
2-Nitrophenol	< .33	ppm			WG423526	05/27/09 10:47
3&4-Methyl Phenol	< .33	ppm			WG423526	05/27/09 10:47
3,3-Dichlorobenzidine	< .33	ppm			WG423526	05/27/09 10:47
3-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
4,6-Dinitro-2-methylphenol	< .33	ppm			WG423526	05/27/09 10:47
4-Bromophenyl-phenylether	< .33	ppm			WG423526	05/27/09 10:47
4-Chloro-3-methylphenol	< .33	ppm			WG423526	05/27/09 10:47
4-Chloroaniline	< .33	ppm			WG423526	05/27/09 10:47
4-Chlorophenyl-phenylether	< .33	ppm			WG423526	05/27/09 10:47
4-Nitroaniline	< .33	ppm			WG423526	05/27/09 10:47
4-Nitrophenol	< .33	ppm			WG423526	05/27/09 10:47
Acenaphthene	< .33	ppm			WG423526	05/27/09 10:47
Acenaphthylene	< .33	ppm			WG423526	05/27/09 10:47
Acetophenone	< .33	ppm			WG423526	05/27/09 10:47
Anthracene	< .33	ppm			WG423526	05/27/09 10:47
Atrazine	< .33	ppm			WG423526	05/27/09 10:47
Benzaldehyde	< .33	ppm			WG423526	05/27/09 10:47
Benzo(a)anthracene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(a)pyrene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(b)fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(g,h,i)perylene	< .33	ppm			WG423526	05/27/09 10:47
Benzo(k)fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Benzylbutyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Biphenyl	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chlorethoxy)methane	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chloroethyl)ether	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-chloroisopropyl)ether	< .33	ppm			WG423526	05/27/09 10:47
Bis(2-ethylhexyl)phthalate	< .33	ppm			WG423526	05/27/09 10:47
Caprolactam	< .33	ppm			WG423526	05/27/09 10:47
Carbazole	< .33	ppm			WG423526	05/27/09 10:47
Chrysene	< .33	ppm			WG423526	05/27/09 10:47
Di-n-butyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Di-n-octyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Dibenz(a,h)anthracene	< .33	ppm			WG423526	05/27/09 10:47
Dibenzofuran	< .33	ppm			WG423526	05/27/09 10:47
Diethyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Dimethyl phthalate	< .33	ppm			WG423526	05/27/09 10:47
Fluoranthene	< .33	ppm			WG423526	05/27/09 10:47
Fluorene	< .33	ppm			WG423526	05/27/09 10:47
Hexachloro-1,3-butadiene	< .33	ppm			WG423526	05/27/09 10:47
Hexachlorobenzene	< .33	ppm			WG423526	05/27/09 10:47
Hexachlorocyclopentadiene	< .33	ppm			WG423526	05/27/09 10:47
Hexachloroethane	< .33	ppm			WG423526	05/27/09 10:47
Indeno(1,2,3-cd)pyrene	< .33	ppm			WG423526	05/27/09 10:47
Isophorone	< .33	ppm			WG423526	05/27/09 10:47
n-Nitrosodi-n-propylamine	< .33	ppm			WG423526	05/27/09 10:47

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Level II

West Linn, OR 97068

July 03, 2009

L410340

Analyte	Result	Laboratory Blank		Limit	Batch	Date Analyzed
		Units	% Rec			
n-Nitrosodiphenylamine	< .33	ppm			WG423526	05/27/09 10:47
Naphthalene	< .33	ppm			WG423526	05/27/09 10:47
Nitrobenzene	< .33	ppm			WG423526	05/27/09 10:47
Pentachlorophenol	< .33	ppm			WG423526	05/27/09 10:47
Phenanthrene	< .33	ppm			WG423526	05/27/09 10:47
Phenol	< .33	ppm			WG423526	05/27/09 10:47
Pyrene	< .33	ppm			WG423526	05/27/09 10:47
2,4,6-Tribromophenol		% Rec.	68.61	25-137	WG423526	05/27/09 10:47
2-Fluorobiphenyl		% Rec.	68.89	30-120	WG423526	05/27/09 10:47
2-Fluorophenol		% Rec.	72.41	26-130	WG423526	05/27/09 10:47
Nitrobenzene-d5		% Rec.	66.45	18-119	WG423526	05/27/09 10:47
Phenol-d5		% Rec.	70.70	37-141	WG423526	05/27/09 10:47
p-Terphenyl-d14		% Rec.	81.75	23-143	WG423526	05/27/09 10:47
Total Solids	< .1	%			WG423815	05/29/09 10:51

Analyte	Units	Result	Duplicate		RPD	Limit	Ref Samp	Batch
			Duplicate	RPD				
Total Solids	%	84.9	83.8		1.26	5	L404245-03	WG423815

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
1,2,4,5-Tetrachlorobenzene	ppm	.333	0.277	83.2	51-112	WG423526
2,4,5-Trichlorophenol	ppm	.333	0.247	74.1	53-110	WG423526
2,4,6-Trichlorophenol	ppm	.333	0.249	74.7	56-109	WG423526
2,4-Dichlorophenol	ppm	.333	0.253	76.1	54-107	WG423526
2,4-Dimethylphenol	ppm	.333	0.432	130.*	58-119	WG423526
2,4-Dinitrophenol	ppm	.333	0.248	74.3	16-130	WG423526
2,4-Dinitrotoluene	ppm	.333	0.269	80.9	53-120	WG423526
2,6-Dinitrotoluene	ppm	.333	0.270	81.0	56-113	WG423526
2-Chloronaphthalene	ppm	.333	0.248	74.4	55-103	WG423526
2-Chlorophenol	ppm	.333	0.247	74.2	52-108	WG423526
2-Methylnaphthalene	ppm	.333	0.273	82.1	52-107	WG423526
2-Methylphenol	ppm	.333	0.287	86.1	58-116	WG423526
2-Nitroaniline	ppm	.333	0.248	74.3	54-116	WG423526
2-Nitrophenol	ppm	.333	0.275	82.5	38-110	WG423526
3&4-Methyl Phenol	ppm	.333	0.322	96.8	60-136	WG423526
3,3-Dichlorobenzidine	ppm	.333	0.238	71.4	24-123	WG423526
3-Nitroaniline	ppm	.333	0.246	73.8	17-135	WG423526
4,6-Dinitro-2-methylphenol	ppm	.333	0.234	70.4	34-111	WG423526
4-Bromophenyl-phenylether	ppm	.333	0.220	66.1	47-98	WG423526
4-Chloro-3-methylphenol	ppm	.333	0.278	83.4	54-116	WG423526
4-Chloroaniline	ppm	.333	0.289	86.8	18-130	WG423526
4-Chlorophenyl-phenylether	ppm	.333	0.249	74.8	55-106	WG423526
4-Nitroaniline	ppm	.333	0.257	77.1	16-133	WG423526
4-Nitrophenol	ppm	.333	0.261	78.5	34-123	WG423526
Acenaphthene	ppm	.333	0.269	80.7	54-102	WG423526
Acenaphthylene	ppm	.333	0.271	81.4	56-104	WG423526
Acetophenone	ppm	.333	0.258	77.5	42-92	WG423526
Anthracene	ppm	.333	0.288	86.6	57-112	WG423526
Atrazine	ppm	.333	0.292	87.6	40-143	WG423526
Benzaldehyde	ppm	.333	0.0869	26.1	0-69	WG423526
Benzo(a)anthracene	ppm	.333	0.293	88.1	55-105	WG423526
Benzo(a)pyrene	ppm	.333	0.269	80.7	59-114	WG423526
Benzo(b)fluoranthene	ppm	.333	0.234	70.4	44-116	WG423526
Benzo(g,h,i)perylene	ppm	.333	0.271	81.5	41-127	WG423526

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Quality Assurance Report
Level II

West Linn, OR 97068

L410340

July 03, 2009

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzo(k)fluoranthene	ppm	.333	0.306	91.9	36-119	WG423526
Benzybutyl phthalate	ppm	.333	0.295	88.4	57-130	WG423526
Biphenyl	ppm	.333	0.238	71.5	54-103	WG423526
Bis(2-chlorethoxy)methane	ppm	.333	0.250	75.2	52-107	WG423526
Bis(2-chloroethyl)ether	ppm	.333	0.232	69.6	38-115	WG423526
Bis(2-chloroisopropyl)ether	ppm	.333	0.253	76.0	49-106	WG423526
Bis(2-ethylhexyl)phthalate	ppm	.333	0.292	87.6	50-130	WG423526
Caprolactam	ppm	.333	0.292	87.7	43-131	WG423526
Carbazole	ppm	.333	0.269	80.7	42-120	WG423526
Chrysene	ppm	.333	0.266	80.0	54-103	WG423526
Di-n-butyl phthalate	ppm	.333	0.283	85.1	56-121	WG423526
Di-n-octyl phthalate	ppm	.333	0.281	84.4	50-128	WG423526
Dibenz(a,h)anthracene	ppm	.333	0.263	79.1	42-128	WG423526
Dibenzofuran	ppm	.333	0.262	78.8	56-111	WG423526
Diethyl phthalate	ppm	.333	0.251	75.3	57-110	WG423526
Dimethyl phthalate	ppm	.333	0.244	73.2	57-108	WG423526
Fluoranthene	ppm	.333	0.285	85.5	51-109	WG423526
Fluorene	ppm	.333	0.275	82.6	53-106	WG423526
Hexachloro-1,3-butadiene	ppm	.333	0.267	80.1	46-110	WG423526
Hexachlorobenzene	ppm	.333	0.254	76.1	51-117	WG423526
Hexachlorocyclopentadiene	ppm	.333	0.267	80.1	21-127	WG423526
Hexachloroethane	ppm	.333	0.236	70.8	43-104	WG423526
Indeno(1,2,3-cd)pyrene	ppm	.333	0.262	78.6	42-127	WG423526
Isophorone	ppm	.333	0.259	77.8	56-116	WG423526
n-Nitrosodi-n-propylamine	ppm	.333	0.239	71.7	54-113	WG423526
n-Nitrosodiphenylamine	ppm	.333	0.257	77.2	66-126	WG423526
Naphthalene	ppm	.333	0.249	74.9	46-97	WG423526
Nitrobenzene	ppm	.333	0.246	73.8	46-102	WG423526
Pentachlorophenol	ppm	.333	0.261	78.4	37-118	WG423526
Phenanthrene	ppm	.333	0.271	81.3	56-102	WG423526
Phenol	ppm	.333	0.269	80.7	55-115	WG423526
Pyrene	ppm	.333	0.281	84.4	53-111	WG423526
2,4,6-Tribromophenol				77.09	25-137	WG423526
2-Fluorobiphenyl				71.07	30-120	WG423526
2-Fluorophenol				77.89	26-130	WG423526
Nitrobenzene-d5				75.87	18-119	WG423526
Phenol-d5				78.27	37-141	WG423526
p-Terphenyl-d14				86.70	23-143	WG423526
Total Solids	%	50	50.0	100.	85-115	WG423815

Analyte	Units	Laboratory Control Sample Duplicate			Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
1,2,4,5-Tetrachlorobenzene	ppm	0.268	0.277	81.0	51-112	3.21	21	WG423526
2,4,5-Trichlorophenol	ppm	0.247	0.247	74.0	53-110	0.303	25	WG423526
2,4,6-Trichlorophenol	ppm	0.251	0.249	75.0	56-109	0.696	20	WG423526
2,4-Dichlorophenol	ppm	0.241	0.253	72.0	54-107	5.07	21	WG423526
2,4-Dimethylphenol	ppm	0.389	0.432	117.	58-119	10.5	23	WG423526
2,4-Dinitrophenol	ppm	0.215	0.248	65.0	16-130	13.9	45	WG423526
2,4-Dinitrotoluene	ppm	0.264	0.269	79.0	53-120	2.03	23	WG423526
2,6-Dinitrotoluene	ppm	0.257	0.270	77.0	56-113	4.92	22	WG423526
2-Chloronaphthalene	ppm	0.233	0.248	70.0	55-103	6.32	20	WG423526
2-Chlorophenol	ppm	0.237	0.247	71.0	52-108	4.01	24	WG423526
2-Methylnaphthalene	ppm	0.248	0.273	74.0	52-107	9.82	21	WG423526
2-Methylphenol	ppm	0.273	0.287	82.0	58-116	4.95	22	WG423526
2-Nitroaniline	ppm	0.250	0.248	75.0	54-116	0.883	24	WG423526
2-Nitrophenol	ppm	0.255	0.275	76.0	38-110	7.62	24	WG423526

* Performance of this Analyte is outside of established criteria.
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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440

Quality Assurance Report
Level II

West Linn, OR 97068

L410340

July 03, 2009

Analyte	Units	Laboratory Control		Sample Duplicate	Limit	RPD	Limit	Batch
		Result	Ref	%Rec				
3&4-Methyl Phenol	ppm	0.311	0.322	93.0	60-136	3.65	29	WG423526
3,3-Dichlorobenzidine	ppm	0.223	0.238	67.0	24-123	6.29	35	WG423526
3-Nitroaniline	ppm	0.221	0.246	66.0	17-135	10.8	33	WG423526
4,6-Dinitro-2-methylphenol	ppm	0.219	0.234	66.0	34-111	6.58	33	WG423526
4-Bromophenyl-phenylether	ppm	0.219	0.220	66.0	47-98	0.734	23	WG423526
4-Chloro-3-methylphenol	ppm	0.260	0.278	78.0	54-116	6.75	23	WG423526
4-Chloroaniline	ppm	0.264	0.289	79.0	18-130	9.14	31	WG423526
4-Chlorophenyl-phenylether	ppm	0.249	0.249	75.0	55-106	0.293	22	WG423526
4-Nitroaniline	ppm	0.249	0.257	75.0	16-133	3.19	37	WG423526
4-Nitrophenol	ppm	0.248	0.261	74.0	34-123	5.22	36	WG423526
Acenaphthene	ppm	0.257	0.269	77.0	54-102	4.34	20	WG423526
Acenaphthylene	ppm	0.256	0.271	77.0	56-104	5.89	20	WG423526
Acetophenone	ppm	0.244	0.258	73.0	42-92	5.71	22	WG423526
Anthracene	ppm	0.271	0.288	81.0	57-112	6.18	21	WG423526
Atrazine	ppm	0.284	0.292	85.0	40-143	2.70	25	WG423526
Benzaldehyde	ppm	0.0864	0.0869	26.0	0-69	0.576	32	WG423526
Benzo(a)anthracene	ppm	0.261	0.293	78.0	55-105	11.6	21	WG423526
Benzo(a)pyrene	ppm	0.271	0.269	81.0	59-114	0.900	22	WG423526
Benzo(b)fluoranthene	ppm	0.273	0.234	82.0	44-116	15.1	33	WG423526
Benzo(g,h,i)perylene	ppm	0.258	0.271	78.0	41-127	4.90	29	WG423526
Benzo(k)fluoranthene	ppm	0.256	0.306	77.0	36-119	17.7	37	WG423526
Benzylbutyl phthalate	ppm	0.270	0.295	81.0	57-130	8.82	27	WG423526
Biphenyl	ppm	0.225	0.238	68.0	54-103	5.72	21	WG423526
Bis(2-chloroethoxy)methane	ppm	0.249	0.250	75.0	52-107	0.668	21	WG423526
Bis(2-chloroethyl)ether	ppm	0.234	0.232	70.0	38-115	0.743	28	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.239	0.253	72.0	49-106	5.68	25	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.268	0.292	80.0	50-130	8.53	29	WG423526
Caprolactam	ppm	0.270	0.292	81.0	43-131	7.82	24	WG423526
Carbazole	ppm	0.246	0.269	74.0	42-120	8.84	26	WG423526
Chrysene	ppm	0.270	0.266	81.0	54-103	1.28	23	WG423526
Di-n-butyl phthalate	ppm	0.254	0.283	76.0	56-121	10.9	22	WG423526
Di-n-octyl phthalate	ppm	0.254	0.281	76.0	50-128	10.1	26	WG423526
Dibenz(a,h)anthracene	ppm	0.245	0.263	74.0	42-128	7.28	28	WG423526
Dibenzofuran	ppm	0.250	0.262	75.0	56-111	4.97	21	WG423526
Diethyl phthalate	ppm	0.244	0.251	73.0	57-110	2.75	20	WG423526
Dimethyl phthalate	ppm	0.232	0.244	70.0	57-108	5.22	20	WG423526
Fluoranthene	ppm	0.271	0.285	81.0	51-109	4.97	26	WG423526
Fluorene	ppm	0.252	0.275	76.0	53-106	8.88	20	WG423526
Hexachloro-1,3-butadiene	ppm	0.248	0.267	74.0	46-110	7.40	25	WG423526
Hexachlorobenzene	ppm	0.243	0.254	73.0	51-117	4.37	24	WG423526
Hexachlorocyclopentadiene	ppm	0.247	0.267	74.0	21-127	7.45	40	WG423526
Hexachloroethane	ppm	0.226	0.236	68.0	43-104	4.02	27	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.253	0.262	76.0	42-127	3.36	28	WG423526
Isophorone	ppm	0.237	0.259	71.0	56-116	9.09	21	WG423526
n-Nitrosodi-n-propylamine	ppm	0.236	0.239	71.0	54-113	1.25	21	WG423526
n-Nitrosodiphenylamine	ppm	0.239	0.257	72.0	66-126	7.44	22	WG423526
Naphthalene	ppm	0.239	0.249	72.0	46-97	4.31	23	WG423526
Nitrobenzene	ppm	0.237	0.246	71.0	46-102	3.81	23	WG423526
Pentachlorophenol	ppm	0.239	0.261	72.0	37-118	8.65	28	WG423526
Phenanthrene	ppm	0.254	0.271	76.0	56-102	6.50	20	WG423526
Phenol	ppm	0.250	0.269	75.0	55-115	7.43	22	WG423526
Pyrene	ppm	0.249	0.281	75.0	53-111	12.2	26	WG423526
2,4,6-Tribromophenol				70.50	25-137			WG423526
2-Fluorobiphenyl				65.47	30-120			WG423526
2-Fluorophenol				76.25	26-130			WG423526
Nitrobenzene-d5				70.18	18-119			WG423526
Phenol-d5				73.17	37-141			WG423526
p-Terphenyl-d14				79.39	23-143			WG423526

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Quality Assurance Report
Level II

July 03, 2009

L410340

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
1,2,4,5-Tetrachlorobenzene	ppm	0.275	0.00	.333	82.7	47-111	L404242-05	WG423526
2,4,5-Trichlorophenol	ppm	0.277	0.00	.333	83.3	28-128	L404242-05	WG423526
2,4,6-Trichlorophenol	ppm	0.263	0.00	.333	78.9	27-128	L404242-05	WG423526
2,4-Dichlorophenol	ppm	0.254	0.00	.333	76.2	39-116	L404242-05	WG423526
2,4-Dimethylphenol	ppm	0.418	0.00	.333	125.*	50-119	L404242-05	WG423526
2,4-Dinitrophenol	ppm	0.146	0.00	.333	44.0	10-123	L404242-05	WG423526
2,4-Dinitrotoluene	ppm	0.281	0.00	.333	84.4	52-121	L404242-05	WG423526
2,6-Dinitrotoluene	ppm	0.253	0.00	.333	75.9	53-114	L404242-05	WG423526
2-Chloronaphthalene	ppm	0.233	0.00	.333	70.1	52-101	L404242-05	WG423526
2-Chlorophenol	ppm	0.231	0.00	.333	69.3	41-112	L404242-05	WG423526
2-Methylnaphthalene	ppm	0.238	0.00	.333	71.3	48-109	L404242-05	WG423526
2-Methylphenol	ppm	0.259	0.00	.333	77.9	56-111	L404242-05	WG423526
2-Nitroaniline	ppm	0.257	0.00	.333	77.3	52-117	L404242-05	WG423526
2-Nitrophenol	ppm	0.252	0.00	.333	75.6	23-117	L404242-05	WG423526
3&4-Methyl Phenol	ppm	0.298	0.00	.333	89.4	50-134	L404242-05	WG423526
3,3-Dichlorobenzidine	ppm	0.132	0.00	.333	39.7	10-133	L404242-05	WG423526
3-Nitroaniline	ppm	0.224	0.00	.333	67.2	5-134	L404242-05	WG423526
4,6-Dinitro-2-methylphenol	ppm	0.175	0.00	.333	52.7	10-124	L404242-05	WG423526
4-Bromophenyl-phenylether	ppm	0.224	0.00	.333	67.3	37-103	L404242-05	WG423526
4-Chloro-3-methylphenol	ppm	0.255	0.00	.333	76.6	52-119	L404242-05	WG423526
4-Chloroaniline	ppm	0.245	0.00	.333	73.7	4-134	L404242-05	WG423526
4-Chlorophenyl-phenylether	ppm	0.236	0.00	.333	71.0	53-105	L404242-05	WG423526
4-Nitroaniline	ppm	0.260	0.00	.333	78.1	12-129	L404242-05	WG423526
4-Nitrophenol	ppm	0.267	0.00	.333	80.2	15-140	L404242-05	WG423526
Acenaphthene	ppm	0.258	0.00	.333	77.3	52-102	L404242-05	WG423526
Acenaphthylene	ppm	0.264	0.00	.333	79.2	54-103	L404242-05	WG423526
Acetophenone	ppm	0.230	0.00	.333	69.0	38-94	L404242-05	WG423526
Anthracene	ppm	0.257	0.00	.333	77.2	55-114	L404242-05	WG423526
Atrazine	ppm	0.303	0.00	.333	90.9	40-144	L404242-05	WG423526
Benzaldehyde	ppm	0.0946	0.00	.333	28.4	0-100	L404242-05	WG423526
Benzo(a)anthracene	ppm	0.263	0.00	.333	78.9	37-124	L404242-05	WG423526
Benzo(a)pyrene	ppm	0.266	0.00	.333	79.8	44-129	L404242-05	WG423526
Benzo(b)fluoranthene	ppm	0.239	0.00	.333	71.9	28-135	L404242-05	WG423526
Benzo(g,h,i)perylene	ppm	0.278	0.00	.333	83.4	25-123	L404242-05	WG423526
Benzo(k)fluoranthene	ppm	0.277	0.00	.333	83.1	41-116	L404242-05	WG423526
Benzylbutyl phthalate	ppm	0.282	0.00	.333	84.6	45-143	L404242-05	WG423526
Biphenyl	ppm	0.235	0.00	.333	70.7	49-103	L404242-05	WG423526
Bis(2-chlorethoxy)methane	ppm	0.236	0.00	.333	70.8	48-108	L404242-05	WG423526
Bis(2-chloroethyl)ether	ppm	0.201	0.00	.333	60.4	36-115	L404242-05	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.228	0.00	.333	68.5	44-109	L404242-05	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.278	0.00	.333	83.4	40-128	L404242-05	WG423526
Caprolactam	ppm	0.283	0.00	.333	85.1	26-140	L404242-05	WG423526
Carbazole	ppm	0.256	0.00	.333	76.8	43-122	L404242-05	WG423526
Chrysene	ppm	0.244	0.00	.333	73.1	39-119	L404242-05	WG423526
Di-n-butyl phthalate	ppm	0.266	0.00	.333	80.0	49-121	L404242-05	WG423526
Di-n-octyl phthalate	ppm	0.267	0.00	.333	80.3	40-132	L404242-05	WG423526
Dibenz(a,h)anthracene	ppm	0.249	0.00	.333	74.8	29-123	L404242-05	WG423526
Dibenzofuran	ppm	0.259	0.00	.333	77.8	54-111	L404242-05	WG423526
Diethyl phthalate	ppm	0.254	0.00	.333	76.3	51-113	L404242-05	WG423526
Dimethyl phthalate	ppm	0.257	0.00	.333	77.2	54-108	L404242-05	WG423526
Fluoranthene	ppm	0.276	0.00	.333	83.0	23-143	L404242-05	WG423526
Fluorene	ppm	0.274	0.00	.333	82.3	53-107	L404242-05	WG423526
Hexachloro-1,3-butadiene	ppm	0.267	0.00	.333	80.1	39-113	L404242-05	WG423526
Hexachlorobenzene	ppm	0.236	0.00	.333	71.0	49-108	L404242-05	WG423526
Hexachlorocyclopentadiene	ppm	0.214	0.00	.333	64.2	10-131	L404242-05	WG423526
Hexachloroethane	ppm	0.220	0.00	.333	66.2	25-118	L404242-05	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.254	0.00	.333	76.3	28-125	L404242-05	WG423526
Isophorone	ppm	0.230	0.00	.333	69.0	51-115	L404242-05	WG423526
n-Nitrosodi-n-propylamine	ppm	0.220	0.00	.333	66.1	54-110	L404242-05	WG423526
n-Nitrosodiphenylamine	ppm	0.233	0.00	.333	70.1	54-138	L404242-05	WG423526

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Quality Assurance Report
Level II

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July 03, 2009

L410340

Analyte	Units	MS Res	Matrix Spike		% Rec	Limit	Ref Samp	Batch
			Ref Res	TV				
Naphthalene	ppm	0.227	0.00	.333	68.2	41-100	L404242-05	WG423526
Nitrobenzene	ppm	0.217	0.00	.333	65.3	40-102	L404242-05	WG423526
Pentachlorophenol	ppm	0.289	0.00	.333	86.8	10-146	L404242-05	WG423526
Phenanthrene	ppm	0.261	0.00	.333	78.5	37-125	L404242-05	WG423526
Phenol	ppm	0.241	0.00	.333	72.5	52-111	L404242-05	WG423526
Pyrene	ppm	0.247	0.00	.333	74.2	22-151	L404242-05	WG423526
2,4,6-Tribromophenol					85.13	25-137		WG423526
2-Fluorobiphenyl					72.75	30-120		WG423526
2-Fluorophenol					76.59	26-130		WG423526
Nitrobenzene-d5					70.28	18-119		WG423526
Phenol-d5					72.13	37-141		WG423526
p-Terphenyl-d14					86.42	23-143		WG423526

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit	Ref Samp	Batch
			Ref	%Rec					
1,2,4,5-Tetrachlorobenzene	ppm	0.298	0.275	89.4	47-111	7.77	20	L404242-05	WG423526
2,4,5-Trichlorophenol	ppm	0.309	0.277	92.7	28-128	10.6	29	L404242-05	WG423526
2,4,6-Trichlorophenol	ppm	0.301	0.263	90.5	27-128	13.7	31	L404242-05	WG423526
2,4-Dichlorophenol	ppm	0.283	0.254	85.1	39-116	10.9	23	L404242-05	WG423526
2,4-Dimethylphenol	ppm	0.440	0.418	132.176*	50-119	5.25	27	L404242-05	WG423526
2,4-Dinitrophenol	ppm	0.118	0.146	35.5	10-123	21.4	42	L404242-05	WG423526
2,4-Dinitrotoluene	ppm	0.276	0.281	83.0	52-121	1.65	23	L404242-05	WG423526
2,6-Dinitrotoluene	ppm	0.294	0.253	88.4	53-114	15.2	22	L404242-05	WG423526
2-Chloronaphthalene	ppm	0.271	0.233	81.5	52-101	15.1	20	L404242-05	WG423526
2-Chlorophenol	ppm	0.265	0.231	79.6	41-112	13.9	27	L404242-05	WG423526
2-Methylnaphthalene	ppm	0.283	0.238	85.0	48-109	17.5	22	L404242-05	WG423526
2-Methylphenol	ppm	0.300	0.259	90.2	56-111	14.7	20	L404242-05	WG423526
2-Nitroaniline	ppm	0.287	0.257	86.2	52-117	10.9	24	L404242-05	WG423526
2-Nitrophenol	ppm	0.263	0.252	79.0	23-117	4.45	31	L404242-05	WG423526
3&4-Methyl Phenol	ppm	0.352	0.298	106.	50-134	16.7	32	L404242-05	WG423526
3,3-Dichlorobenzidine	ppm	0.126	0.132	37.9	10-133	4.58	41	L404242-05	WG423526
3-Nitroaniline	ppm	0.236	0.224	70.7	5-134	5.10	30	L404242-05	WG423526
4,6-Dinitro-2-methylphenol	ppm	0.117	0.175	35.1	10-124	40.0*	38	L404242-05	WG423526
4-Bromophenyl-phenylether	ppm	0.241	0.224	72.3	37-103	7.20	23	L404242-05	WG423526
4-Chloro-3-methylphenol	ppm	0.291	0.255	87.3	52-119	13.0	24	L404242-05	WG423526
4-Chloroaniline	ppm	0.236	0.245	70.7	4-134	4.05	28	L404242-05	WG423526
4-Chlorophenyl-phenylether	ppm	0.276	0.236	83.0	53-105	15.6	20	L404242-05	WG423526
4-Nitroaniline	ppm	0.268	0.260	80.4	12-129	2.98	34	L404242-05	WG423526
4-Nitrophenol	ppm	0.279	0.267	83.8	15-140	4.48	40	L404242-05	WG423526
Acenaphthene	ppm	0.289	0.258	86.9	52-102	11.6	23	L404242-05	WG423526
Acenaphthylene	ppm	0.291	0.264	87.3	54-103	9.69	22	L404242-05	WG423526
Acetophenone	ppm	0.281	0.230	84.4	38-94	20.1	22	L404242-05	WG423526
Anthracene	ppm	0.295	0.257	88.4	55-114	13.6	21	L404242-05	WG423526
Atrazine	ppm	0.335	0.303	101.	40-144	10.2	21	L404242-05	WG423526
Benzaldehyde	ppm	0.232	0.0946	69.6	0-100	84.1*	37	L404242-05	WG423526
Benzo(a)anthracene	ppm	0.265	0.263	79.5	37-124	0.729	33	L404242-05	WG423526
Benzo(a)pyrene	ppm	0.300	0.266	90.2	44-129	12.2	27	L404242-05	WG423526
Benzo(b)fluoranthene	ppm	0.312	0.239	93.8	28-135	26.5	33	L404242-05	WG423526
Benzo(g,h,i)perylene	ppm	0.221	0.278	66.4	25-123	22.7	35	L404242-05	WG423526
Benzo(k)fluoranthene	ppm	0.314	0.277	94.3	41-116	12.7	34	L404242-05	WG423526
Benzylbutyl phthalate	ppm	0.347	0.282	104.	45-143	20.8	39	L404242-05	WG423526
Biphenyl	ppm	0.261	0.235	78.5	49-103	10.5	24	L404242-05	WG423526
Bis(2-chloroethoxy)methane	ppm	0.258	0.236	77.4	48-108	8.93	23	L404242-05	WG423526
Bis(2-chloroethyl)ether	ppm	0.257	0.201	77.3	36-115	24.5	30	L404242-05	WG423526
Bis(2-chloroisopropyl)ether	ppm	0.277	0.228	83.1	44-109	19.3	27	L404242-05	WG423526
Bis(2-ethylhexyl)phthalate	ppm	0.317	0.278	95.2	40-128	13.2	34	L404242-05	WG423526
Caprolactam	ppm	0.289	0.283	86.7	26-140	1.89	27	L404242-05	WG423526
Carbazole	ppm	0.275	0.256	82.6	43-122	7.19	25	L404242-05	WG423526

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Est. 1970

SLR International Corp. - West Linn, OR
Chris Kramer
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Quality Assurance Report
Level II

L410340

July 03, 2009

Analyte	Units	MSD	Matrix Spike Duplicate		Limit	RPD	Limit Ref	Samp	Batch
			Ref	%Rec					
Chrysene	ppm	0.289	0.244	86.8	39-119	17.1	31	L404242-05	WG423526
Di-n-butyl phthalate	ppm	0.287	0.266	86.2	49-121	7.48	22	L404242-05	WG423526
Di-n-octyl phthalate	ppm	0.242	0.267	72.7	40-132	9.93	27	L404242-05	WG423526
Dibenz(a,h)anthracene	ppm	0.217	0.249	65.1	29-123	13.9	30	L404242-05	WG423526
Dibenzofuran	ppm	0.284	0.259	85.3	54-111	9.28	21	L404242-05	WG423526
Diethyl phthalate	ppm	0.282	0.254	84.7	51-113	10.4	21	L404242-05	WG423526
Dimethyl phthalate	ppm	0.276	0.257	82.8	54-108	7.07	23	L404242-05	WG423526
Fluoranthene	ppm	0.281	0.276	84.3	23-143	1.57	29	L404242-05	WG423526
Fluorene	ppm	0.300	0.274	90.1	53-107	9.01	22	L404242-05	WG423526
Hexachloro-1,3-butadiene	ppm	0.279	0.267	83.9	39-113	4.58	26	L404242-05	WG423526
Hexachlorobenzene	ppm	0.270	0.236	81.0	49-108	13.2	27	L404242-05	WG423526
Hexachlorocyclopentadiene	ppm	0.229	0.214	68.7	10-131	6.84	39	L404242-05	WG423526
Hexachloroethane	ppm	0.278	0.220	83.5	25-118	23.1	35	L404242-05	WG423526
Indeno(1,2,3-cd)pyrene	ppm	0.213	0.254	64.0	28-125	17.6	32	L404242-05	WG423526
Isophorone	ppm	0.262	0.230	78.8	51-115	13.3	22	L404242-05	WG423526
n-Nitrosodi-n-propylamine	ppm	0.256	0.220	76.7	54-110	14.9	23	L404242-05	WG423526
n-Nitrosodiphenylamine	ppm	0.273	0.233	82.1	54-138	15.7	26	L404242-05	WG423526
Naphthalene	ppm	0.270	0.227	80.9	41-100	17.2	26	L404242-05	WG423526
Nitrobenzene	ppm	0.247	0.217	74.1	40-102	12.6	24	L404242-05	WG423526
Pentachlorophenol	ppm	0.319	0.289	95.9	10-146	9.88	35	L404242-05	WG423526
Phenanthrene	ppm	0.279	0.261	83.7	37-125	6.39	27	L404242-05	WG423526
Phenol	ppm	0.273	0.241	81.9	52-111	12.2	22	L404242-05	WG423526
Pyrene	ppm	0.319	0.247	95.7	22-151	25.4	38	L404242-05	WG423526
2,4,6-Tribromophenol				94.49	25-137				WG423526
2-Fluorobiphenyl				80.03	30-120				WG423526
2-Fluorophenol				88.83	26-130				WG423526
Nitrobenzene-d5				81.00	18-119				WG423526
Phenol-d5				85.23	37-141				WG423526
p-Terphenyl-d14				98.95	23-143				WG423526

Batch number /Run number / Sample number cross reference

WG423526: R759406: L410340-01
WG423815: R761468: L410340-01

* * Calculations are performed prior to rounding of reported values .
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



ENVIRONMENTAL
SCIENCE CORP.

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Quality Assurance Report
Level II

West Linn, OR 97068

L410340

July 03, 2009

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

APPENDIX D
PHASE 1 SEDIMENT TECHNICAL
MEMORANDUM



1423 Third Avenue, Suite 300
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MEMORANDUM

To: Russ McMillan, Kevin MacLachlan, and Isaac Standen, Washington Department of Ecology
Date: August 18, 2009

From: James Keithly and Clay Patmont, Anchor QEA
Scott Miller, SLR International Corporation
Project: 080207-02

cc: Erik Gerking, Port of Everett and Steve Thiele, Stoel Rives

Re: Bay Wood Products Surficial Sediment Results - Port of Everett

This technical memorandum presents the results from the first phase of the sediment investigation being performed at the Bay Wood Products Site in Port Gardiner, Washington. As described in detail in the Sediment Sampling and Analysis Plan (SAP; Anchor QEA 2009) approved by the Washington Department of Ecology (Ecology), the first phase of the sampling program included a shoreline reconnaissance survey, followed by collection in June 2009 of 12 surface sediment samples (obtained 0-10 centimeters [cm] below mudline) throughout the Site area (Figure 1). All 12 samples were analyzed for conventional parameters (grain size, wood debris percentage, total volatile solids [TVS], total organic carbon [TOC], bulk sediment and porewater ammonia and sulfide, and diesel and motor oil-range hydrocarbons). A subset of the samples was also analyzed for the complete Sediment Management Standards (SMS) suite of chemicals and dioxins/furans. The results from these chemical analyses are summarized in Table 1.

As discussed in more detail in the Ecology-approved SAP, the second phase of investigation will include sediment borings at target locations to define vertical distributions of identified SMS contaminants, along with confirmatory biological testing to assess potential sediment toxicity. Sediment stations with relatively high wood debris and/or hydrocarbon indicators (e.g., relative to cleanup levels developed for other similar sites) will be designated for follow-on sampling and analyses. The sections below summarize the first phase field sampling and analysis results, and provide Anchor QEA's recommendations for the second phase sediment borings and biological testing. Second phase sampling locations will be finalized following collaborative evaluation of these data with Ecology.

SURFICIAL SEDIMENT SAMPLE COLLECTION

Surficial sediment samples from Stations BW-01 to BW-12 were collected successfully at all twelve designated stations (Figure 1) on June 2, 2009 using a van Veen grab sampler. Field logs summarizing visual observations during sampling are included as Attachment A to this memorandum. The SAP required designation of either station BW-11 or BW-12 for analysis of Ecology's SMS parameters based upon field observations. Based upon petroleum odors and visual appearance, Station BW-11 was selected for this evaluation. There were no deviations from the SAP, and all sample handling and processing followed the procedures detailed in the Ecology-approved SAP.

SHORELINE RECONNAISSANCE SURVEY

Figure 2 depicts the results of the Bay Wood property southern shoreline visual assessment. The excavations (performed manually) revealed that woody debris is present along the southern shoreline bank of the site. In the areas east of the log pile wall, wood debris and bark was not observed, but there were logs and other large pieces of wood. West of the log pile wall, a mix of debris, bark and large wood pieces were found. The northern shoreline is a wooden timber and driven pile wall (visible on the aerial photographs, extending northwesterly into the mudflat) and was not surveyed.

CHEMICAL TESTING

Sediment samples were analyzed at Analytical Resources, Incorporated (ARI) in Tukwila, Washington for all parameters except for dioxins and furans, which were measured at Analytical Perspectives, Inc (AP) in Wilmington, North Carolina. Sample results from each station are summarized in Table 1 and, notably, none of the five samples submitted for analysis of SMS parameters exceeded any SMS chemical criteria. Similarly, these five samples also contained relatively low dioxin/furan concentrations, with toxic equivalent quotient (TEQ) concentrations ranging from 4 to 9 parts per trillion (ppt), similar to regional background concentrations reported in Port Gardiner Bay (based on Ecology's bay-wide investigation data and the Dredge Material Management Program [DMMP] baseline assessment; see <http://www.nws.usace.army.mil/PublicMenu/Menu>).

Evaluation of Hydrocarbon Data and Woody Debris Indicators

Petroleum products indicator chemicals include diesel- and motor oil-range total petroleum hydrocarbons (TPH; using NWTPH-Dx methods, including silica gel cleanup) and total

polycyclic aromatic hydrocarbons (PAHs). The results for petroleum hydrocarbon indicators are presented in Tables 1 and 2, and are summarized as follows:

- Diesel-range TPH concentrations in surface sediments at the site ranged from non-detected up to 28 milligrams per kilogram (mg/kg); the maximum concentration was well below the MTCA Method A soil screening level of 2,000 mg/kg;
- Motor oil-range TPH concentrations in surface sediments at the site ranged from 25 to 190 mg/kg; again, the maximum concentration was well below the MTCA soil screening level of 2,000 mg/kg; and
- Total PAH concentrations in surface sediments ranged from 17 to 73 mg/kg; both individual and cumulative PAH concentrations were below SMS chemical criteria (organic carbon normalized basis).

Wood debris indicators include TVS, TOC, ammonia and sulfide in porewater, phenol, methylated phenols, benzyl alcohol and benzoic acid. The results for woody debris indicators are presented in Table 2, and are summarized as follows:

- Surface sediment woody debris by volume (visual determination) ranged from zero to 15 percent, below the reported DMMP/SMS screening criterion of 25 percent (Kendall, D. and T. Michelsen. 1997. Management of Wood Waste under DMMP and SMS Cleanup Program);
- Surface sediment TVS concentrations ranged from 3 to 9 percent; the maximum concentration was below the MTCA/SMS cleanup level range of 12 to 25 percent developed by Ecology for other woody debris sites;
- Surface sediment TOC concentrations were similarly low, ranging from 1.1 to 2.7 percent;
- Porewater sulfide concentrations were all not detected (less than 0.05 mg/L), and well below the reported 30 mg/L effects level (www.nws.usace.army.mil/PublicMenu/);
- Porewater ammonia concentrations ranged from 0.8 to 3.4 mg/L, well below the 10 and 40 mg/L effects levels range reported in the DMMP User's Manual; and
- Other chemical indicators (e.g., phenolics, benzyl alcohol and benzoic acid) were generally not detected.

Based on these data, surface sediments at the site contain relatively low concentrations of TPH, woody debris, and other SMS chemicals. Based on comparisons with regional benchmarks and chemical criteria, biological effects are not anticipated. However, focused additional data collection is recommended to verify this condition, as outlined below.

RECOMMENDATIONS FOR SEDIMENT BORINGS AND BIOASSAY TESTING

Table 3 presents recommended stations for sediment borings (Stations BW-01, BW-03, BW-06, BW-07, and BW-11) and associated chemical analyses. The borings are recommended to complete characterization of the vertical extent of TPH and woody debris at the site, given that the shoreline reconnaissance survey revealed that woody debris is present along portions of the shoreline bank. Focused confirmatory biological testing is also recommended on surface sediment samples collected from stations BW-07 and BW-11. These two stations had the highest TPH and wood waste indicator concentrations. The bioassays will be used to assess the biological effects (if any) associated with TPH and woody debris at the site. The need for any follow-on sampling and analysis to complete the remedial investigation/feasibility study would be determined based on following collaborative evaluation of these data with Ecology.

Q:\Jobs\080546-01_Bay_Wood_Products_POE\Maps\2009_07\Actual_Sample_Locations_8x11.mxd mkoehie 07/13/2009 9:56 AM



Aerial Imagery © 2007 ESRI, i-cubed.

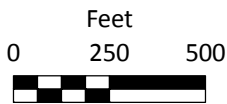


Figure 1
Sediment Sampling Stations

Table 2
Bay Wood Products Data - Wood Waste and Petroleum Parameter Summary

		Location ID: Sample ID: Sample Date: Depth: Sample Type:	BW-01 BW-01-SS-090602 6/2/09 0 - 10 cm Normal	BW-02 BW-02-SS-090602 6/2/09 0 - 10 cm Normal	BW-03 BW-03-SS-090602 6/2/09 0 - 10 cm Normal	BW-03 BW-53-SS-090602 6/2/09 0 - 10 cm Field Duplicate	BW-04 BW-04-SS-090602 6/2/09 0 - 10 cm Normal	BW-04 BW-54-SS-090602 6/2/09 0 - 10 cm Field Duplicate	BW-05 BW-05-SS-090602 6/2/09 0 - 10 cm N	BW-06 BW-06-SS-090602 6/2/09 0 - 10 cm N	BW-07 BW-07-SS-090602 6/2/09 0 - 10 cm N	BW-08 BW-08-SS-090602 6/2/09 0 - 10 cm N	BW-09 BW-09-SS-090602 6/2/09 0 - 10 cm N	BW-10 BW-10-SS-090602 6/2/09 0 - 10 cm N	BW-11 BW-11-SS-090602 6/2/09 0 - 10 cm N	BW-12 BW-12-SS-090602 6/2/09 0 - 10 cm N
	SMS SQS	SMS CSL														
Porewater (mg/L)																
Porewater Ammonia (mg-N/L)	--	--	1.45	2.55	1.93	1.61	1.84	1.7	2.38	0.945	2.83	1.03	1.47	0.829	3.41	2.46
Porewater Sulfide (mg/L)	--	--	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Conventional Parameters (pct)																
Ammonia	--	--	7.94	4.7	5.88	6.2	7.22	5.5	7.58	6.36	8.98	5.09	8.94	6.36	13.6	8.19
Sulfide	--	--	62.8	8.9	60.6	174	27.6	112	502	6.56	46.8	1.68 U	5.1	3.5	136	133
Total organic carbon	--	--	2.73	1.91	1.19	1.61	1.5	2.73	2.45	1.61	2.08	1.11	2.14	1.43	1.52	2.73
Total volatile solids	--	--	7.54	2.99	7.1	7.16	7.69	8.1	6.53	5.69	6.29	5.72	7.6	4.23	8.73	7.64
Field Observations of Woody Debris (pct by volume)																
Sediment Surface (0 cm)	--	--	None	None	None	--	None	None	None	One 6" piece	Few	None	None	None	<10%	<5%
Subsurface (1-10cm)	--	--	None	None	None	--	Few	None	None	<10% below 5cm	15% / Few	None	5%	None	10%	<10%
Ionizable Organic Compounds (µg/kg)																
Phenol	420	1200	20 U	--	20 U	19 U	--	--	--	--	20 U	--	19 J	--	20 U	--
2-Methylphenol (o-Cresol)	63	63	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
4-Methylphenol (p-Cresol)	670	670	20 U	--	20 U	19 U	--	--	--	--	20 U	--	20 U	--	18 J	--
2,4-Dimethylphenol	29	29	6.1 U	--	6.1 U	6.1 U	--	--	--	--	6 U	--	6 U	--	6 U	--
Benzyl alcohol	57	73	30 U	--	31 U	30 U	--	--	--	--	30 U	--	30 U	--	30 U	--
Benzoic acid	650	650	200 U	--	200 U	190 U	--	--	--	--	200 U	--	200 U	--	200 U	--
Aromatic Hydrocarbons (mg/kg-OC)																
Total LPAH (U = 0)	370	780	1.65	--	2.7	1.61	--	--	--	--	12.27	--	5.26	--	2.79	--
Total HPAH (U = 0)	960	5300	17.32	--	25.6	15.9	--	--	--	--	61.03	--	26.89	--	34.34	--
Total PAH (U = 0)	--	--	18.97	--	28.3	17.51	--	--	--	--	73.3	--	32.15	--	37.13	--
Total Petroleum Hydrocarbons (mg/kg)																
Diesel Range Hydrocarbons	2,000	--	22	6.8 U	10	12	20	13	12	8.2 U	28	14	17	11	15	12
Motor Oil Range	2,000	--	120	25	54	70	110	75	57	27	190	53	78	39	79	64

Notes:

■ Highest detected concentration of indicator hazardous substance

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

-- Results not reported or not applicable

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

ng/kg = nanograms per kilogram

Preliminary Pre-Validation Data

There is also no promulgated SMS criterion for diesel and motor oil-range hydrocarbons. Based on Ecology's review of sediment bioassay data from other similar sediment sites with relatively weathered hydrocarbons, the MTCA Method A soil cleanup level for diesel and motor oil-range hydrocarbons is also likely to be protective of sediment and aquatic life exposures.

Table 3
Proposed Sediment Sampling Location Coordinates and Summary of Laboratory Testing

Sample Type	Station ID	NAD 1983 Washington North (ft)		TPH and wood debris indicator parameters (grain size; TS; TVS; TOC; total and porewater ammonia; and total and porewater sulfide)
		X	Y	
Sediment Core	BW-1	1303524.6	373457.4	4
Sediment Core	BW-3	1303271.6	373751.4	4
Sediment Core	BW-7	1304064.1	374061.2	4
Sediment Core	BW-9	1304337.7	374219.1	4
Sediment Core	BW-11	1303112.8	374189.8	4
Sediment Grab	BW-7	1304064.1	374061.2	0 (previously tested)
Sediment Grab	BW-11	1303112.8	374189.8	0 (previously tested)
Totals:				20

APPENDIX E
SURFICIAL SEDIMENT COLLECTION
FORMS



Surface Sediment Field Sample Record

Project Name: Bay Wood Project No: 080547-01 Station ID: BW-01

Sampling Crew: LV DG
Sample Date: 12/18/09
Sampling Method: Van Veen
Sampling Vessel: Sted
Subcontractor(s): RPS 1st 2nd
Weather: 45°F calm
Station Coordinates: N/Lat. 373457 / 373459
E/Long. 1303525 / 1303522
Datum: NAD 83 / WGS 84 zone: Washington N US Survey Feet

Sample ID: BW-01-SS-091218 and BW-51-SS-091218
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
Other: EPH VPH
TS / TVS / Grain Size / TOC / Ammonia / Sulfides
Other: Bioassay

Grab Number: 1 Water Depth: 7.0 ft. Grab Recovery: 16 cm Time: 1032
Tide Level: 8.8 ft. Sample Interval: 10 cm
Depth MLLW: 1.8 ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: no wood on surface no odor
few worms 3cm brown silt wet silt bottom mod stiff
then olive gray mod stiff w/ clay w/ brown mottles.

Grab Number: 2 Water Depth: ft. Grab Recovery: 17 cm Time:
Tide Level: ft. Sample Interval: 10 cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: same as above few worms polychaetes
few shells
D wood on surface or in top 10cm

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: 85% fines

Date/Time Lab Drop Off:

Recorded by:



Surface Sediment Field Sample Record

Project Name: Baywood Project No: 080547-01 Station ID: BW-04

Sampling Crew: LV, DG
Sample Date: 12/18/09
Sampling Method: Van Veen
Sampling Vessel: Sled
Subcontractor(s): RSS
Weather: 45°
Station Coordinates: N/Lat. 373941
E/Long. 1303170
Datum: NAD 83/WGS 84 zone: WA N 45 5 Feet

Sample ID: BW-04-SS-091218
Analysis: Metals/TBT/SVOCs/VOCs/PCBs/Pest
Other: VPH/EPH
TS/TVS/Grain Size/TOC/Ammonia/Sulfides
Other: Bioassay

Grab Number: 1
Water Depth: 4.0 ft.
Grab Recovery: 16 cm
Time: 1120
Tide Level: 7.9 ft.
Sample Interval: 0-10 cm
Depth MLLW: 2.1 ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: no wood on surface or in 10cm or anywhere in grab (one small piece)
3cm soft wet olive brown silt; below gray mod-firm silt with red nodules.

Grab Number:
Water Depth:
Tide Level:
Depth MLLW:
Grab Recovery:
Sample Interval:
Time:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments:

Grab Number:
Water Depth:
Tide Level:
Depth MLLW:
Grab Recovery:
Sample Interval:
Time:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: DG 80% fines
DG

Date/Time Lab Drop Off:

Recorded by: LV

Project Name: Bay Wood Project No: 080547-01 Station ID: BW-05

Sampling Crew: LV, DG
 Sample Date: 12/18/09 Sampling Method: grab - Vanveer
 Sampling Vessel: RSS Sled
 Subcontractor(s): RSP #1 #2 Weather: calm - 45°F
 Station Coordinates: N/Lat. 374305. 374314
 E/Long. 1302820 1302819
 Datum: (NAD 83) WGS 84 zone: Washington N US survey ft

Sample ID: BW-05-SS-091218
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest Other: EPH VPH
TS / TVS / Grain Size / TOC / Ammonia / Sulfides Other: Bioassay
 (Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 6.8 ft. Grab Recovery: 10 cm Time: 09:45
 Tide Level: 9.8 ft. Sample Interval: 0-10 cm
 Depth MLLW: 3.0 ft.

Bioassay / Chemistry

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	<u>H2S</u>	<u>none</u>
gravel	<u>gray</u>	<u>soft/loose top</u>	<u>slight</u>	Petroleum	trace
<u>sand C M F</u>	black	<u>mod dense/stiff below</u>	moderate	other:	slight
<u>silt/clay</u>	brown	dense/stiff	strong		moderate
organic matter	<u>brown surface</u>	very dense/stiff	overwhelming		heavy

Comments: 2cm soft fine sandy silt no wood on surface
few shell brown on surface; grey below surface
few wood (10%) olive grey sand to bottom of grab

Grab Number: 2 Water Depth: _____ ft. Grab Recovery: 15 cm Time: _____
 Tide Level: _____ ft. Sample Interval: 0-10 cm
 Depth MLLW: _____ ft.

Bioassay / Chemistry

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	<u>H2S</u>	<u>none</u>
gravel	<u>gray</u>	<u>soft/loose</u>	<u>slight</u>	Petroleum	trace
sand C M F	black	<u>mod dense/stiff</u>	moderate	other:	slight
<u>silt/clay</u>	brown	dense/stiff	strong		moderate
organic matter	<u>brown surface</u>	very dense/stiff	overwhelming		heavy

Comments: 2cm brown silt + sand no wood on surface, soft
10% wood below; moderately dense below
↳ below 10cm (is not sampled) few shell

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Depth MLLW: _____ ft.

Bioassay / Chemistry

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	none
gravel	gray	soft/loose	slight	Petroleum	trace
sand C M F	black	mod dense/stiff	moderate	other:	slight
silt clay	brown	dense/stiff	strong		moderate
organic matter	brown surface	very dense/stiff	overwhelming		heavy

Comments: 26% fines

Date/Time Lab Drop Off:

Recorded by: LV

Project Name: Bay Wood Project No: 080547-01 Station ID: BW-07

Sampling Crew: LV, DG
 Sample Date: 12/18/09 Sampling Method: Van veen
 Sampling Vessel: Sled
 Subcontractor(s): RSS Weather: 45°F cloudy
 Station Coordinates: N / Lat. 374058
 E / Long. 1304026
 Datum: NAD 83/WGS 84 zone: Washington N US Survey FT

Sample ID: BW-07-SS-091218
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest Other: EPH, VPH
TS / TVS / Grain Size / TOC / Ammonia / Sulfides Other: Bioassay
 (Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 2.2 ft. Grab Recovery: 1011 cm Time: 1232
 Tide Level: 7.5 ft. Sample Interval: 0-10 cm
 Depth MLLW: 5.3 ft.

Bioassay / Chemistry

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	<u>none</u> H2S	<u>none</u>	Dry
gravel	gray	<u>soft/loose top</u>	slight Petroleum	trace	Damp
<u>sand C M F</u>	black	<u>mod dense/stiff below</u>	moderate other:	slight	<u>Moist</u>
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	<u>brown surface</u>	very dense/stiff	overwhelming	heavy	

Comments: 3cm of brown sand, few silt below that, gray sand with red mottles no wood on surface; trace wood below

Grab Number: 2 Water Depth: _____ ft. Grab Recovery: 12 cm Time: _____
 Tide Level: _____ ft. Sample Interval: 0-10 cm
 Depth MLLW: _____ ft.

Bioassay / Chemistry

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: some wood + seaweed in jaws
Same as above but few wood @ 10cm depth.

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: 45% fines

Date/Time Lab Drop Off:

Recorded by: LV



Surface Sediment Field Sample Record

Project Name: Baywood Project No: 080547 01 Station ID: BW-11

Sampling Crew: LV, DG Sample Date: 12/18/09 Sampling Method: van veen
Sampling Vessel: Sled Subcontractor(s): RSS Weather: 45°F cloudy <5kts
Station Coordinates: N/Lat. 374207 E/Long. 1303088
Datum: NAD 83 WGS 84 zone: Washington N US Survey Feet

Sample ID: BW-11-S5-091218
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
Other: VPH EPH
TS / TVS / Grain Size / TOC / Ammonia / Sulfides
Other: Bioassay

Grab Number: 1 Water Depth: 5.9 ft. Grab Recovery: 17 cm Time: 1155
Tide Level: 7.6 ft. Sample Interval: 0-10 cm
Depth MLLW: 1.7 ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: 2cm brown cilt soft wet @ wood surface
mod-firm below - black few worms
trace sand

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: 71% finer

Date/Time Lab Drop Off:

Recorded by: LV



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-1

Sampling Crew: DG, DP, MH Sample Date: 6/2/09 Sampling Method: Van Reen Sampling Vessel: Anchor Subcontractor(s): Station Coordinates: N/Lat. 393463 (1A) E/Long. 1303526 Datum: NAD 83 / WGS 84 zone: Weather: sunny 70s calm

Sample ID: BW-01-SS-090602 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest TS / TVS / Grain Size / TOC / Ammonia / Sulfides Other: (Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 4.8 ft @ 1240 Grab Recovery: 17 cm Time: 1243 Tide Level: ft. Sample Interval: 10 cm Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter with handwritten notes like 'gray 3-10 cm', 'soft/loose @ surf.', 'mod dense/stiff', 'fluffy', 'none', 'H2S', 'trace', 'slight', 'moderate', 'strong', 'overwhelming', 'none', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments: NO WOOD ON SURFACE / or throughout NO shell, no sand 0-3 cm: light fluffly brown silt 3-10 cm: gray silt w/ few clay some red mottling 17 cm

Grab Number: Water Depth: ft. Grab Recovery: cm Time: Tide Level: ft. Sample Interval: cm Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter with handwritten notes like 'gray', 'mod dense/stiff', 'dense/stiff', 'very dense/stiff', 'none', 'H2S', 'trace', 'slight', 'moderate', 'strong', 'overwhelming', 'none', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time: Tide Level: ft. Sample Interval: cm Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter with handwritten notes like 'gray', 'mod dense/stiff', 'dense/stiff', 'very dense/stiff', 'none', 'H2S', 'trace', 'slight', 'moderate', 'strong', 'overwhelming', 'none', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments:

Date/Time Lab Drop Off:

Recorded by: MH



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-2

Sampling Crew: MH, DG, DP Sample Date: 6/2/09 Sampling Method: van veen
Sampling Vessel: Anchor Weather: sunny, 70s, slight breeze.
Station Coordinates: N/Lat. 373586 E/Long. 1303385
Datum: NAD 83 / WGS 84 zone: 2A

Sample ID: BW-02-SS-090602
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
TS / TVS / Grain Size / TOC / Ammonia / Sulfides
Other: (Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 5.0 ft @ 1220 Grab Recovery: 12 cm Time: 1220
Tide Level: ft. Sample Interval: 10 cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'coarse sand' and 'TOP 2cm'.

Comments: No wood. much sandier. scattered shells throughout
0-2 cm silt w/ little sand brown
2-10 cm coarse light gray sand w/ black and red mottling

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

scattered shell hash throughout Date/Time Lab Drop Off:

Recorded by: (Signature)



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site

Project No: 080207-02

Station ID: BW-3

Sampling Crew: DG, M.H., DP
 Sample Date: 6/2/09 Sampling Method: vanveen
 Sampling Vessel: ANCHOR
 Subcontractor(s): _____ Weather: Sunny 70s
 Station Coordinates: N / Lat. 373757 (3A)
 E / Long. 1303267
 Datum: NAD 83 / WGS 84 zone: _____

Sample ID: BW-03-SS-090602
 Analysis: (Metals) TBT (SVOCs) (VOCs) (PCBs) (Pest)
(TS/TVS) (Grain Size) (TOC) (Ammonia) (Sulfides)
 (Circle Appropriate Analyses)
 Other: _____
 Other: _____

Grab Number: 1 Water Depth: 3.7 ft @ 1145 Grab Recovery: 15 cm Time: 1147
 Tide Level: _____ ft. Sample Interval: 10 cm
 Bioassay (Chemistry) Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O. @ depth	Very soft/Loose	none	H2S	Dry
gravel	gray	soft/loose	slight	Petroleum	Damp
sand C M F	black	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface - 3cm	very dense/stiff	overwhelming	heavy	

NO WOOD

Comments: NO WOOD ON SURFACE. WORM TUBES BELOW SURFACE
0-3 cm. soft brown silt. 3-10 cm olive gray silt w/ scattered
red modeling - 3-10 cm = med. stiff silt w/ few clay.

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	Dry
gravel	gray	soft/loose	slight	Petroleum	Damp
sand C M F	black	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: _____

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	Dry
gravel	gray	soft/loose	slight	Petroleum	Damp
sand C M F	black	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: _____

plenty of volume for dup ⊕
 SMS/D/F

Date/Time Lab Drop Off:

Recorded by: MH



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-4

Sampling Crew: DG, MH, DP
 Sample Date: 6/2/09 Sampling Method: Grab Van Veen
 Sampling Vessel: Anchor Weather: Sunny 70s calm
 Subcontractor(s):
 Station Coordinates: N / Lat. 373933 MA
 E / Long. 1303167
 Datum: NAD 83 / WGS 84 zone:

Sample ID: BW-04-SS-090602
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
 (TS / TVS / Grain Size / TOC / Ammonia / Sulfides)
 Other: Other:

Grab Number: 1 Water Depth: 1.3 ft @ 1120 Grab Recovery: 17 cm Time: 1115
 Tide Level: ft. Sample Interval: 10 cm
 Bioassay (Chemistry) Depth MLLW: ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble 5-10 cm	D.O. w/ black	Very soft/Loose	none	H2S	Dry
gravel silt w/ few clay	gray Seams 2	soft/loose surface	slight	Petroleum	Damp
sand C M F	black 5-10 cm	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface TOP 5cm	very dense/stiff	overwhelming	heavy	

Comments: slight overpenetration NO surface wood.
 0-5cm brown fluffy silt (soft) 5-10 cm black mod dense silt few clay. @ 7cm w/ few (scattered) wood chunks

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
 Tide Level: ft. Sample Interval: cm
 Bioassay / Chemistry Depth MLLW: ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	Dry
gravel	gray	soft/loose	slight	Petroleum	Damp
sand C M F	black	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
 Tide Level: ft. Sample Interval: cm
 Bioassay / Chemistry Depth MLLW: ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none	H2S	Dry
gravel	gray	soft/loose	slight	Petroleum	Damp
sand C M F	black	mod dense/stiff	moderate	other:	Moist
silt clay	brown	dense/stiff	strong		Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments:

good grab. Enough material for duplicate. 5-10 cm dark olive w/ black seams

Date/Time Lab Drop Off:

Recorded by: MH



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-5

Sampling Crew: DG, MH, DP
Sample Date: 6/2/09
Sampling Method: Grab
Sampling Vessel: Anchor
Subcontractor(s): N/A
Weather: Sunny, calm
Station Coordinates: N/Lat. 374290 E/Long. 1302800
Datum: NAD 83 / WGS 84 zone:

Sample ID: BW-05-SS-090602
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest / TS / TVS / Grain Size / OC / Ammonia / Sulfides
Other:

Grab Number:
Water Depth: 0.9 ft.
Grab Recovery: 17 cm
Time: 10:15 10/20/09
Tide Level:
Sample Interval: 10 cm
Depth MLLW:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'black Below 2cm', 'brown top 2cm', 'organic matter 2-10cm'.

Comments: Slight penetration. no wood throughout sample. Top 2 cm light brown wet silt. gets stiffer w/ depth. all silt no sand, no clay. Amphipod tubes on surface. organic black silt 2-10 cm

Grab Number:
Water Depth:
Tide Level:
Depth MLLW:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

Grab Number:
Water Depth:
Tide Level:
Depth MLLW:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

good grab - great recovery. all silt. no wood. easily homogenized. Recorded by: (MH) characterized by DP, DG Date/Time Lab Drop Off:



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-06

Sampling Crew: GD, DP, MH
Sample Date: 6/2/09
Sampling Method: Van Veen
Sampling Vessel: Anchor
Subcontractor(s):
Station Coordinates: N/Lat. 374417 (6A) E/Long. 1303543
Weather: overcast, warm, humid calm
Datum: NAD 83 / WGS 84 zone:

Sample ID:
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
TS (FVS) Grain Size TOC Ammonia / Sulfides
Other:
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 4.7 ft. Grab Recovery: 17 cm Time: 1626
Tide Level: ft. Sample Interval: 10 cm
Bioassay / Chemistry Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'cobble 5-17cm', 'gray - 5-17cm', 'soft/loose', 'moderate', 'strong', 'overwhelming', 'none', 'H2S', 'Petroleum', 'other:', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments: big piece of wood on surface (6 inches long)
0-5cm: soft wet brown silt
5-17cm: gray clayey silt w/ few small wood pieces (scattered)
red modeling clay

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Bioassay / Chemistry Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'cobble', 'gray', 'soft/loose', 'moderate', 'strong', 'overwhelming', 'none', 'H2S', 'Petroleum', 'other:', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Tide Level: ft. Sample Interval: cm
Bioassay / Chemistry Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'cobble', 'gray', 'soft/loose', 'moderate', 'strong', 'overwhelming', 'none', 'H2S', 'Petroleum', 'other:', 'trace', 'slight', 'moderate', 'heavy', 'Dry', 'Damp', 'Moist', 'Wet'.

Comments:

more wood @ 10-17 cm (moderate < 10%) Date/Time Lab Drop Off:

Recorded by: (MH)



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-07

Sampling Crew: DG, MH, DP
 Sample Date: 6/2/09 Sampling Method: van veen
 Sampling Vessel: Anchor
 Subcontractor(s): _____ Weather: shiny breezy warm
 Station Coordinates: N / Lat. 374056 7A
 E / Long. 1304059

Datum: NAD 83 / WGS 84 zone: _____
 Sample ID: BW-07-SS-090602
 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
MS/MSD D/F TS TVS Grain Size TOC Ammonia Sulfides
 (Circle Appropriate Analyses) Other: 7B N: 374075
 Other: E: 1304033

Grab Number: _____ Water Depth: 2.3 ft. Grab Recovery: _____ cm Time: 1416
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: Attempt 1: <10cm recovery

Grab Number: 3 Water Depth: 3.6 ft. Grab Recovery: 10.5 cm Time: 1440
 Tide Level: _____ ft. Sample Interval: 10 cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	<u>none</u> H2S	<u>none</u>	Dry
gravel	<u>gray</u>	soft/loose	slight Petroleum	<u>trace</u>	Damp
<u>sand</u> C M F	black	<u>mod dense/stiff</u>	moderate other:	slight	<u>Moist</u>
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	<u>brown surface</u>	very dense/stiff	overwhelming	heavy	

Comments: 0-2: coarse brown sand - moist
2-10.5: olive gray coarse sand, few wood debris scattered shell

Grab Number: 4 Water Depth: 3.6 ft. Grab Recovery: 13 cm Time: 1450
 Tide Level: _____ ft. Sample Interval: 10 cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	<u>none</u>	Dry
gravel	<u>gray</u> - depth	soft/loose	<u>slight</u> Petroleum	trace	Damp
<u>sand</u> C M F	black	<u>mod dense/stiff</u>	moderate other:	slight	<u>Moist</u>
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	<u>brown surface</u>	very dense/stiff	overwhelming	heavy	

Comments: Few pieces of wood on surface
coarse sand brown on surface
gray coarse sand w/ black seams (seams smell H2S)
few wood @ depth (15% volume)

material for both 7B. 4 @ grab 3 & 4

Recorded by: MH

Date/Time Lab Drop Off: _____



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-08

Sampling Crew: DG, DP, MH Sample Date: 6/2/09 Sampling Method: van veen Sampling Vessel: Anchor Subcontractor(s): Station Coordinates: N/Lat. 374577 (RA) E/Long. 1304198 Datum: NAD 83/WGS 84 zone: Weather: overcast warm calm humid

Sample ID: BW-08-SS-090602 Analysis: Metals/TBT/SVOCs/VOCs/PCBs/Pest TS/TVS/Grain Size/TOC/Ammonia/Sulfides Other: (Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 3.2 ft @ 1600 Grab Recovery: 10 cm Time: 1600 Tide Level: Depth MLLW: Sample Interval: Bioassay / Chemistry

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Includes handwritten notes like 'sandy silt' and 'Wet - surf (0-5 cm)'.

Comments: Lots of amphipod tubes No wood, no odor no sheen 0-5 cm: wet soft sandy silt 5-10cm: moist med dense silty sand

Grab Number: Water Depth: Grab Recovery: Time: Tide Level: Sample Interval: Bioassay / Chemistry Depth MLLW:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

Grab Number: Water Depth: Grab Recovery: Time: Tide Level: Sample Interval: Bioassay / Chemistry Depth MLLW:

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture.

Comments:

Date/Time Lab Drop Off:

Recorded by: (MH)



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-09

Sampling Crew: MH, DP, DG Sample Date: 6/2/09 Sampling Method: van veen Sampling Vessel: Anchor Subcontractor(s): Station Coordinates: N/Lat. 374226 (9A) E/Long. 1304341 Datum: NAD 83 / WGS 84 zone: Weather: SUNNY, HOT

Sample ID: BW-09-SS-090602 Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest TS / TVS / Grain Size / TOC / Ammonia / Sulfides (Circle Appropriate Analyses) Other: Other: (MH)

Grab Number: 1 Water Depth: 2.1 ft. Grab Recovery: 8-14 cm Time: 1507 Tide Level: ft. Sample Interval: 10 cm Bioassay (Chemistry) Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt/clay, organic matter with handwritten annotations like 'mod dense/stiff' and 'a depth'.

Comments: 0-4 cm: light brown silt 4-13 cm: dark brown/gray med stiff silt w/ few clay 0% wood @ surface (some red modelling @ depth / some black)

Grab Number: Water Depth: ft. Grab Recovery: cm Time: Tide Level: ft. Sample Interval: cm Bioassay / Chemistry Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time: Tide Level: ft. Sample Interval: cm Bioassay / Chemistry Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments:

5% wood by volume 5-13 cm. scattered shell hash throughout Date/Time Lab Drop Off: Recorded by: (MH)



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-10

Sampling Crew: DG, DP, MH
Sample Date: 6/2/09
Sampling Method: van veen
Sampling Vessel: Anchor
Subcontractor(s):
Station Coordinates: N/Lat. 374346 (10A)
E/Long. 1304594
Datum: NAD 83 / WGS 84 zone:

Sample ID: BW-10-SS-090602
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
TS / TVS / Grain Size / TOC / Ammonia / Sulfides
Other:
(Circle Appropriate Analyses)

Grab Number: 1 Water Depth: 2.6 ft @ 1538
Tide Level:
Grab Recovery: 8 cm Time: 1540
Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments: Took some material from surface and kept in bowl.

Grab Number: 2 Water Depth: 2.5 ft @ 1542
Tide Level:
Grab Recovery: 10 cm Time: 1543
Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter. Includes handwritten notes like '1-10cm' and 'brown surface 1cm'.

Comments: 0-1 cm = brown silt
1-10 cm = dark gray sand (w/ red mottling) w/ few gravel. scattered shell. NO WOOD, no odor. small clams.

Grab Number: Water Depth: ft.
Tide Level: ft.
Grab Recovery: cm Time:
Sample Interval: cm
Depth MLLW: ft.

Table with 6 columns: Sediment Type, Sediment Color, Density, Sediment Odor, Sheen, Moisture. Rows include cobble, gravel, sand C M F, silt clay, organic matter.

Comments:

Date/Time Lab Drop Off:

Recorded by: [Signature]

Project Name: **Bay Wood Products Site** Project No: **080207-02** Station ID: **BW-11**

Sampling Crew: DG, DP, MH
 Sample Date: 6/2/09 Sampling Method: VAN VEEN
 Sampling Vessel: Anchor
 Subcontractor(s): _____ Weather: sunny breezy
 Station Coordinates: N / Lat. 374191 (11A)
 E / Long. 1303114
 Datum: NAD 83 / WGS 84 zone: _____

Sample ID: BW-11-SS-090602
 Analysis: (SMS) Metals / TBT / SVOCs / VOCs / PCBs / Pest
TS / TVS / Grain Size / TOC / Ammonia / Sulfides
 (Circle Appropriate Analyses) Other: _____
 Other: _____

Grab Number: _____ Water Depth: 5.6 ft. @ 1315
 Tide Level: _____ ft. Grab Recovery: 13 cm Time: 1315
 Sample Interval: 10 cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel <u>silt @ surface</u>	gray	soft/loose	slight <u>Petroleum</u>	trace	Damp
sand C M F	black	mod dense/stiff	moderate <u>in black</u>	slight	Moist
silt clay	brown	dense/stiff	strong <u>seams</u>	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: TOP 2 cm - light brown silt
2-13 cm gray w/ red mottling & substantial black seams
which smells petrolic - silt w/ fine clay

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: _____

Grab Number: _____ Water Depth: _____ ft. Grab Recovery: _____ cm Time: _____
 Tide Level: _____ ft. Sample Interval: _____ cm
 Bioassay / Chemistry Depth MLLW: _____ ft.

Sediment Type:	Sediment Color:	Density:	Sediment Odor:	Sheen:	Moisture:
cobble	D.O.	Very soft/Loose	none H2S	none	Dry
gravel	gray	soft/loose	slight Petroleum	trace	Damp
sand C M F	black	mod dense/stiff	moderate other:	slight	Moist
silt clay	brown	dense/stiff	strong	moderate	Wet
organic matter	brown surface	very dense/stiff	overwhelming	heavy	

Comments: _____

< 10% wood @ surface - (25%)
wood present and mixed types - some sticks.
10% wood by volume @ depth
 Recorded by: (MH)
 Date/Time Lab Drop Off: _____
(going to BW-12 to collect grab & decide which of 2 gets SMS analysis)



Surface Sediment Field Sample Record

Project Name: Bay Wood Products Site Project No: 080207-02 Station ID: BW-12

Sampling Crew: DG, MH, DP
Sample Date: 6/2/09
Sampling Method: Van Veen
Weather: Sunny, breezy 70s-80s
Station Coordinates: N/Lat. 374274 (12A) E/Long. 1303165
Datum: NAD 83 / WGS 84 zone:

Sample ID: BW-12-SS-090602
Analysis: Metals / TBT / SVOCs / VOCs / PCBs / Pest
Other: * DECIDED TO USE BW-11 for SMS since BW-12 appears to be cleaner

Grab Number: 1 Water Depth: 5.5 ft @ 1338
Grab Recovery: 15 cm Time: 1338
Sample Interval: 10 cm
Bioassay (Chemistry) Depth MLLW: ft.
Sediment Type: cobble, gravel, sand C M F, silt clay, organic matter
Sediment Color: D.O., gray 2-15cm, black, brown, brown surface
Density: Very soft/Loose, soft/loose surf., mod dense/stiff, dense/stiff, very dense/stiff
Sediment Odor: none, slight, moderate, strong, overwhelming
Sheen: none, trace, slight, moderate, heavy
Moisture: Dry, Damp, Moist, Wet - Surf.

Comments: 0-3 cm - Light brown silt, some silt on sticks @ surf.
3-15 cm - red mottling w/ black but MOSTLY dark olive med stiff silt w/ few clay (slight H2S odor in black stuff)

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Sample Interval: cm
Bioassay / Chemistry Depth MLLW: ft.
Sediment Type: cobble, gravel, sand C M F, silt clay, organic matter
Sediment Color: D.O., gray, black, brown, brown surface
Density: Very soft/Loose, soft/loose, mod dense/stiff, dense/stiff, very dense/stiff
Sediment Odor: none, slight, moderate, strong, overwhelming
Sheen: none, trace, slight, moderate, heavy
Moisture: Dry, Damp, Moist, Wet

Comments:

Grab Number: Water Depth: ft. Grab Recovery: cm Time:
Sample Interval: cm
Bioassay / Chemistry Depth MLLW: ft.
Sediment Type: cobble, gravel, sand C M F, silt clay, organic matter
Sediment Color: D.O., gray, black, brown, brown surface
Density: Very soft/Loose, soft/loose, mod dense/stiff, dense/stiff, very dense/stiff
Sediment Odor: none, slight, moderate, strong, overwhelming
Sheen: none, trace, slight, moderate, heavy
Moisture: Dry, Damp, Moist, Wet

Comments:

Less than 5% wood on surface
some sticks 6-8 in long (x3)
< 10% volume @ depth

Date/Time Lab Drop Off:

Recorded by: MH

APPENDIX F
MUDMOLE CORE LOGS

Mudmole Core Log

BW-01

Project: Bay Wood Products	Location: Port Gardiner	Method/Tube ID: Mudmole
Project #: 080546-01	Water Depth (FT): 5.9	Core Type: 4" square
Client: Port of Everett	Mudline Elevation (MLLW): 2.5	Core Tube Length (FT): 14.6
Collection Date: 12/17/2009	Northing (FT): 373457	Penetration: 10
Collection Time: 13:15	Easting (FT): 1303525	Refusal: Yes
Contractor: Geomatrix	Horizontal Datum: NAD 83 SP WA North	Recovery: 48%
Operator: G. Maxwell	Vertical Datum: MLLW	Logged By: D. Marshalonis

Recoverd Depth (ft) below Mudline	Sample	Sediment Description	Status
--------------------------------------	--------	----------------------	--------

0		Moist, brown SILT, moderate sulfide odor, no sheen, no woody debris.	
1	BW-01-SC-A-091218		Analyze
2			
3	BW-01-SC-B-091218	Damp, brown SILT, 30% wood / organic material, moderate sulfide odor, no sheen.	Analyze
4			
5		Damp, brown WOOD / ORGANIC MATERIAL (90%), trace petroleum odor, no sheen.	
6			
7	BW-01-SC-C-091218		Hold
8			
9			
10	BW-01-SC-D-091218	Wet, brown SILT, 45% wood / organic material, slight sulfide odor, no sheen.	Hold
11			
12			
13			
14			
15			
16		Bottom of Mudmole Core at 10 feet.	

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Mudmole Core Log

BW-04

Project: Bay Wood Products	Location: Port Gardiner	Method/Tube ID: Mudmole
Project #: 080546-01	Water Depth (FT): 5.2	Core Type: 4" square
Client: Port of Everett	Mudline Elevation (MLLW): 4.3	Core Tube Length (FT): 14.7
Collection Date: 12/17/2009	Northing (FT): 373940.5	Penetration: 4.4
Collection Time: 14:46	Easting (FT): 1303170.7	Refusal: Yes, on rock
Contractor: Geomatrix	Horizontal Datum: NAD 83 SP WA North	Recovery: 77%
Operator: G. Maxwell	Vertical Datum: MLLW	Logged By: D. Marshalonis

Recoverd Depth (ft) below Mudline	Sample	Sediment Description	Status
--------------------------------------	--------	----------------------	--------

0		Damp, brown SILT, slight sulfide odor, no sheen, no woody debris.	Hold
-1		Moist, brown silty WOOD (95%), moderate sulfide, no sheen.	
-2	BW-04-SC-B-091218		Analyze
-3		Dry, brown/black, sandy WOOD (80%), slight petroleum odor, no sheen.	
-4	BW-04-SC-C-091218		Analyze
-5		Bottom of Mudmole Core at 4.4 feet.	
-6			
-7			
-8			
-9			
-10			
-11			
-12			
-13			
-14			
-15			
-16			

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Mudmole Core Log

BW-05

Project: Bay Wood Products	Location: Port Gardiner	Method/Tube ID: Mudmole
Project #: 080546-01	Water Depth (FT): 5.8	Core Type: 4" square
Client: Port of Everett	Mudline Elevation (MLLW): 3.0	Core Tube Length (FT): 14.9
Collection Date: 12/17/2009	Northing (FT): 374308.3	Penetration: 11.4
Collection Time: 10:00	Easting (FT): 1302821.6	Refusal: No
Contractor: Geomatrix	Horizontal Datum: NAD 83 SP WA North	Recovery: 50%
Operator: G. Maxwell	Vertical Datum: MLLW	Logged By: D. Marshalonis

Recoverd Depth (ft) below Mudline	Sample	Sediment Description	Status
--------------------------------------	--------	----------------------	--------

0		Damp, brown SILT, 30% wood, moderate sulfide odor, no sheen.	
-1	BW-05-SC-A-091218		Analyze
-2			
-3		Dry, dark gray, silty CLAY with trace wood fragments, slight sulfide odor.	
-4	BW-05-SC-B-091218		Analyze
-5		Dry, brown, sandy wood (75%) slight sulfide odor, no sheen.	
-6	BW-05-SC-C-091218		Hold
-7		Dry, dark gray, medium SAND, no odor, no sheen.	
-8	BW-05-SC-Z-091218		Hold
-9		Bottom of Mudmole Core at 8.0 feet.	
-10			
-11			
-12			
-13			
-14			
-15			
-16			

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Mudmole Core Log

BW-07

Project: Bay Wood Products	Location: Port Gardiner	Method/Tube ID: Mudmole
Project #: 080546-01	Water Depth (FT): 4.9	Core Type: 4" square
Client: Port of Everett	Mudline Elevation (MLLW): 5.2	Core Tube Length (FT): 14.5
Collection Date: 12/17/2009	Northing (FT): 374059.4	Penetration: 10
Collection Time: 9:00	Easting (FT): 1304029.9	Refusal: Yes
Contractor: Geomatrix	Horizontal Datum: NAD 83 SP WA North	Recovery: 66%
Operator: G. Maxwell	Vertical Datum: MLLW	Logged By: D. Marshalonis

Recoverd Depth (ft) below Mudline	Sample	Sediment Description	Status
-----------------------------------	--------	----------------------	--------

0	BW-07-SC-A-091218	Damp, brown SILT, no odor, no sheen.	Hold
1		Dry, brown, clayey SILT, 5-10% woody debris, no odor, no sheen.	
2			
3	BW-07-SC-B-091218		Analyze
4			
5	BW-07-SC-C-091218	Dry, brown ORGANIC MATERIAL / WOOD FIBERS (80%), no odor, no sheen.	Analyze
6			
7	BW-07-SC-Z-091218	Dry, dark gray, medium SAND, no odor, no sheen.	Hold
8			
9	BW-07-SC-Z1-091218	Dry, brown ORGANIC MATERIAL / WOOD FIBERS (95%), trace sand, no odor, no sheen.	Hold
10	BW-07-SC-Z2-091218	Dry, dark gray, medium SAND, no odor, no sheen.	Hold
11			
12			
13			
14			
15			
16		Bottom of Mudmole Core at 9.9 feet.	

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Mudmole Core Log

BW-11

Project: Bay Wood Products	Location: Port Gardiner	Method/Tube ID: Mudmole
Project #: 080546-01	Water Depth (FT): 5.8	Core Type: 4" square
Client: Port of Everett	Mudline Elevation (MLLW): 2.0	Core Tube Length (FT): 14.5
Collection Date: 12/17/2009	Northing (FT): 374205.7	Penetration: 9.7
Collection Time: 12:14	Easting (FT): 1303093.2	Refusal: Yes
Contractor: Geomatrix	Horizontal Datum: NAD 83 SP WA North	Recovery: 69%
Operator: G. Maxwell	Vertical Datum: MLLW	Logged By: D. Marshalonis

Recoverd Depth (ft) below Mudline	Sample	Sediment Description	Status
--------------------------------------	--------	----------------------	--------

0		Moist, brown SILT, trace wood fibers (5%), moderate sulfide, no sheen.	Analyze
1	BW-11-SC-A-091218		
2		Dry, brown, sandy WOOD (85%), moderate sulfide odor, no sheen.	
3	BW-11-SC-B-091218		Analyze
4		Dry, dark gray, medium SAND, trace wood fibers, no odor, no sheen.	
5	BW-11-SC-Z-091218		Hold
6		Dry, dark gray, medium SAND, trace wood fibers, no odor, no sheen.	
7			
8			
9			
10		Bottom of Mudmole Core at 9.4 feet.	
11			
12			
13			
14			
15			
16			

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APPENDIX G
CORE COLLECTION AND PROCESSING
LOGS



Sediment Core Collection Log

Project: Bay Wood
 Project No: _____
 Field Staff (in): DG
 Contractor: Amec
 Vertical Datum: MLLW

Station ID: BW-01
 Attempt No: _____
 Date (mm/dd/yy): 12/17/09
 Logged By: DG
 Horizontal Datum: NAD 83 W A N US S Feet
 Time (hhmm): 1315
 Type of Core: Piston Shelby Vibro Other
 Diameter of Core (inches): mud/mole
 Core Quality: Good Fair Poor Disturbed

Field Collection Coordinates:
 Lat/Northing: 373457

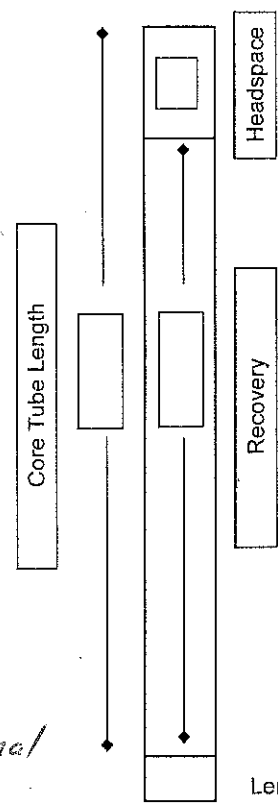
Long/Easting: 1303526

A. Water Depth (ft)
 DTM Depth Sounder: _____
 DTM Lead Line: 5.9

B. Tide Measurements
 Time (hhmm): 1315
 Height (ft): 8.4

C. Mudline Elevation
 (-A+B=C)

Core Collection Recovery Details:
 Core Accepted: Yes / No
 Core Tube Length: 15 Units: (in (ft) m cm)
 Drive Penetration (A): 10.3
 Headspace Measurement: 9.5
 Recovery Measurement (B): 9.3
 Recovery Percentage (B/A): _____ %
 Total Length of Core To Process: _____
 Refusal Encountered? Yes No



Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal
0-5 easy very soft
5-10 easy very soft
hard penetration after 10'
pushed more to make plug.
Sat on hard material for
several minutes with no additional
penetration, probably sand.

Core Field Observations and Description: Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota
nose empty door shut tight. fine
sandy silt detected. in nose
material behind flap unknown

Rinsate Blank Samples Collected Yes No

Visual Classification of Subsurface Core



Project: Plywood
 Project No: 080547-01.01
 Station ID: BW-01

Date (hhmm): 12/18/09
 Core Processed By: SMD, DEP, DM
 Page 1 of 1

Total Core Length (feet) 4.6

Average % Recovery (from collection log)

Sample Interval (ft)	Actual Depth in Core Sections	Theoretical	Summary Sketch	Classification and Remarks: (Moisture content, density/consistency, color, minor constituents, MAJOR constituents, sheen, and odor)
0- 0.9 1.4	0 0.5 1			MOIST SOFT BLUE BROWN SILT MODERATE H ₂ S ODOR NO SHEEN
1.4 -2.3	1 2			DAMP MEDIUM STIFF BROWN WOODY (30%) SILT (ORGANIC MATERIAL/WOOD) MODERATE H ₂ S ODOR NO SHEEN
2.3 -4.2	2.5 3.5 4.0			DAMP STIFF BROWN WOOD/ORGANIC MATERIAL (90%) WITH TRACE SILT (1%) TRACE SAND (5%) SOME SCATTERED WOOD FRAGMENTS (0.3 ft) TRACE PETROLEUM ODOR NO SHEEN
4.2- 4.6	4.5			WET SOFT BROWN WOODY SILT (45% WOOD) SLIGHT H ₂ S ODOR NO SHEEN
				END OF CORE

Core logged by: DM

Mudmole™ Core Summary Log

Project: Bay Wood Sediment Coring
Project No: 12598.002.0

Station: BW-1

Mudline elevation: 2.5 ft MLLW

Maximum depth of retained sediment: 10.0 ft
Percent recovery (on-deck): 48%

	Core collection	Laboratory processing
Date:	12/18/2009	12/18/2009
Time:	13:13	9:45

Field Log: NB
Summary Log: NB

	Visual Description of Sediment	Summary Interpretation	Segment	Primary Sample ID	Secondary Sample ID
0	<div style="text-align: center; margin-bottom: 10px;">Brown silt</div> <hr style="border: 1px solid black;"/> <div style="text-align: center; margin-bottom: 10px;">Brown woody silt</div> <hr style="border: 1px solid black;"/> <div style="text-align: center; margin-bottom: 10px;">Brown wood/organic material</div> <hr style="border: 1px solid black;"/> <div style="text-align: center; margin-bottom: 10px;">Brown wood silt</div> <hr style="border: 1px solid black;"/> <div style="text-align: center; margin-bottom: 10px;">End of Core</div>				
2					
4					
6					
8					
10		End of core	End of core	End of core	End of core
12					

Visual Classification of Subsurface Core



Project: BAYWOOD
 Project No: 080547-01.D1
 Station ID: BW-04

Date (hhmm): 12/18/09
 Core Processed By: JMD OEP DM
 Page 1 of 1

Total Core Length (feet) 3.4

Average % Recovery (from collection log)

Sample Interval (ft)	Actual Depth in Core Sections	Theoretical	Summary Sketch	Classification and Remarks: (Moisture content, density/consistency, color, minor constituents, MAJOR constituents, sheen, and odor)
0-0.5	0.5			DAMP SOFT OLIVE BROWN SILT SLIGHT H ₂ S ODOR NO SHEEN
0.5-2.1	1.0 1.5			MOIST MEDIUM STIFF BROWN SILTY WOOD (95% WOOD) ORGANIC MATERIAL, SCATTERED WOOD FRAGMENTS (0.3 ft) MODERATE H ₂ S ODOR NO SHEEN
2.1-3.4	2.5 3.0			DRY STIFF DARK BROWN (BLACK) ORGANIC MATERIAL (WOOD WITH LITTLE SAND) (20%) SLIGHT PETROLEUM ODOR NO SHEEN
	3.5			END OF CORE

Core logged by: DM

Mudmole™ Core Summary Log

Project: Bay Wood Sediment Coring
Project No: 12598.002.0

Station: BW-04

Mudline elevation: 4.3 ft MLLW

Maximum depth of retained sediment: 4.4 ft
Percent recovery (on-deck): 77%

	Core collection	Laboratory processing
Date:	12/17/2009	12/18/2009
Time:	14:46	8:45

Field Log: NB
Summary Log: NB

	Visual Description of Sediment	Summary Interpretation	Segment	Primary Sample ID	Secondary Sample ID
0.0	Olive brown silt				
0.5					
1.0					
1.5	Brown silty wood				
2.0					
2.5					
3.0					
3.5	Dark brown/black organic material/wood				
4.0					
4.5	End of Core	End of core	End of core	End of core	End of core
5.0					

Visual Classification of Subsurface Core



Project: BAYWOOD

Date (hhmm): 12/15/09

Project No: 080947-01.01

Core Processed By: JMD, DEP, DM

Station ID: BW-05

Page 1 of 1

Total Core Length (feet) 5.7

Average % Recovery (from collection log)

Sample Interval (ft)	Actual Depth in Core Sections	Theoretical	Summary Sketch	Classification and Remarks: (Moisture content, density/consistency, color, minor constituents, MAJOR constituents, sheen, and odor)
0-2.3	1			DAMP MEDIUM STIFF BROWN WOODY SILT (30% WOOD FIGURES AND FRAGMENTS) MODERATE ODOR NO SHEEN
2.3- 3.8 3.8	3			DRY MEDIUM STIFF DARK GREY CLAY w/ LITTLE SILT (27% SILT) SLIGHT H ₂ S ODOR NO SHEEN TRACE WOOD FRAGMENTS BAND OF MOIST WOOD w/ LITTLE SILT FROM 2.3-2.5
3.8- 4.4	4			DRY MEDIUM STIFF BROWN WOOD w/ LITTLE SAND (25% SAND) SLIGHT H ₂ S ODOR NO SHEEN
4.4- 5.7	5			2 LAYER DRY STIFF DARK GREY MEDIUM COARSE SAND NO ODOR NO SHEEN SAMPLE TAKEN FROM 4.9-5.3
	6			

Core logged by:

DM

Mudmole™ Core Summary Log

Project: Bay Wood Sediment Coring
Project No: 12598.002.0

Station: BW-05

Mudline elevation: 3.0 ft MLLW

Maximum depth of retained sediment: 8.0 ft
Percent recovery (on-deck): 50%

	Core collection	Laboratory processing
Date:	12/17/2009	12/18/2009
Time:	10:03	12:35

Field Log: NPB
Summary Log: NPB

	Visual Description of Sediment	Summary Interpretation	Segment	Primary Sample ID	Secondary Sample ID
0					
1	Brown woody silt				
2					
3					
4	Dark gray clay				
5	Brown wood				
6					
7	Dark gray sand				
8	End of Core	End of core	End of core	End of core	End of core
9					

Visual Classification of Subsurface Core



Project: BAW WOOD

Date (hhmm): 12/18/09

Project No: 080547-01.01

Core Processed By: TAD, DEP, DM

Station ID: BW-07

Page 1 of 1

Total Core Length (feet) 6.5

Average % Recovery (from collection log)

Sample Interval (ft)	Actual Depth in Core Sections	Theoretical	Summary Sketch	Classification and Remarks: (Moisture content, density/consistency, color, minor constituents, MAJOR constituents, sheen, and odor)
0-0.3				DAMP SOFT OLIVE BROWN SILT NO ODOR NO SHEEN
0.3-3.6	1			DRY STIFF BROWN CLAYEY SILT (45% (55%)) SCATTERED (5-10%) WOOD DEBRIS NO ODOR NO SHEEN
	2			1.4-1.5 BAND OF MEDIUM COARSE SAND 2.1-2.3 BAND OF LIGHT GREY MEDIUM SAND, (EXTENDS) DOWN SIDE OF CORE DOWN TO 2.6
3.6-4.5	4			DRY STIFF BROWN ORGANIC MATERIAL/WOOD FIBERS LITTLE CLAYEY SILT (15%) TRACE SAND (0-5%) NO ODOR NO SHEEN
4.5-5.4	5			Z LAYER DRY STIFF DARK GREY MEDIUM COARSE SAND NO ODOR NO SHEEN SAMPLE TAKEN FROM 4.6-5.1 (ESTIMATED)
5.4-5.9				DRY STIFF BROWN ORGANIC MATERIAL/WOOD FIBERS NO TRACE SAND (0-5%) TRACE H ₂ S ODOR NO SHEEN
5.9-6.5	6			Z LAYER DRY STIFF DARK GREY MEDIUM COARSE SAND NO ODOR NO SHEEN
	7			END OF CORE

Core logged by:

DM

Mudmole™ Core Summary Log

Project: Bay Wood Sediment Coring
Project No: 12598.002.0

Station: BW-07

Mudline elevation: 5.2 ft MLLW

Maximum depth of retained sediment: 9.9 ft
Percent recovery (on-deck): 66%

	Core collection	Laboratory processing
Date:	12/17/2009	12/18/2009
Time:	09:07	11:24

Field Log: NB
Summary Log: NB

	Visual Description of Sediment	Summary Interpretation	Segment	Primary Sample ID	Secondary Sample ID
0	Olive brown silt				
2	Brown clayey silt				
4					
6	Brown organic material/wood fibers				
8	Dark gray sand				
8	Brown organic material/wood fibers				
9	Dark gray sand				
10	End of Core	End of core	End of core	End of core	End of core
12					

Visual Classification of Subsurface Core



Project: BAYWOOD

Date (hhmm): 12/18/09

Project No: 080547-01.01

Core Processed By: JMD, DEP, DM

Station ID: BW-011

Page (of) 1

Total Core Length (feet) 6.7

Average % Recovery (from collection log)

Sample Interval (ft)	Actual Depth in Core Sections	Theoretical	Summary Sketch	Classification and Remarks: (Moisture content, density/consistency, color, minor constituents, MAJOR constituents, sheen, and odor)
0-1.0	1			MOIST SOFT OLIVE BROWN SILT w/ TRAILS WOOD FIBERS (5%) WOOD FRAGMENT (0.3ft) MODERATE H ₂ S ODOR NO SHEEN
1.0-2.6	2			DRY STIFF BROWN WOOD w/ LITTLE SAND (15%) MODERATE H ₂ S ODOR NO SHEEN SCATTERED WOOD FRAGMENTS (0.4ft) OR LESS
2.6-3.2	3			NOT SAMPLED, SAME DESCRIPTION AS 3.2-3.7 LAYER
3.2-3.7	4			2 LAYER DRY STIFF DARK GREY MEDIUM COARSE SAND TRACE WOOD FIBERS NO ODOR NO SHEEN
3.7-6.7	5			2 LAYER DRY STIFF DARK GREY MEDIUM COARSE SAND TRACE WOOD FIBERS NO ODOR NO SHEEN
	6			DIAGONAL LAYER OF WOODY DEBRIS AT 6.4-6.5
	7			END OF CORE

Core logged by:

DM

Mudmole™ Core Summary Log

Project: Bay Wood Sediment Coring
Project No: 12598.002.0

Station: BW-11

Mudline elevation: 2.0 ft MLLW

Maximum depth of retained sediment: 9.4 ft
Percent recovery (on-deck): 69%

Core collection
Date: 12/17/2009
Time: 12:14

Laboratory processing
Date: 12/18/2009
Time: 10:30

Field Log: NB
Summary Log: NB

Depth below mudline (ft.)	Visual Description of Sediment	Summary Interpretation	Segment	Primary Sample ID	Secondary Sample ID
0.0	Olive brown silt				
1.0					
2.0					
3.0	Brown wood				
4.0	Not sampled, same as below				
5.0	Dark gray sand				
6.0					
7.0	Dark gray sand				
8.0					
9.0					
9.4	End of Core	End of core	End of core	End of core	End of core
10.0					



Sediment Core Collection Log

Project: Bay work
 Project No: _____
 Field Staff (in): DG
 Contractor: AMEC
 Vertical Datum: MLLW

Station ID: BWD4
 Attempt No: 2
 Date (mm/dd/yy): 12/17/09
 Logged By: _____
 Horizontal Datum: _____
 Time (hhmm): 1445
 Type of Core: Piston Shelby Vibro Other
 Diameter of Core (Inches): 4" *mudmole*
 Core Quality: Good Fair Poor Disturbed

Field Collection Coordinates:
 Lat/Northing: _____

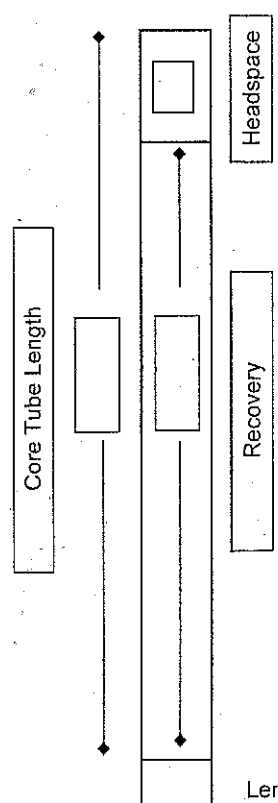
Long/Easting: _____

A. Water Depth (ft)
 DTM Depth Sounder: _____
 DTM Lead Line: 5.2

B. Tide Measurements
 Time (hhmm): 1445
 Height (ft): 9.5

C. Mudline Elevation
 (-A+B=C)

Core Collection Recovery Details:
 Core Accepted: Yes / No
 Core Tube Length: _____ Units: (in ft m cm)
 Drive Penetration (A): 4.4'
 Headspace Measurement: 1.3
 Recovery Measurement (B): 3.4
 Recovery Percentage (B/A): _____ %
 Total Length of Core To Process: _____
 Refusal Encountered? Yes No



Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal
reloaded core
0-3 relatively easy (moderate)
same as before

Core Field Observations and Description: Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota
coarse sand and rounded gravel in
nose with organic material
core nose damaged on rocks

Rinsate Blank Samples Collected Yes No



Sediment Core Collection Log

Project: Bay Wood
 Project No: _____
 Field Staff (in): DG
 Contractor: Ameec
 Vertical Datum: MLLW

Station ID: BW-05
 Attempt No: 1
 Date (mm/dd/yy): 12/17/09
 Logged By: DG
 Horizontal Datum: _____
 Time (hhmm): _____
 Type of Core: Piston Shelby Vibro Other
 Diameter of Core (inches): 4 medium
 Core Quality: Good Fair Poor Disturbed

Field Collection Coordinates:
 Lat/Northing: 374308

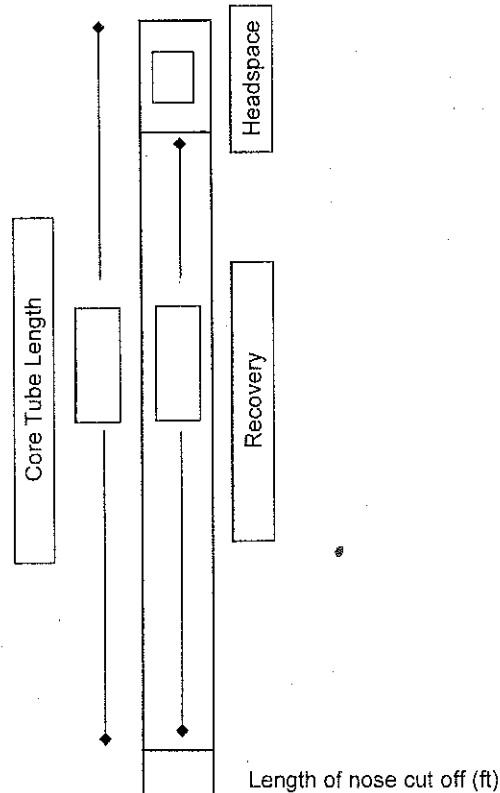
Long/Easting: 1302822

A. Water Depth (ft)
 DTM Depth Sounder: _____
 DTM Lead Line: 5.8

B. Tide Measurements
 Time (hhmm): 1000
 Height (ft): ~~2.8~~ 2.8

C. Mudline Elevation
 (-A+B=C)

Core Collection Recovery Details:
 Core Accepted: Yes No
 Core Tube Length: 14.9 Units: (in ft m cm)
 Drive Penetration (A): 11.4
 Headspace Measurement: 8.0'
 Recovery Measurement (B): 7.8
 Recovery Percentage (B/A): _____ %
 Total Length of Core To Process: _____
 Refusal Encountered? Yes No



Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal

0-2' med.
2-4' slow through obstacle
4-11' moderate slow & steady
core still moving down slow when stopped

Core Field Observations and Description: Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota

dark gray moist medium coarse sand - clean in nose

Barrel loaded @ 1000

Rinsate Blank Samples Collected Yes No



Sediment Core Collection Log

Project: Bay Word
 Project No: _____
 Field Staff (in): _____
 Contractor: AMEC
 Vertical Datum: _____

Station ID: BW-07
 Attempt No: 1
 Date (mm/dd/yy): 12/17/09
 Logged By: DG
 Horizontal Datum: NAD 83 WA N USS Feet
 Time (hhmm): 0900
 Type of Core: Piston Shelby Vibro Other
 Diameter of Core (inches): 4 mudmole
 Core Quality: Good Fair Poor Disturbed

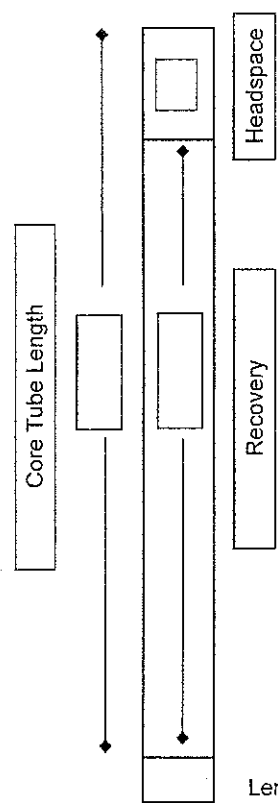
Field Collection Coordinates:
 Lat/Northing: 374039
 Long/Easting: 1304030

A. Water Depth (ft)
 DTM Depth Sounder: _____
 DTM Lead Line: 4.9

B. Tide Measurements
 Time (hhmm): 0900
 Height (ft): 10.1

C. Mudline Elevation
 (-A+B=C)

Core Collection Recovery Details:
 Core Accepted: Yes No
 Core Tube Length: 15 Units: (in m cm)
 Drive Penetration (A): 10 ft
 Headspace Measurement: 8.1'
 Recovery Measurement (B): _____
 Recovery Percentage (B/A): _____ %
 Total Length of Core To Process: _____
 Refusal Encountered? Yes No



Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal
moderate penetration to 8'
8-10 slower
refusal at 10'

finish drive & extract @ 0930

Core Field Observations and Description: Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota
dark gray, med coarse clean sand in nose

 Rinsate Blank Samples Collected Yes No



Sediment Core Collection Log

Project: Bay Wood
 Project No: _____
 Field Staff (in): OG
 Contractor: Amer
 Vertical Datum: MLW

Station ID: BW-11
 Attempt No: 2
 Date (mm/dd/yy): 12/17/09
 Logged By: OG
 Horizontal Datum: NAD 83 w/ N US Feet
 Time (hhmm): 1210
 Type of Core: Piston Shelby Vibro Other
 Diameter of Core (inches): 4" *mudmole*
 Core Quality: Good Fair Poor Disturbed

BW11c at location of core
 Field Collection Coordinates: 374207
 Lat/Northing: 374206 Long/Easting: 1303093 1303089

A. Water Depth (ft)

DTM Depth Sounder: _____
 DTM Lead Line: 5.8

B. Tide Measurements

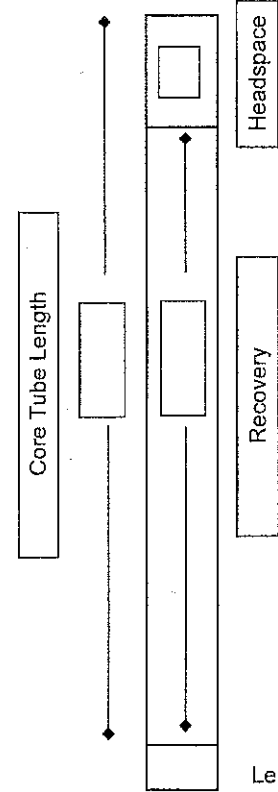
Time (hhmm): 1210
 Height (ft): 7.8

C. Mudline Elevation

(-A+B=C)

Core Collection Recovery Details:

Core Accepted: Yes / No
 Core Tube Length: 14.9 Units: (in ft m cm)
 Drive Penetration (A): 9.7
 Headspace Measurement: 7.8
 Recovery Measurement (B): 7.6
 Recovery Percentage (B/A): _____ %
 Total Length of Core To Process: _____
 Refusal Encountered? Yes No



Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal
Steady penetration
slow last 2 feet.
last foot very slow
BW11c coordinate

Core Field Observations and Description:

Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota

moved offshore 25' to get #2 attempt.
Gray coarse sand with few wood pieces in nose.

Rinsate Blank Samples Collected Yes No



Sediment Core Collection Log

Page ___ of ___

Project: Bay Wood

Station ID: BW-04

Project No: _____

Attempt No: _____

Field Staff (in): DG

Date (mm/dd/yy): 12/17/09

Contractor: Amec

Logged By: DG

Vertical Datum: MLLW

Horizontal Datum: NAD 83 WANA 165 feet

Time (hhmm): 1410

reject

Type of Core: Piston Shelby Vibro Other

Diameter of Core (inches): _____

Core Quality: Good Fair Poor Disturbed

Field Collection Coordinates:

Lat/Northing: 373930

Long/Easting: 1303181

A. Water Depth (ft)

DTM Depth Sounder: _____

DTM Lead Line: 4.9

B. Tide Measurements

Time (hhmm): 1410

Height (ft): 9.0

C. Mudline Elevation

(-A+B=C)

Core Collection Recovery Details:

Core Accepted: Yes / No

Core Tube Length: 14.7 Units: (in m cm)

Drive Penetration (A): _____

Headspace Measurement: _____

Recovery Measurement (B): _____

Recovery Percentage (B/A): _____ %

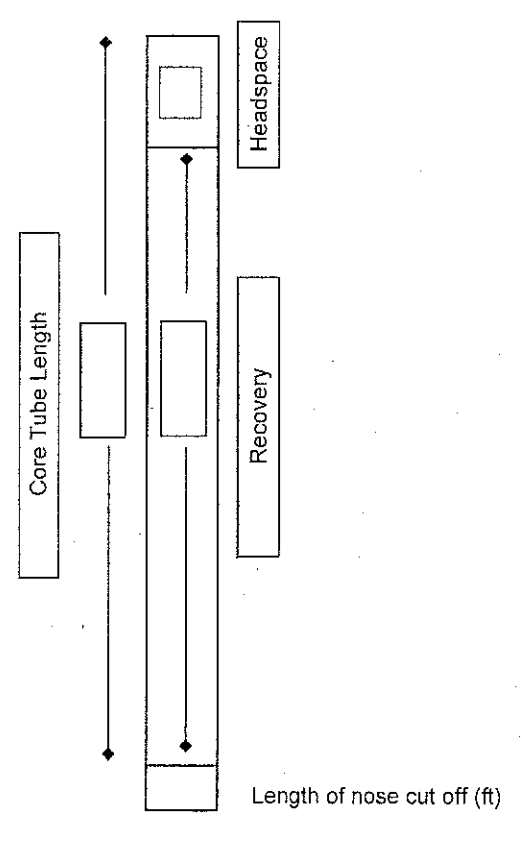
Total Length of Core To Process: _____

Refusal Encountered? Yes No

Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal

1-2 ft med. hit refusal at 3' dumped material - nose contained clean gray sand and gravel.

1350 loading core



Core Field Observations and Description: Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota

Rinsate Blank Samples Collected Yes No



Sediment Core Collection Log

Project: Bay Wood

Station ID: WB-11

Project No: _____

Attempt No: _____

Field Staff (in): DF

Date (mm/dd/yy): 12/17/09

Contractor: Amec

Logged By: DF

Vertical Datum: _____

Horizontal Datum: _____

Time (hhmm): 1105

Type of Core: Piston Shelby Vibro Other

Diameter of Core (inches): mudmole

Core Quality: Good Fair Poor Disturbed

reject

Field Collection Coordinates:

Lat/Northing: _____

Long/Easting: _____

A. Water Depth (ft)

DTM Depth Sounder: _____

DTM Lead Line: 5.7

B. Tide Measurements

Time (hhmm): 1105

Height (ft): 7.9

C. Mudline Elevation

(-A+B=C)

Core Collection Recovery Details:

Core Accepted: Yes No

Core Tube Length: 15 Units: (in ft) m cm)

Drive Penetration (A): _____

Headspace Measurement: _____

Recovery Measurement (B): _____

Recovery Percentage (B/A): _____ %

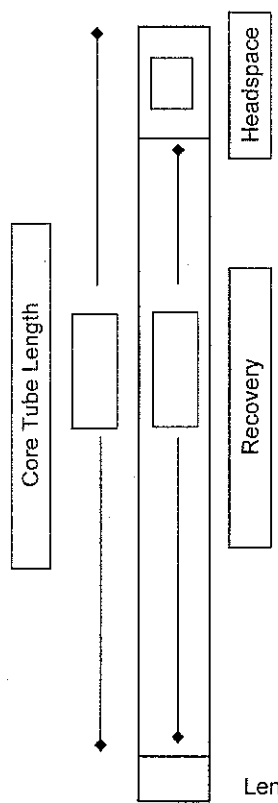
Total Length of Core To Process: _____

Refusal Encountered? Yes No

Drive Notes: freefall, easy penetration, moderate penetration, hard penetration, refusal

Hit solid at 5' penetration refusal nose is bent - Hit a rock

core loaded 1100



Core Field Observations and Description:

Sediment type, moisture, color, minor modifier, MAJOR modifier, other constituents, odor, sheen, layering, anoxic layer, debris, plant matter, shells, biota

wood in nose - reject.
hard substrate at surface
2 ft of dense wood to obstruction
cleaned tube for re-use
will affect 30' from shore

Rinsate Blank Samples Collected Yes No

stopped for lunch 1140 - 1150